

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

FORM 10-K

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

For the fiscal year ended December 31, 2019

or

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

For the transition period from to

Commission File Number: 1-33100

Owens Corning

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

43-2109021

(I.R.S. Employer Identification No.)

One Owens Corning Parkway, Toledo, OH

(Address of principal executive offices)

43659

(Zip Code)

(419) 248-8000

(Registrant's telephone number, including area code)

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

<u>Title of each class</u>	<u>Trading Symbol</u>	<u>Name of each exchange on which registered</u>
Common Stock, par value \$0.01 per share	OC	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 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 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

On June 28, 2019, the last business day of the registrant's most recently completed second fiscal quarter, the aggregate market value of \$0.01 par value common stock (the voting stock of the registrant) held by non-affiliates (assuming for purposes of this computation only that the registrant had no affiliates) was approximately \$6,331,714,247.

As of February 14, 2020, 108,277,883 shares of the registrant's common stock, par value \$0.01 per share, were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of Owens Corning's proxy statement to be delivered to stockholders in connection with the Annual Meeting of Stockholders to be held on or about April 16, 2020 (the "2020 Proxy Statement") are incorporated by reference into Part III hereof.

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PART I

ITEM 1. BUSINESS

OVERVIEW

Owens Corning is a global building and industrial materials leader that manufactures and delivers a broad range of high-quality insulation, roofing, and fiberglass composite materials. Its insulation products conserve energy and improve acoustics, fire resistance and air quality in the spaces where people live, work and play. Its roofing products and systems enhance curb appeal of people's homes and protect homes and commercial buildings alike. Its fiberglass composites make thousands of products lighter, stronger, and more durable. In short, the Company provides innovative products and solutions that deliver a material difference to its customers and, ultimately, makes the world a better place.

The business is global in scope, with operations in 33 countries, and human in scale, with approximately 19,000 employees and longstanding, local relationships with its customers. Based in Toledo, Ohio, Owens Corning recorded net sales in 2019 of \$7.2 billion. Founded in 1938, it has been a Fortune 500® company for 65 consecutive years.

Unless the context indicates otherwise, the terms "Owens Corning," "Company," "we" and "our" in this report refer to Owens Corning and its subsidiaries. References to a particular year mean the Company's year commencing on January 1 and ending on December 31 of that year.

SEGMENT OVERVIEW

The Company has three reportable segments: Composites, Insulation and Roofing. Our Composites, Insulation and Roofing reportable segments accounted for approximately 28%, 36% and 36% of our total reportable segment net sales, respectively, in 2019.

Composites

Owens Corning glass fiber materials can be found in over 40,000 end-use applications within five primary markets: building and construction, transportation, consumer, industrial, and power and energy. Such end-use applications include pipe, roofing shingles, sporting goods, consumer electronics, telecommunications cables, boats, aviation, automotive, industrial containers and wind-energy. Our products are manufactured and sold worldwide. We primarily sell our products directly to parts molders and fabricators. Within the building and construction market, our Composites segment sells glass fiber and/or glass mat directly to a small number of major shingle manufacturers, including our own Roofing segment.

Our Composites segment includes vertically integrated downstream activities. The Company manufactures, fabricates and sells glass reinforcements in the form of fiber. Glass reinforcement materials are also used downstream by the Composites segment to manufacture and sell glass fiber products in the form of fabrics, non-wovens and other specialized products.

Demand for composites is driven by general global economic activity and, more specifically, by the increasing replacement of traditional materials such as aluminum, wood and steel with composites that offer lighter weight, improved strength, lack of conductivity and corrosion resistance. We estimate that over the last 35 years, on average, annual global demand for composite materials grew at about 1.6 times global industrial production growth.

We compete with composite manufacturers worldwide. According to various industry reports and Company estimates, our Composites segment is a world leader in the production of glass fiber reinforcement materials. Primary methods of competition include innovation, quality, customer service and global geographic reach. Significant competitors to the Composites segment include China Jushi Group Co., Ltd., Chongqing Polycom International Corporation Ltd (CPIC), Johns Manville, Nippon Electric Glass Co. Ltd. (NEG) and Taishan Glass Fiber Co., Ltd.

Typically, our composites plants run continuously throughout the year, and we warehouse much of our production prior to sale since we operate primarily with short delivery cycles.

Insulation

Our insulating products help customers conserve energy, provide improved acoustical performance and offer convenience of installation and use. Our Insulation segment includes a diverse portfolio of high, mid and low-temperature products with a geographic mix of United States, Canada, Europe, Asia-Pacific and Latin America, a market mix of residential, commercial, industrial and other markets, and a channel mix of retail, contractor and distribution.

ITEM 1. BUSINESS (continued)

Our products in the residential channel include thermal and acoustical batts, loosefill insulation, foam sheathing and accessories, and are sold under well-recognized brand names and trademarks such as Owens Corning PINK[®] FIBERGLAS[™] Insulation. Our products in the commercial and industrial channel include glass fiber pipe insulation, energy efficient flexible duct media, bonded and granulated mineral wool insulation, cellular glass insulation and foam insulation used in above- and below-grade construction applications, and are sold under well-recognized brand names and trademarks such as Thermafiber[®], FOAMGLAS[®] and Paroc[®]. We sell our insulation products primarily to insulation installers, home centers, lumberyards, retailers and distributors in the United States, Canada, Europe, Asia-Pacific and Latin America.

Demand for Owens Corning's insulating products is driven by commercial and industrial construction activity in the United States, Canada, Europe, Asia-Pacific and Latin America; new North American residential construction; remodeling and repair activity; and increasingly stringent building codes and the growing need for energy efficiency. Demand in the segment typically follows seasonal home improvement, remodeling and renovation and residential, commercial and industrial construction industry patterns. Demand for new residential construction in North America typically follows housing starts on a three-month lagged basis, although the new residential construction cycle can elongate due to labor availability and other factors beyond our control. The peak season for home construction and remodeling in our geographic markets generally corresponds with the second and third calendar quarters. Demand for commercial and industrial applications is more heavily tied to industrial production growth, commercial construction activity, and overall economic conditions in the global markets we serve.

Our Insulation segment competes primarily with manufacturers in the United States, with a growing international presence due to our recent acquisitions of Pittsburgh Corning Corporation and Pittsburgh Corning Europe NV (collectively, "Pittsburgh Corning") in 2017 and Paroc Group Oy ("Paroc") in 2018. According to industry reports and Company estimates, Owens Corning is North America's largest producer of residential, commercial and industrial insulation. Principal methods of competition include innovation and product design, service, location, quality, price and compatibility of systems solutions. Significant competitors in this segment include CertainTeed Corporation, Dow Chemical, Johns Manville, Knauf Insulation and ROCKWOOL International.

Working capital practices for this segment historically have followed a seasonal cycle. Typically, our insulation plants run continuously throughout the year. This production plan, along with the seasonal nature of portions of the segment, generally results in higher finished goods inventory balances in the first half of the year. Since sales increase during the second half of the year, our accounts receivable balances are typically higher during this period.

Roofing

Our primary products in the Roofing segment are laminate and strip asphalt roofing shingles. Other products include roofing components, synthetic packaging materials and oxidized asphalt. We have been able to meet the growing demand for longer lasting, aesthetically attractive laminate products with modest capital investment.

We sell shingles and roofing components primarily through distributors, home centers, lumberyards, retailers and contractors in the United States. Our synthetic packaging materials are used primarily in the construction industry for lumber and metal packaging. Oxidized asphalt is a significant input used in the production of our asphalt roofing shingles. We are vertically integrated and have manufacturing facilities that process asphalt for use in our roofing shingles manufacturing process. In addition, we sell processed asphalt to other shingle manufacturers, to roofing contractors for built-up roofing asphalt systems and to manufacturers in a variety of other industries, including automotive, chemical, rubber and construction. Asphalt input costs and third-party asphalt sales prices are correlated to crude oil prices. As a result, third-party asphalt sales are largely a cost-plus business.

Demand for products in our Roofing segment is generally driven by both residential repair and remodeling activity and by new residential construction. Roofing damage from major storms can significantly increase demand in this segment. As a result, sales in this segment do not always follow seasonal home improvement, remodeling and new construction industry patterns as closely as our Insulation segment.

Our Roofing segment competes primarily with manufacturers in the United States. According to various industry reports and Company estimates, Owens Corning's Roofing segment is the second largest producer of asphalt roofing shingles in the United States. Principal methods of competition include innovation and product design, proximity to customers, quality and price. Significant competitors in the Roofing segment include CertainTeed Corporation, GAF and TAMKO.

Our manufacturing operations are generally continuous in nature, and we warehouse much of our production prior to sale since we operate with relatively short delivery cycles. One of the raw materials important to this segment is sourced from a sole supplier. We have a long-term supply contract for this material, and have no reason to believe that any availability issues will exist. If this supply was to become unavailable, our production could be interrupted until such time as the supplies again

ITEM 1. BUSINESS (continued)

became available or the Company reformulated its products. Additionally, the supply of asphalt, another significant raw material in this segment, has been constricted at times. Although this has not caused an interruption of our production in the past, prolonged asphalt shortages would restrict our ability to produce products in this segment.

GENERAL**Major Customers**

No one customer accounted for more than 10% of our consolidated net sales for 2019, 2018 or 2017. A significant portion of the net sales in our Insulation and Roofing segments are generated from large United States home improvement distributors and retailers.

Intellectual Property

The Company relies on a combination of intellectual property laws, as well as confidentiality procedures and contractual provisions, to protect our intellectual property, proprietary technology and our brands. Through continuous and extensive use of the color PINK since 1956, Owens Corning became the first owner of a single color trademark registration. In addition to our Owens Corning and PINK brands, the Company has registered, and applied for the registration of, U.S. and international trademarks, service marks, and domain names. Additionally, the Company has filed U.S. and international patent applications, including numerous issued patents, covering certain of our proprietary technology resulting from research and development efforts. Over time, the Company has assembled a portfolio of intellectual property rights including patents, trademarks, service marks, copyrights, domain names, know-how and trade secrets covering our products, services and manufacturing processes. Our proprietary technology is not dependent on any single or group of intellectual property rights and the Company does not expect the expiration of existing intellectual property to have a material adverse effect on the business as a whole. The Company believes the duration of our patents is adequate relative to the expected lives of our products. Although the Company protects its intellectual property and proprietary technology, any significant impairment of, or third-party claim against, our intellectual property rights could harm our business or our ability to compete.

Backlog

Our customer volume commitments are generally short-term, and the Company does not have a significant backlog of orders.

Environmental Control

Owens Corning has established policies and procedures to ensure that its operations are conducted in compliance with all relevant laws and regulations and that enable the Company to meet its high standards for corporate sustainability and environmental stewardship. Our manufacturing facilities are subject to numerous foreign, federal, state and local laws and regulations relating to the presence of hazardous materials, pollution and protection of the environment, including emissions to air, discharges to water, management of hazardous materials, handling and disposal of solid wastes, and remediation of contaminated sites. All Company manufacturing facilities operate using an ISO 14001 or equivalent environmental management system. The Company's 2030 Sustainability Goals require significant global reductions in energy use, water consumption, waste to landfill, emissions of greenhouse gases, fine particulate matter and toxic air emissions. The Company is dedicated to continuous improvement in our environmental, health and safety performance and to achieving its 2030 Sustainability Goals.

The Company has not experienced a material adverse effect upon our capital expenditures or competitive position as a result of environmental control legislation and regulations. Operating costs associated with environmental compliance were approximately \$42 million in 2019. The Company continues to invest in equipment and process modifications to remain in compliance with applicable environmental laws and regulations worldwide.

Our manufacturing facilities are subject to numerous national, state and local environmental protection laws and regulations. Regulatory activities of particular importance to our operations include those addressing air pollution, water pollution, waste disposal and chemical control. It is possible that new laws and regulations will specifically address climate change, toxic air emissions, ozone forming emissions and fine particulate matter. New environmental and chemical regulations could impact our ability to expand production or construct new facilities in geographic regions in which we operate. However, based on information known to the Company, including the nature of our manufacturing operations and associated air emissions, at this time we do not expect any of these new laws, regulations or activities to have a material adverse effect on our results of current operations, financial condition or long-term liquidity.

ITEM 1. BUSINESS (continued)

Owens Corning is involved in remedial response activities and is responsible for environmental remediation at a number of sites, including certain of its currently owned or formerly owned plants. These responsibilities arise under a number of laws, including, but not limited to, the Federal Resource Conservation and Recovery Act, and similar state or local laws pertaining to the management and remediation of hazardous materials and petroleum. The Company has also been named a potentially responsible party under the United States Federal Superfund law, or state equivalents, at a number of disposal sites. The Company became involved in these sites as a result of government action or in connection with business acquisitions. At the end of 2019, the Company was involved with a total of 21 sites worldwide, including 7 Superfund sites and 14 owned or formerly owned sites. None of the liabilities for these sites are individually significant to the Company.

Remediation activities generally involve a potential range of activities and costs related to soil and groundwater contamination. This can include pre-cleanup activities such as fact finding and investigation, risk assessment, feasibility studies, remedial action design and implementation (where actions may range from monitoring to removal of contaminants, to installation of longer-term remediation systems). A number of factors affect the cost of environmental remediation, including the number of parties involved in a particular site, the determination of the extent of contamination, the length of time the remediation may require, the complexity of environmental regulations, variability in clean-up standards, the need for legal action, and changes in remediation technology. Taking these factors into account, Owens Corning has predicted the costs of remediation reasonably estimated to be paid over a period of years. The Company accrues an amount on an undiscounted basis, consistent with the reasonable estimates of these costs when it is probable that a liability has been incurred. Actual cost may differ from these estimates for the reasons mentioned above.

At December 31, 2019, the Company had an accrual totaling \$9 million for its environmental liabilities, of which the current portion is \$5 million. Changes in required remediation procedures or timing of those procedures at existing legacy sites, or discovery of contamination at additional sites, could result in material increases to the Company's environmental obligations.

Number of Employees

As of December 31, 2019, Owens Corning had approximately 19,000 employees. Approximately 8,000 of such employees are subject to collective bargaining agreements. The Company believes that its relations with employees are good.

AVAILABILITY OF INFORMATION

Owens Corning makes available, free of charge, through its website, the Company's Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and all amendments to those reports as soon as reasonably practicable after such material is electronically filed with or furnished to the Securities and Exchange Commission. These documents are available through the Investor Relations page of the Company's website at www.owenscorning.com.

ITEM 1A. RISK FACTORS

RISKS RELATED TO OUR BUSINESS AND OUR INDUSTRY

Low levels of residential, commercial or industrial construction activity can have a material adverse impact on our business and results of operations.

A large portion of our products are used in the markets for residential and commercial construction and repair and remodeling. Demand for certain of our products is affected in part by the level of new residential construction in the United States and elsewhere, although typically not until a number of months after the change in the level of construction. Lower demand in the regions and markets where our products are sold could result in lower revenues and lower profitability. Historically, construction activity has been cyclical and is influenced by prevailing economic conditions, including the level of interest rates and availability of financing, inflation, employment levels, consumer spending habits, consumer confidence and other macroeconomic factors outside our control.

Some of our products, particularly in our insulation business, are used in industrial applications. Lower levels of industrial production and other macroeconomic factors affecting industrial construction activity could lessen demand for those products and lead to lower revenues or profitability.

We face significant competition in the markets we serve and we may not be able to compete successfully.

All of the markets we serve are highly competitive. We compete with manufacturers and distributors, both within and outside the United States, in the sale of building products and composite products. Some of our competitors may have superior financial, technical, marketing and other resources than we do. In some cases, we face competition from manufacturers in countries able to produce similar products at lower costs. We also face competition from the introduction by competitors of new products or technologies that may address our customers' needs in a better manner, whether based on considerations of pricing, usability, effectiveness, sustainability, quality or other features or benefits. If we are not able to successfully commercialize our innovation efforts, we may lose market share. Price competition or overcapacity may limit our ability to raise prices for our products when necessary, may force us to reduce prices and may also result in reduced levels of demand for our products and cause us to lose market share. In addition, in order to effectively compete, we must continue to develop new products that meet changing consumer preferences and successfully develop, manufacture and market these new products. Our inability to effectively compete could result in the loss of customers and reduce the sales of our products, which could have a material adverse impact on our business, financial condition and results of operations.

Our sales may fall rapidly in response to declines in demand because we do not operate under long-term volume agreements to supply our customers and because of customer concentration in certain segments.

Many of our customer volume commitments are short-term; therefore, we do not have a significant manufacturing backlog. As a result, we do not benefit from the visibility provided by long-term volume contracts against downturns in customer demand and sales. Further, we are not able to immediately adjust our costs in response to declines in sales. In addition, although no single customer represents more than 10% of our annual sales, our ability to sell some of the products in Insulation and Roofing are dependent on a limited number of customers, who account for a significant portion of such sales. The loss of key customers for these products, a consolidation of key customers or a significant reduction in sales to those customers, could significantly reduce our revenues from these products. In addition, if key customers experience financial pressure or consolidate, they could attempt to demand more favorable contractual terms, which would place additional pressure on our margins and cash flows. Lower demand for our products, loss of key customers and material changes to contractual terms could materially and adversely impact our business, financial condition and results of operations. Furthermore, some of our sales are concentrated in certain geographic areas, and market growth that is skewed to other geographic areas may negatively impact our rate of growth or market share.

ITEM 1A. RISK FACTORS (continued)**Worldwide economic conditions and credit tightening could have a material adverse impact on the Company.**

The Company's business may be materially and adversely impacted by changes in United States or global economic conditions, including global industrial production rates, inflation, deflation, interest rates, availability of capital, consumer spending rates, energy availability and commodity prices, trade laws, and the effects of governmental initiatives to manage economic conditions. Changes in and/or new laws, regulations and policies that may be enacted in the United States or elsewhere could also materially impact economic conditions and the Company's business and results of operations. Volatility in financial markets and the deterioration of national and global economic conditions could materially adversely impact the Company's operations, financial results and/or liquidity including as follows:

- the financial stability of our customers or suppliers may be compromised, which could result in reduced demand for our products, additional bad debts for the Company or non-performance by suppliers;
- one or more of the financial institutions associated with our credit facilities cease to be able to fulfill their funding obligations, which could materially adversely impact our liquidity;
- it may become more costly or difficult to obtain financing or refinance the Company's debt in the future;
- the value of the Company's assets held in pension plans may decline; and/or
- the Company's assets may be impaired or subject to write-down or write-off.

Uncertainty about global economic conditions may cause consumers of our products to postpone spending in response to tighter credit, negative financial news and/or declines in income or asset values. This could have a material adverse impact on the demand for our products and on our financial condition and operating results. A deterioration of economic conditions would likely exacerbate these adverse effects and could result in a wide-ranging and prolonged impact on general business conditions, thereby negatively impacting our operations, financial results and/or liquidity.

We are subject to risks associated with our international operations.

We sell products and operate plants throughout the world. Our international sales and operations are subject to risks and uncertainties, including:

- difficulties and costs associated with complying with a wide variety of complex and changing laws, including securities laws, tax laws, employment and pension-related laws, competition laws, U.S. and foreign export and trading laws, and laws governing improper business practices, treaties and regulations;
- limitations on our ability to enforce legal rights and remedies;
- adverse domestic or international economic and political conditions, business interruption, war and civil disturbance;
- changes to tax, currency, or other laws or policies that may adversely impact our ability to repatriate cash from non-United States subsidiaries, make cross-border investments, or engage in other intercompany transactions;
- future regulatory guidance and interpretations of the tax legislation commonly known as the U.S. Tax Cuts and Jobs Act of 2017 (the "Tax Act"), as well as assumptions that the Company makes related to the Tax Act;
- changes to tariffs or other import or export restrictions, penalties or sanctions, including modification or elimination of international agreements covering trade or investment;
- costs and availability of shipping and transportation;
- nationalization or forced relocation of properties by foreign governments;
- currency exchange rate fluctuations between the United States dollar and foreign currencies; and
- uncertainty with respect to any potential changes to laws, regulations and policies that could exacerbate the risks described above.

As we continue to expand our business globally, we may have difficulty anticipating and effectively managing these and other risks that our international operations may face, which may adversely impact our business, financial condition and results of operations.

ITEM 1A. RISK FACTORS (continued)

In addition, we operate in many parts of the world that have experienced governmental corruption and we could be adversely affected by violations of the Foreign Corrupt Practices Act (FCPA) and similar worldwide anti-corruption laws. The FCPA and similar anti-corruption laws in other jurisdictions generally prohibit companies and their intermediaries from making improper payments to officials for the purpose of obtaining or retaining business. Although we mandate compliance with these anti-corruption laws and maintain an anti-corruption compliance program, we cannot provide assurance that these measures will necessarily prevent violations of these laws by our employees or agents. If we were found to be liable for violations of anti-corruption laws, we could be liable for criminal or civil penalties or other sanctions, which could have a material adverse impact on our business, financial condition and results of operations.

We will not be insured against all potential losses and could be seriously harmed by natural disasters, catastrophes, theft or sabotage.

Many of our business activities globally involve substantial investments in manufacturing facilities and many products are produced at a limited number of locations. These facilities could be materially damaged by natural disasters such as floods, tornados, hurricanes, fires, earthquakes, pandemics or by theft or sabotage. We could incur uninsured losses and liabilities arising from such events, including damage to our reputation, and/or suffer material losses in operational capacity, which could have a material adverse impact on our business, financial condition and results of operations.

Climate change, weather conditions and storm activity could have a material adverse impact on our results of operations.

Weather conditions and the level of severe storms can have a significant impact on the markets for residential and commercial construction, repair and improvement. As a result, climate change that results in altered weather conditions or storm activity could have a significant impact on our business. These factors could impact our business as follows:

- generally, any weather conditions that slow or limit residential or commercial construction activity can adversely impact demand for our products; and
- a portion of our annual product demand is attributable to the repair of damage caused by severe storms. In periods with below average levels of severe storms, demand for such products could be reduced.

Lower demand for our products as a result of either of these scenarios could adversely impact our business, financial condition and results of operations. Additionally, severely low temperatures may lead to significant and immediate spikes in costs of natural gas, electricity and other commodities that could negatively affect our results of operation.

We may be exposed to cost increases or reduced availability of energy, materials or transportation, which could reduce our margins and have a material adverse impact on our business, financial condition and results of operations.

Our business relies heavily on certain commodities and raw materials used in our manufacturing processes. Additionally, we spend a significant amount on inputs that are influenced by energy prices, such as asphalt, chemicals, resins, and transportation. Price increases for these inputs could raise costs and reduce our margins if we are not able to offset them by increasing the prices of our products, improving productivity or hedging where appropriate. In particular, energy prices could increase as a result of climate change legislation or other environmental mandates. Availability of certain of the raw materials we use has occasionally been limited, and our sourcing of some of these raw materials from a limited number of suppliers, and in some cases a sole supplier, increases the risk of unavailability. For example, if one of the raw materials important to our business is sourced from a sole supplier, our production could be interrupted regardless of whether we have a long-term supply contract for the material. Despite our contractual supply agreements with many of our suppliers, it is possible that we could experience a lack of certain raw materials that limits our ability to manufacture our products, thereby materially and adversely impacting our business, financial condition and results of operations.

We could face potential product liability and warranty claims, we may not accurately estimate costs related to such claims, and we may not have sufficient insurance coverage available to cover such claims.

Our products are used and have been used in a wide variety of residential, commercial and industrial applications. We face an inherent business risk of exposure to product liability or other claims in the event our products are alleged to be defective or that the use of our products is alleged to have resulted in harm to others or to property. We may, in the future, incur liability if product liability lawsuits against us are successful. Moreover, any such lawsuits, whether or not successful, could result in adverse publicity to us, which could cause our sales to decline.

ITEM 1A. RISK FACTORS (continued)

In addition, consistent with industry practice, we provide warranties on many of our products and we may experience costs of warranty or breach of contract claims if our products have defects in manufacture or design or they do not meet contractual specifications. We estimate our future warranty costs based on historical trends and product sales, but we may fail to accurately estimate those costs and thereby fail to establish adequate warranty reserves for them. We maintain insurance coverage to protect us against product liability claims, but that coverage may not be adequate to cover all claims that may arise or we may not be able to maintain adequate insurance coverage in the future at an acceptable cost. Any liability not covered by insurance or that exceeds our established reserves could materially and adversely impact our business, financial condition and results of operations.

We are subject to various legal and regulatory proceedings, including litigation in the ordinary course of business, and uninsured judgments or a rise in insurance premiums may adversely impact our business, financial condition and results of operations.

In the ordinary course of business, we are subject to various legal and regulatory proceedings, which may include but are not limited to those involving antitrust, tax, environmental, intellectual property, data privacy and other matters, including general commercial litigation. Any claims raised in legal and regulatory proceedings, whether with or without merit, could be time consuming and expensive to defend and could divert management's attention and resources. Additionally, the outcome of legal and regulatory proceedings may differ from our expectations because the outcomes of these proceedings are often difficult to predict reliably. Various factors and developments can lead to changes in our estimates of liabilities and related insurance receivables, where applicable, or may require us to make additional estimates, including new or modified estimates that may be appropriate due to a judicial ruling or judgment, a settlement, regulatory developments or changes in applicable law. A future adverse ruling, settlement or unfavorable development could result in charges that could have a material adverse effect on our results of operations in any particular period.

In accordance with customary practice, we maintain insurance against some, but not all, of these potential claims. In the future, we may not be able to maintain insurance at commercially acceptable premium levels. In addition, the levels of insurance we maintain may not be adequate to fully cover any and all losses or liabilities. If any significant judgment or claim is not fully insured or indemnified against, it could have a material adverse impact on our business, financial condition and results of operations.

We may be subject to liability under and may make substantial future expenditures to comply with environmental laws and regulations.

Our manufacturing facilities are subject to numerous foreign, federal, state and local laws and regulations relating to the presence of hazardous materials, pollution and the protection of the environment, including those governing emissions to air, discharges to water, use, storage and transport of hazardous materials, storage, treatment and disposal of waste, remediation of contaminated sites and protection of worker health and safety.

Liability under these laws involves inherent uncertainties. Environmental liability estimates may be affected by changing determinations of what constitutes an environmental exposure or an acceptable level of cleanup. For example, remediation activities generally involve a potential range of activities and costs related to soil and groundwater contamination. This can include pre-cleanup activities such as fact finding and investigation, risk assessment, feasibility studies, remedial action design and implementation (where actions may range from monitoring to removal of contaminants, to installation of longer-term remediation systems). Please see "Item 1 - Business - Environmental Control" for information on costs and accruals related to environmental remediation. To the extent that the required remediation procedures or timing of those procedures change, additional contamination is identified, or the financial condition of other potentially responsible parties is adversely affected, the estimate of our environmental liabilities may change. Change in required remediation procedures or timing of those procedures at existing legacy sites, or discovery of contamination at additional sites, could result in increases to our environmental obligations. Violations of environmental, health and safety laws are subject to civil, and, in some cases, criminal sanctions. As a result of these uncertainties, we may incur unexpected interruptions to operations, fines, penalties or other reductions in income which could adversely impact our business, financial condition and results of operations. It is possible that new laws and regulations will specifically address climate change, toxic air emissions, ozone forming emissions and fine particulate matter. New environmental and chemical regulations could impact our ability to expand production or construct new facilities in every geographic region in which we operate. Continued and increased government and public emphasis on environmental issues is expected to result in increased future investments for environmental controls at ongoing operations, which will be charged against income from future operations. Present and future environmental laws and regulations applicable to our operations, and changes in their interpretation, may require substantial capital expenditures or may require or cause us to modify or curtail our operations, which may have a material adverse impact on our business, financial condition and results of operations.

ITEM 1A. RISK FACTORS (continued)**Our intellectual property rights may not provide meaningful commercial protection for our products or brands and third parties may assert that we violate their intellectual property rights, which could adversely impact our business, financial condition and results of operations.**

Owens Corning relies on its intellectual property, including numerous patents, registered trademarks, trade secrets, confidential information, as well as its licensed intellectual property. We monitor and protect against activities that might infringe, dilute, or otherwise harm our patents, trademarks and other intellectual property and rely on the patent, trademark and other laws of the United States and other countries. However, we may be unable to prevent third parties from using our intellectual property without our authorization. To the extent we cannot protect our intellectual property, unauthorized use and misuse of our intellectual property could harm our competitive position and have a material adverse impact on our business, financial condition and results of operations. In addition, the laws of some non-United States jurisdictions provide less protection for our proprietary rights than the laws of the United States and we therefore may not be able to effectively enforce our intellectual property rights in these jurisdictions. If we are unable to maintain certain exclusive licenses, our brand recognition and sales could be adversely impacted. Current employees, contractors and suppliers have, and former employees, contractors and suppliers may have, access to trade secrets and confidential information regarding our operations which could be disclosed improperly and in breach of contract to our competitors or otherwise used to harm us.

Third parties may also claim that we are infringing upon their intellectual property rights. If we are unable to successfully defend or license such alleged infringing intellectual property or if we are required to substitute similar technology from another source, our operations could be adversely affected. Even if we believe that such intellectual property claims are without merit, defending such claims can be costly, time consuming and require significant resources. Claims of intellectual property infringement also might require us to redesign affected products, pay costly damage awards, or face injunctions prohibiting us from manufacturing, importing, marketing or selling certain of our products. Even if we have agreements to indemnify us, indemnifying parties may be unable or unwilling to do so.

We are subject to risks relating to our information technology systems, and any failure to adequately protect our critical information technology systems could materially affect our operations.

We rely on information technology systems across our operations, including for management, supply chain and financial information and various other processes and transactions. Our ability to effectively manage our business depends on the security, reliability and capacity of these systems. Information technology system failures, network disruptions or breaches of security could disrupt our operations, causing delays or cancellation of customer orders or impeding the manufacture or shipment of products, processing of transactions or reporting of financial results. An attack or other problem with our systems could also result in the disclosure of proprietary information about our business or confidential information concerning our customers or employees, which could result in significant damage to our business and our reputation.

We have put in place security measures designed to protect against the misappropriation or corruption of our systems, intentional or unintentional disclosure of confidential information, or disruption of our operations. However, advanced cybersecurity threats, such as computer viruses, attempts to access information, and other security breaches, are persistent and continue to evolve, making them increasingly difficult to identify and prevent. Protecting against these threats may require significant resources, and we may not be able to implement measures that will protect against all of the significant risks to our information technology systems. In addition, we rely on a number of third party service providers to execute certain business processes and maintain certain information technology systems and infrastructure, and any breach of security on their part could impair our ability to effectively operate. Moreover, our operations in certain geographic locations may be particularly vulnerable to security attacks or other problems.

Any breach of our security measures could result in unauthorized access to and misappropriation of our information, corruption of data or disruption of operations or transactions, any of which could have a material adverse effect on our business.

Our level of indebtedness could adversely impact our business, financial condition or results of operations.

Our debt level and degree of leverage could have important consequences, including the following:

- our ability to obtain additional debt or equity financing for working capital, capital expenditures, debt service requirements, acquisitions and general corporate or other purposes may be limited;
 - a substantial portion of our cash flow from operations could be required for the payment of principal and interest on our indebtedness, and may not be available for other business purposes;
 - certain of our borrowings are at variable rates of interest, exposing us to the risk of increased interest rates;
-

ITEM 1A. RISK FACTORS (continued)

- if due to liquidity needs we must replace any indebtedness upon maturity, we would be exposed to the risk that we may not be able to refinance such indebtedness;
- our ability to adjust to changing market conditions may be limited and place us at a competitive disadvantage compared to our competitors that have less debt; and
- we may be vulnerable in a downturn in general economic conditions or in our business, or we may be unable to carry out important capital spending.

The credit agreement governing our senior credit facility, the indentures governing our senior notes, the receivables purchase agreement governing our receivables securitization facility and any term loan agreement in place contain various covenants that impose operating and financial restrictions on us and/or our subsidiaries. Additionally, instruments and agreements governing our future indebtedness may impose other restrictive conditions or covenants that could restrict our ability to conduct our business operations or pursue growth strategies.

Downgrades of our credit ratings could adversely impact us.

Our credit ratings are important to our cost of capital. The major debt rating agencies routinely evaluate our debt based on a number of factors, which include financial strength and business risk as well as transparency with rating agencies and timeliness of financial reporting. A downgrade in our debt rating could result in increased interest and other expenses on our existing variable interest rate debt, and could result in increased interest and other financing expenses on future borrowings. Downgrades in our debt rating could also restrict our access to capital markets and affect the value and marketability of our outstanding notes.

If we were required to write down all or part of our goodwill or other indefinite-lived intangible assets, our results of operations or financial condition could be materially adversely affected in a particular period.

Declines in the Company's business may result in an impairment of the Company's tangible and intangible assets which could result in a material non-cash charge. A significant or prolonged decrease in the Company's market capitalization, including a decline in stock price, or a negative long-term performance outlook, could result in an impairment of its tangible and intangible assets which results when the carrying value of the Company's assets exceed their fair value. At least annually, the Company assesses goodwill and intangible assets for impairment. Since the Company utilizes a discounted cash flow methodology to calculate the fair value of its reporting units, weak demand for a specific product line or business could result in an impairment. Accordingly, any determination requiring the write-off of a significant portion of goodwill or intangible assets could negatively impact the Company's results of operations.

Our ongoing efforts to increase productivity and reduce costs may not result in anticipated savings in operating costs.

Our cost reduction and productivity efforts, including those related to our existing operations, production capacity expansions, new manufacturing platforms, or other capital expenditures, may not produce anticipated results. Our ability to achieve cost savings and other benefits within expected time frames is subject to many estimates and assumptions. These estimates and assumptions are subject to significant economic, competitive, legal and other uncertainties, some of which are beyond our control. If these estimates and assumptions are incorrect, if we experience delays, or if other unforeseen events occur, our business, financial condition and results of operations could be adversely impacted.

Our operations require substantial capital, leading to high levels of fixed costs that will be incurred regardless of our level of business activity.

Our businesses are capital intensive, and regularly require capital expenditures to expand operations, maintain equipment, increase operating efficiency and comply with applicable laws and regulations, leading to high fixed costs, including depreciation expense. Also, increased regulatory focus could lead to additional or higher costs in the future. We are limited in our ability to reduce fixed costs quickly in response to reduced demand for our products and these fixed costs may not be fully absorbed, resulting in higher average unit costs and lower gross margins if we are not able to offset this higher unit cost with price increases. Alternatively, we may be limited in our ability to quickly respond to unanticipated increased demand for our products, which could result in an inability to satisfy demand for our products and loss of market share.

ITEM 1A. RISK FACTORS (continued)

The Company's income tax net operating loss and U.S. foreign tax credit carryforwards may be limited and our results of operations may be adversely impacted.

The Company has substantial deferred tax assets related to both U.S. federal and state net operating losses (NOLs) and U.S. foreign tax credits (FTCs) for income tax purposes, which the Company expects generally are available, with some exceptions, to offset future taxable income. However, the Company's ability to utilize or realize the current carrying value of the NOLs and FTCs may be impacted by certain events, such as changes in tax legislation or the interpretation thereof, or insufficient future taxable income prior to expiration of the NOLs and FTCs, or annual limits imposed under sections 382 and 383 of the Internal Revenue Code, or by state law, as a result of a change in control. A change in control is generally defined as a cumulative change of more than 50% in the ownership positions of certain stockholders during a rolling three-year period. Changes in the ownership positions of certain stockholders could occur as the result of stock transactions by such stockholders and/or by the issuance of stock by the Company. Such limitations may cause the Company to pay income taxes earlier and in greater amounts than would be the case if the NOLs and FTCs were not subject to such limitations. Additionally, uncertainty exists with respect to future regulatory guidance and interpretations of the Tax Act, as well as assumptions that the Company makes related to the Tax Act, which could have an impact on the use of the Company's NOLs and FTCs.

Should the Company determine that it is likely that its recorded NOL and FTC benefits are not realizable, the Company would be required to reduce the NOL and FTC tax benefit reflected on its financial statements to the net realizable amount either by a direct adjustment to the NOL and FTC tax benefit or by establishing a valuation allowance and recording a corresponding charge to current earnings. The corresponding charge to current earnings would have an adverse effect on the Company's financial condition and results of operations in the period in which it is recorded. Conversely, if the Company is required to increase its NOL and FTC tax benefit either by a direct adjustment or reversing any portion of the accounting valuation allowance against its deferred tax assets related to its NOLs and FTCs, such credit to current earnings could have a positive effect on the Company's business, financial condition and results of operations in the period in which it is recorded.

Our efforts in acquiring and integrating other businesses, establishing joint ventures, expanding our production capacity or divesting assets are subject to a number of risks.

Some of the ways we have historically grown or restructured our business have been through acquisitions, joint ventures, the expansion of our production capacity and divestitures. Our ability to grow or restructure our business depends upon our ability to identify, negotiate and finance suitable arrangements. If we cannot successfully execute on such arrangements or receive any required regulatory approvals on a timely basis, we may be unable to generate desired returns, and our expectations of future results of operations, including cost savings and synergies, may not be achieved. Acquisitions, joint ventures, production capacity expansions and divestitures involve substantial risks, including:

- unforeseen difficulties in operations, technologies, products, services, accounting and personnel;
 - increased cybersecurity risks;
 - diversion of financial and management resources from existing operations;
 - unforeseen difficulties related to entering geographic regions, markets or product lines where we do not have prior experience;
 - risks relating to obtaining sufficient financing;
 - difficulty in integrating the acquired business' standards, processes, procedures and controls with our existing operations;
 - potential loss of key employees;
 - unanticipated competitive responses;
 - potential loss of customers; and
 - undisclosed or undiscovered liabilities or claims, or retention of unpredictable future liabilities.
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ITEM 1A. RISK FACTORS (continued)

Our failure to address these risks or other problems encountered in connection with our past or future acquisitions, investments and divestitures could cause us to fail to realize the anticipated benefits of such transactions, incur unanticipated liabilities, and harm our business generally. Future acquisitions and investments could also result in dilutive issuances of our equity securities, the incurrence of debt, contingent liabilities, or amortization expenses, or write-offs of goodwill, any of which could have a material adverse impact on our business, financial condition and results of operations. Also, the anticipated benefits of our investments may not materialize.

Our hedging activities to address energy price fluctuations may not be successful in offsetting increases in those costs or may reduce or eliminate the benefits of any decreases in those costs.

In order to mitigate short-term variation in our operating results due to commodity price fluctuations in certain geographic markets, we may hedge a portion of our near-term exposure to the cost of energy, primarily natural gas. The results of our hedging practices could be positive, neutral or negative in any period depending on price changes of the hedged exposures.

Our hedging activities are not designed to mitigate long-term commodity price fluctuations and, therefore, will not protect us from long-term commodity price increases. In addition, in the future, our hedging positions may not correlate to our actual energy costs, which would cause acceleration in the recognition of unrealized gains and losses on our hedging positions in our operating results.

Our results of operations in a given period may be impacted by price volatility in certain wind-generated energy markets in the United States.

In connection with our sustainability goals to reduce greenhouse gas and toxic air emissions, we entered into contracts in the United States, pursuant to which we have agreed to purchase wind-generated electricity from third parties. Under these contracts, we do not take physical delivery of wind-generated electricity. The generated electricity is instead sold by our counterparties to local grid operators at the prevailing market price and we obtain the associated non-tax renewable energy credits. The prevailing market pricing for wind-generated electricity can be affected by factors beyond our control and is subject to significant period over period volatility. For example, wind-generated energy output fluctuates due to climactic and other factors beyond our control and can be constrained by available transmission capacity, thereby significantly impacting pricing. Due to this potential volatility, it is possible that these contracts could have an impact on our results of operations in a given reporting period.

We depend on our senior management team and other skilled and experienced personnel to operate our business effectively, and the loss of any of these individuals or the failure to attract additional personnel could adversely impact our financial condition and results of operations.

We are highly dependent on the skills and experience of our senior management team and other skilled and experienced personnel. These individuals possess sales, marketing, manufacturing, logistical, financial, business strategy and administrative skills that are important to the operation of our business. We cannot assure that we will be able to retain all of our existing senior management personnel and skilled and experienced personnel. The loss of any of these individuals or an inability to attract additional personnel could prevent us from implementing our business strategy and could adversely impact our business and our future financial condition or results of operations.

Increases in the cost of labor, union organizing activity, labor disputes and work stoppages at our facilities could delay or impede our production, reduce sales of our products and increase our costs.

The costs of labor are generally increasing, including the costs of employee benefit plans. We are subject to the risk that strikes or other types of conflicts with personnel may arise or that we may become the subject of union organizing activity at additional facilities. In particular, renewal of collective bargaining agreements typically involves negotiation, with the potential for work stoppages or increased costs at affected facilities.

Significant changes in the factors and assumptions used to measure our defined benefit plan obligations, actual investment returns on pension assets and other factors could have a negative impact on our financial condition or liquidity.

We have certain defined benefit pension plans and other post-employment benefit (OPEB) plans. Our future funding requirements for defined benefit pension and OPEB plans depend upon a number of factors and assumptions, including our actual experience against assumptions with regard to interest rates used to determine funding levels; return on plan assets; benefit levels; participant experience (e.g., mortality and retirement rates); health care cost trends; and applicable regulatory

ITEM 1A. RISK FACTORS (continued)

changes. To the extent actual results are less favorable than our assumptions, there could be a material adverse impact on our financial condition and results of operations.

Additional risks exist due to the nature and magnitude of our investments, including the implementation of or changes to the investment policy, insufficient market capacity to absorb a particular investment strategy or high-volume transactions, and the inability to quickly rebalance illiquid and long-term investments.

If our cash flows and capital resources are insufficient to fund our pension or OPEB obligations, we could be forced to reduce or delay investments and capital expenditures, seek additional capital, or restructure or refinance our indebtedness.

RISKS RELATED TO OWNERSHIP OF OUR COMMON STOCK

The market price of our common stock is subject to volatility.

The market price of our common stock could be subject to wide fluctuations in response to numerous factors, many of which are beyond our control. These factors include actual or anticipated variations in our operational results and cash flow, our earnings relative to our competition, changes in financial estimates by securities analysts, trading volume, sales by holders of large amounts of our common stock, short selling, market conditions within the industries in which we operate, seasonality of our business operations, the general state of the securities markets and the market for stocks of companies in our industry, governmental legislation or regulation and currency and exchange rate fluctuations, as well as general economic and market conditions, such as recessions.

We are a holding company with no operations of our own and depend on our subsidiaries for cash.

As a holding company, most of our assets are held by our direct and indirect subsidiaries and we will primarily rely on dividends and other payments or distributions from our subsidiaries to meet our debt service and other obligations and to enable us to pay dividends. The ability of our subsidiaries to pay dividends or make other payments or distributions to us will depend on their respective operating results and may be restricted by, among other things, the laws of their jurisdiction of organization (which may limit the amount of funds available for the payment of dividends or other payments), agreements of those subsidiaries, agreements with any co-investors in non-wholly-owned subsidiaries, the terms of our facilities and senior notes and the covenants of any future indebtedness we or our subsidiaries may incur.

Provisions in our amended and restated certificate of incorporation and bylaws or Delaware law might discourage, delay or prevent a change in control of our company or changes in our management and therefore depress the trading price of our common stock.

Our amended and restated certificate of incorporation and bylaws contain provisions that could depress the trading price of our common stock through provisions that may discourage, delay or prevent a change in control of our Company or changes in our management that our stockholders may deem advantageous.

Additionally, we are subject to Section 203 of the Delaware General Corporation Law, which generally prohibits a Delaware corporation from engaging in any of a broad range of business combinations with any “interested” stockholder for a period of three years following the date on which the stockholder became an “interested” stockholder and which may discourage, delay or prevent a change in control of our company.

Dividends on our common stock are declared at the discretion of our Board of Directors.

Since February 2014, the Board has declared a quarterly dividend on our common stock. The payment of any future cash dividends to our stockholders is not guaranteed and will depend on decisions that will be made by our Board of Directors and will depend on then-existing conditions, including our operating results, financial conditions, contractual restrictions, corporate law restrictions, capital agreements, applicable laws of the State of Delaware and business prospects.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES**Composites**

Our Composites segment operates out of 27 manufacturing facilities. We are in the process of closing certain sub-scale manufacturing facilities as a result of our expansion in India. Principal manufacturing facilities for our Composites segment, all of which are owned by the Company, include the following:

Aiken, South Carolina	Jackson, Tennessee
Amarillo, Texas	Kimchon, Korea
Anderson, South Carolina	L'Ardoise, France
Apeldoorn, The Netherlands	Rio Claro, Brazil
Chambery, France	Taloja, India
Gastonia, North Carolina	Tlaxcala, Mexico
Gous, Russia	Yuhang, China

Insulation

Our Insulation segment operates out of 43 manufacturing facilities. Principal manufacturing facilities for our Insulation segment, all of which are owned by the Company, include the following:

Delmar, New York	Santa Clara, California
Edmonton, Alberta, Canada	Sedalia, Missouri
Fairburn, Georgia	Tallmadge, Ohio
Guangzhou, Guandong, China	Tessengerlo, Belgium
Joplin, Missouri	Toronto, Ontario, Canada
Kansas City, Kansas	Trzemeszno, Poland
Mexico City, Mexico	Vilnius, Lithuania
Newark, Ohio	Wabash, Indiana
Rockford, Illinois	Waxahachie, Texas

Roofing

Our Roofing segment operates out of 35 total manufacturing facilities. This number separately counts many roofing and asphalt manufacturing facilities that are located at the same site. Principal manufacturing facilities for our Roofing segment, all of which are owned by the Company, include the following:

Brookville, Indiana	Minneapolis, Minnesota
Denver, Colorado	Portland, Oregon
Irving, Texas	Qingdao, China
Kearny, New Jersey	Savannah, Georgia
Medina, Ohio	Silvassa, India
Memphis, Tennessee	Summit, Illinois

We believe that these properties are in good condition and well maintained, and are suitable and adequate to carry on our business. The capacity of each plant varies depending upon product mix.

Our principal executive offices are located in the Owens Corning World Headquarters, Toledo, Ohio, an owned facility of approximately 400,000 square feet. Our research and development activities are primarily conducted at our Science and Technology Center, located on approximately 500 acres of land owned by the Company outside of Granville, Ohio. It consists of approximately 20 structures totaling more than 650,000 square feet. In addition, we have application development and other product and market focused research and development centers in various locations.

ITEM 3. LEGAL PROCEEDINGS

Environmental Legal Proceedings

None.

Litigation, Other Regulatory Proceedings and Environmental Matters

Additional information required by this item is incorporated by reference to Note 16, Contingent Liabilities and Other Matters.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

INFORMATION ABOUT OUR EXECUTIVE OFFICERS

The name, age and business experience during the past five years of Owens Corning's executive officers as of January 1, 2020 are set forth below. Each executive officer holds office until his or her successor is elected and qualified or until his or her earlier resignation, retirement or removal. All those listed have been employees of Owens Corning during the past five years except as indicated.

Name and Age	Position*
Brian D. Chambers (53)**	President and Chief Executive Officer since April 2019; formerly President and Chief Operating Officer (2018); formerly President, Roofing (2014)
Todd Fister (45)	President, Insulation since July 2019; formerly Vice President of Global Insulation and Strategy (2019); formerly Vice President and Managing Director for Europe Insulation and Global Foamglas® (2018); formerly Vice President and Managing Director for Foamglas® (2017); formerly Vice President of Strategic Marketing (2014)
Prithvi S. Gandhi (49)	Interim Chief Financial Officer since October 2019; formerly Vice President of Corporate Strategy, Corporate Development, and Financial Planning (2014)
Ava Harter (50)	Senior Vice President, General Counsel and Secretary since May 2015; formerly General Counsel, Chief Compliance Officer and Corporate Secretary, Taleris America LLC (2012)
Paula Russell (42)	Senior Vice President, Chief Human Resources Officer since December 2019; formerly Vice President, Chief Human Resources Officer (April 2019); formerly Vice President of Total Rewards and Center of Excellence (March 2018); formerly Vice President of Total Rewards (August 2017); formerly Vice President of Human Resources, Composites (October 2012)
Marcio Sandri (56)	President, Composites since May 2018; formerly Vice President Global Strategy and Operations, Composites (2017); formerly Vice President and General Manager, Composites (2007)
Kelly J. Schmidt (54)	Vice President, Controller since April 2011
Daniel T. Smith (54)	Senior Vice President, Chief Growth Officer since December 2019; formerly Senior Vice President, Organization and Administration (2014)
Gunner Smith (46)	President, Roofing since August 2018, formerly Vice President of Distribution Sales for Roofing (2012)
Michael H. Thaman (55)**	Executive Chairman since April 2019 (Chairman of the Board since April 2002); Chief Executive Officer from December 2007 to April 2019

* Information in parentheses indicates year during the past five years in which service in position began. The last item listed for each individual represents the position held by such individual at the beginning of the five-year period.

** On December 9, 2019, the Company announced that its Board of Directors elected Brian D. Chambers to succeed Michael H. Thaman as Chairman of the Board, effective April 2020.

Part II**ITEM 5. MARKET FOR OWENS CORNING'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES****Market Information**

Owens Corning's common stock trades on the New York Stock Exchange under the symbol "OC."

Holders of Common Stock

The number of stockholders of record of Owens Corning's common stock on February 14, 2020 was 363.

Cash Dividends

The payment of any future cash dividends to our stockholders will depend on decisions that will be made by our Board of Directors and will depend on then existing conditions, including our operating results, financial conditions, contractual restrictions, corporate law restrictions, capital agreements, applicable laws of the State of Delaware and business prospects.

Under the credit agreement applicable to our senior revolving credit facility, the Company may not declare a cash dividend if a default or event of default exists or would come to exist at the time of declaration or if a dividend declaration violates the provisions of our formation documents or other material agreements.

The Company's subsidiaries are subject to certain restrictions on their ability to pay dividends under the agreements governing our senior revolving credit facility and our receivables securitization facility.

Recent Sales of Unregistered Securities; Use of Proceeds from Registered Securities

None.

Issuer Purchases of Equity Securities

The following table provides information about Owens Corning's purchases of its common stock during the three months ended December 31, 2019:

Period	Total Number of Shares (or Units) Purchased*	Average Price Paid per Share (or Unit)	Total Number of Shares (or Units) Purchased as Part of Publicly Announced Plans or Programs**	Maximum Number of Shares (or Units) that May Yet Be Purchased Under the Plans or Programs**
October 1-31, 2019	902	\$ 63.01	—	3,581,726
November 1-30, 2019	2,103	67.20	—	3,581,726
December 1-31, 2019	2,532	66.34	—	3,581,726
Total	5,537	\$ 66.12	—	3,581,726

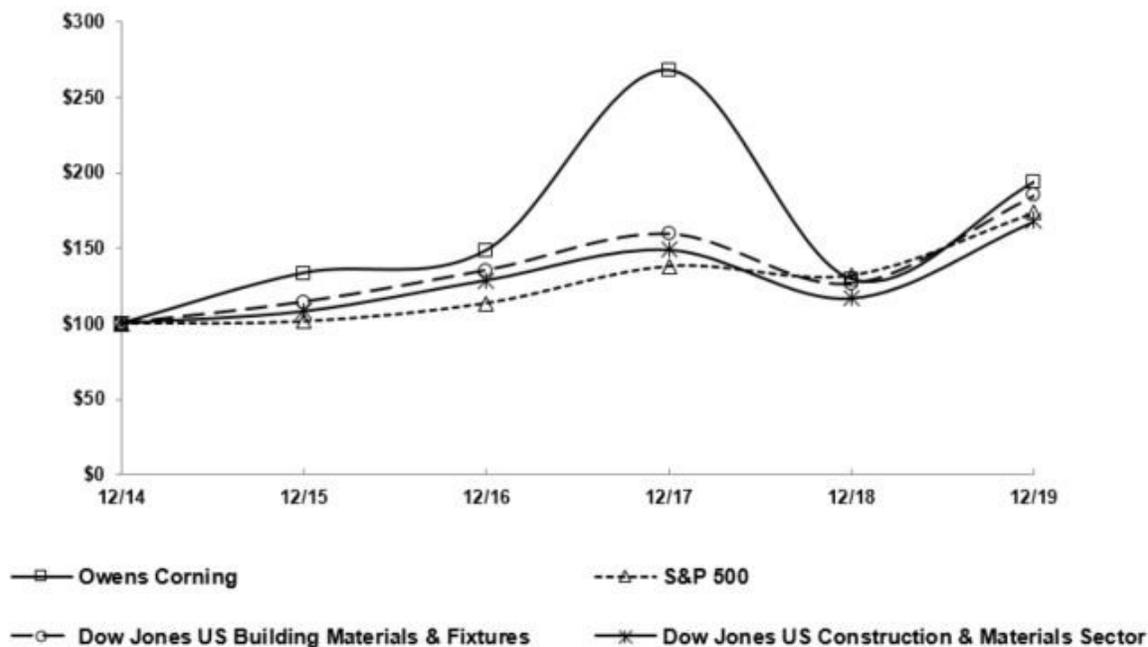
* The Company retained 5,537 shares surrendered to satisfy tax withholding obligations in connection with the vesting of restricted shares granted to our employees.

** On October 24, 2016, the Board of Directors approved a share buy-back program under which the Company is authorized to repurchase up to 10 million shares of the Company's outstanding common stock (the "Repurchase Authorization"). The Repurchase Authorization enables the Company to repurchase shares through open market, privately negotiated, or other transactions. The actual number of shares repurchased will depend on timing, market conditions and other factors and is at the Company's discretion. The Company did not repurchase any shares of its common stock during the three months ended December 31, 2019 under the Repurchase Authorization. As of December 31, 2019, approximately 3.6 million shares remain available for repurchase under the Repurchase Authorization.

ITEM 5. MARKET FOR OWENS CORNING'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES (continued)

Performance Graph

The annual changes for the five-year period shown in the graph on this page are based on the assumption that \$100 had been invested in Owens Corning (OC) stock, the Standard & Poor's 500 Stock Index ("S&P 500"), the Dow Jones U.S. Building Materials & Fixtures Index ("DJ Bld. Mat.") and the Dow Jones U.S. Construction & Materials Index ("DJ Constr. & Mat.") on December 31, 2014, and that all quarterly dividends were reinvested. The total cumulative dollar returns shown on the graph represent the value that such investments would have had on December 31, 2019. We have selected the U.S. Construction & Materials Index to include in the graph below as that index is used in an external metric to determine performance-based compensation and is utilized by the Company's investor relations function.



Performance Graph

	2014	2015	2016	2017	2018	2019
OC	\$ 100	\$ 133	\$ 148	\$ 268	\$ 129	\$ 195
S&P 500	\$ 100	\$ 101	\$ 114	\$ 138	\$ 132	\$ 174
DJ Bld. Mat.	\$ 100	\$ 114	\$ 135	\$ 160	\$ 127	\$ 185
DJ Constr. & Mat.	\$ 100	\$ 108	\$ 129	\$ 149	\$ 117	\$ 168

ITEM 6. SELECTED FINANCIAL DATA

	Twelve Months Ended December 31,				
	2019(a)	2018(b)	2017(c)	2016(d)	2015(e)
	(in millions, except per share amounts)				
Statement of Earnings Data					
Net sales	\$ 7,160	\$ 7,057	\$ 6,384	\$ 5,677	\$ 5,350
Gross margin	\$ 1,609	\$ 1,632	\$ 1,569	\$ 1,569	\$ 1,153
Marketing and administrative expenses	\$ 698	\$ 700	\$ 620	\$ 584	\$ 525
Earnings before interest and taxes	\$ 753	\$ 821	\$ 737	\$ 699	\$ 548
Interest expense, net	\$ 131	\$ 117	\$ 107	\$ 108	\$ 100
Loss (gain) on extinguishment of debt	\$ 32	\$ —	\$ 71	\$ 1	\$ (5)
Income tax expense	\$ 186	\$ 156	\$ 269	\$ 188	\$ 120
Net earnings	\$ 405	\$ 547	\$ 290	\$ 399	\$ 334
Net earnings attributable to Owens Corning	<u>\$ 405</u>	<u>\$ 545</u>	<u>\$ 289</u>	<u>\$ 393</u>	<u>\$ 330</u>
Earnings per common share attributable to Owens Corning common stockholders					
Basic	\$ 3.71	\$ 4.94	\$ 2.59	\$ 3.44	\$ 2.82
Diluted	\$ 3.68	\$ 4.89	\$ 2.55	\$ 3.41	\$ 2.79
Dividend	\$ 0.90	\$ 0.85	\$ 0.81	\$ 0.74	\$ 0.68
Weighted-average common shares					
Basic	109.2	110.4	111.5	114.4	117.2
Diluted	110.1	111.4	113.2	115.4	118.2
Balance Sheet Data					
Total assets	\$ 10,006	\$ 9,771	\$ 8,632	\$ 7,741	\$ 7,326
Long-term debt, net of current portion	\$ 2,986	\$ 3,362	\$ 2,405	\$ 2,099	\$ 1,702
Total equity	\$ 4,671	\$ 4,324	\$ 4,204	\$ 3,889	\$ 3,779

- (a) During 2019, the Company recorded \$28 million of restructuring costs, comprised of \$13 million of severance, \$9 million of accelerated depreciation and \$6 million of other exit costs; and \$43 million of pension settlement losses from risk mitigation actions. Outside of earnings before interest and taxes, the Company also recorded a \$32 million loss on debt extinguishment. The Company adopted ASU 2016-02, "Leases (Topic 842)," and the related amendments as of January 1, 2019, which increased total assets by \$237 million as of the date of adoption.
- (b) During 2018, the Company recorded \$22 million of restructuring costs, comprised of \$4 million of severance, \$10 million of accelerated depreciation and \$8 million of other exit costs. In connection with our previously announced acquisitions, mainly Paroc, we recognized \$16 million of acquisition-related costs and a \$2 million charge related to inventory fair value step-up. Outside of earnings before interest and taxes, the Company also recorded a \$32 million gain related to the settlement of an uncertain tax position in Finland and a \$9 million non-cash income tax charge related to the Tax Act.
- (c) During 2017, the Company recorded \$48 million of restructuring costs, comprised of \$27 million of severance, \$17 million of accelerated depreciation and \$4 million of other exit costs. In connection with our previously announced acquisitions, mainly Pittsburgh Corning, we recognized \$15 million of acquisition-related costs and a \$5 million charge related to inventory fair value step-up. Other significant items included \$64 million of pension settlement losses from risk mitigation actions, a \$15 million environmental liability charge for a closed U.S. site, partially offset by a \$29 million litigation settlement gain, net of legal fees. Outside of earnings before interest and taxes, the Company also recorded a \$71 million loss on debt extinguishment and an \$82 million non-cash income tax charge related to the Tax Act.
- (d) During 2016, the Company recorded \$28 million of restructuring costs, comprised of \$19 million of accelerated depreciation, \$6 million of facility-related charges and \$3 million of personnel-related charges. In connection with our previously announced acquisitions, mainly InterWrap Holdings, Inc. ("InterWrap"), we recognized \$9 million of acquisition-related costs and a \$10 million charge related to inventory fair value step-up.

ITEM 6. SELECTED FINANCIAL DATA (continued)

- (e) During 2015, the Company recorded \$2 million of restructuring costs. This was comprised of a \$6 million benefit from changes in severance estimates and pension-related adjustments, offset by \$3 million in accelerated depreciation and \$5 million in other exit costs. The retrospective adoption requirements of ASU 2017-07 had a de minimis effect on 2015, and was not applied to the results shown above due to immateriality.
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ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

This Management's Discussion and Analysis (MD&A) is intended to help investors understand Owens Corning, our operations and our present business environment. MD&A is provided as a supplement to, and should be read in conjunction with, our Consolidated Financial Statements and the accompanying Notes thereto contained in this report. Unless the context requires otherwise, the terms "Owens Corning," "Company," "we," "its," and "our" in this report refer to Owens Corning and its subsidiaries.

This section of this Form 10-K generally discusses 2019 and 2018 items and year-to-year comparisons between 2019 and 2018. Discussions of 2017 items and year-to-year comparisons between 2018 and 2017 that are not included in this Form 10-K can be found in "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Part II, Item 7 of the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2018.

GENERAL

Owens Corning is a leading global producer of glass fiber reinforcements and other materials for composites and of residential, commercial and industrial building materials. The Company has three reporting segments: Composites, Insulation and Roofing. Through these lines of business, the Company manufactures and sells products worldwide. We maintain leading market positions in many of our major product categories.

EXECUTIVE OVERVIEW

Net earnings attributable to Owens Corning were \$405 million in 2019 compared to \$545 million in 2018. The Company reported \$753 million in earnings before interest and taxes (EBIT) in 2019 compared to \$821 million in 2018. The Company generated \$828 million in adjusted earnings before interest and taxes ("Adjusted EBIT") in 2019 compared to \$861 million in 2018. See the Adjusted Earnings Before Interest and Taxes paragraph of MD&A for further information regarding EBIT and Adjusted EBIT, including the reconciliation to net earnings attributable to Owens Corning. Segment EBIT performance compared to 2018 decreased \$4 million in our Composites segment, decreased \$60 million in our Insulation segment, and increased \$21 million in our Roofing segment. Within our Corporate, Other and Eliminations category, General corporate expenses and other decreased by \$10 million.

In our Composites segment, EBIT in 2019 was \$247 million compared to \$251 million in 2018. In our Insulation segment, EBIT in 2019 was \$230 million compared to \$290 million in 2018, primarily due to production curtailment actions taken in our North American residential fiberglass business. In our Roofing segment, EBIT in 2019 was \$455 million compared to \$434 million in 2018, primarily due to higher sales volumes.

In 2019, the Company's operating activities provided \$1,037 million of cash flow, compared to \$803 million in 2018. The change was primarily driven by changes in inventories.

In August 2019, the Company issued \$450 million of 2029 senior notes with an annual interest rate of 3.95%. The proceeds from the notes were used to repay portions of its outstanding 2022 senior notes and 2036 senior notes. The Company recognized \$32 million of loss on extinguishment of debt in the third quarter of 2019 associated with these actions.

In 2019, the Company repurchased 1.0 million shares of the Company's common stock for \$48 million under a previously announced repurchase authorization. As of December 31, 2019, 3.6 million shares remain available for repurchase under the repurchase authorization.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS (continued)**RESULTS OF OPERATIONS****Consolidated Results (in millions)**

	Twelve Months Ended December 31,		
	2019	2018	2017
Net sales	\$ 7,160	\$ 7,057	\$ 6,384
Gross margin	\$ 1,609	\$ 1,632	\$ 1,569
<i>% of net sales</i>	<i>22 %</i>	<i>23 %</i>	<i>25 %</i>
Non-operating expense (income)	\$ 34	\$ (14)	\$ 60
Earnings before interest and taxes	\$ 753	\$ 821	\$ 737
Interest expense, net	\$ 131	\$ 117	\$ 107
Loss on extinguishment of debt	\$ 32	\$ —	\$ 71
Income tax expense	\$ 186	\$ 156	\$ 269
Net earnings attributable to Owens Corning	\$ 405	\$ 545	\$ 289

The Consolidated Results discussion below provides a summary of our results and the trends affecting our business, and should be read in conjunction with the more detailed Segment Results discussion that follows.

NET SALES

Net sales increased \$103 million in 2019 compared to 2018. The increase in net sales was driven by higher selling prices in our Roofing and Insulation segments and higher sales volumes in our Roofing and Composites segments.

GROSS MARGIN

Gross margin decreased \$23 million in 2019 compared to 2018. The decrease was primarily driven by higher input cost inflation in all three segments and the impact of production curtailment actions taken in our North American residential fiberglass business, partially offset by the impact of higher selling prices in our Insulation and Roofing segments and lower transportation costs in all three segments.

NON-OPERATING EXPENSE (INCOME)

Non-operating expense (income) increased \$48 million compared to 2018, primarily due to pension settlement losses resulting from risk mitigation actions.

INTEREST EXPENSE, NET

Interest expense, net in 2019 increased \$14 million compared to 2018, primarily due to a decrease in interest income earned on cash balances and lower interest capitalized.

LOSS ON EXTINGUISHMENT OF DEBT

For the year ended December 31, 2019, the Company recognized a \$32 million loss on extinguishment of debt in connection with the repurchase of a portion of its outstanding 2022 senior notes and 2036 senior notes in a tender offer. During 2018, there was no extinguishment of debt. For the year ended December 31, 2017, the Company recognized a \$71 million loss on extinguishment of debt in connection with the redemption of its 2019 senior notes and a portion of its 2036 senior notes.

INCOME TAX EXPENSE

Income tax expense for 2019 was \$186 million compared to \$156 million in 2018. The Company's effective tax rate for 2019 was 31% on pre-tax income of \$590 million. The difference between the 31% effective tax rate and the U.S. federal statutory tax rate of 21% is primarily attributable to U.S. state and local income tax expense, legislative changes, the impact of U.S. federal tax expense on foreign earnings, an increase in tax valuation allowances recorded against U.S. foreign tax credits and certain foreign deferred tax assets and other discrete adjustments.

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

On March 6, 2019, the U.S. Treasury and the Internal Revenue Service (IRS) proposed regulations that provide guidance on determining the amount of a domestic corporation's deduction for the global intangible low-taxed income (GILTI) and foreign-derived intangible income (FDII) recently added by the Tax Act. The proposed regulations provide special rules to determine the deduction amount, which adjusted the Company's 2018 tax estimate and resulted in an increase to tax expense of \$12 million for 2019.

The realization of deferred tax assets depends on achieving a certain minimum level of future taxable income. Management currently believes that it is at least reasonably possible that the minimum level of taxable income will be met within the next 12 months to reduce the valuation allowances of certain foreign jurisdictions by a range of zero to \$5 million.

The Company's effective tax rate for 2018 was 22% on pre-tax income of \$704 million. The difference between the 22% effective tax rate and the U.S. federal statutory tax rate of 21% is primarily attributable to the final adjustments for the Tax Act including an additional valuation allowance recorded against U.S. FTCs, U.S. federal tax expense on foreign earnings and U.S. state and local income tax expense, offset by the reversal of valuation allowances recorded on certain foreign deferred tax assets, changes in uncertain tax positions and excess tax benefits related to stock compensation.

On February 5, 2018, the Company acquired all the outstanding equity of Paroc, a leading producer of mineral wool insulation for building and technical applications in Europe. The acquisition included net uncertain tax position (UTP) liabilities related to a transfer pricing dispute and interest expense. On December 18, 2018, the Finnish Supreme Administrative Court (SAC) ruled in favor of Paroc Oy Ag ("Paroc Finland") regarding the transfer pricing dispute for tax years 2006 to 2008. Based on the SAC decision, the Company reversed the UTPs regarding the transfer pricing dispute resulting in a reduction of tax expense of \$32 million.

In December 2017, the U.S. government enacted tax legislation commonly known as the Tax Act. The SEC issued Staff Accounting Bulletin No. 118, "Income Tax Accounting Implications of the Tax Cuts and Jobs Act" ("SAB 118"), providing guidance on accounting for the Tax Act. SAB 118 provides a measurement period that should not extend beyond one year from the Tax Act enactment date to complete the accounting under Accounting Standards Codification (ASC) 740, "Income Taxes." In accordance with SAB 118, a provisional non-cash charge of \$82 million was recorded to tax expense in December 2017 based on reasonable estimates of certain effects of the Tax Act. During the measurement period, the Company completed the accounting for income tax effects of the Tax Act. The 2018 revised estimates resulted in an increase to the provisional charge of \$9 million.

A provision of the Tax Act effective January 1, 2018 for global intangible low taxed income (GILTI) earned by controlled foreign corporations (CFCs) resulted in a 2018 charge of \$13 million to tax expense.

ITEM 7. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS (continued)
Restructuring and Acquisition-Related Costs

The Company has incurred restructuring, transaction and integration costs related to acquisitions, along with restructuring costs in connection with its global cost reduction and productivity initiatives. These costs are recorded in the Corporate, Other and Eliminations category. Please refer to Notes 8 and 12 of the Consolidated Financial Statements for further information on the nature of these costs.

The following table presents the impact and respective location of these income (expense) items on the Consolidated Statements of Earnings (in millions):

	Location	Twelve Months Ended December 31,		
		2019	2018	2017
Restructuring costs	Cost of sales	\$ (15)	\$ (17)	\$ (20)
Restructuring costs	Other expenses, net	(12)	(5)	(28)
Restructuring costs	Non-operating expense	(1)	—	—
Acquisition-related costs	Marketing and administrative expenses	—	(7)	(6)
Acquisition-related costs	Other expenses, net	—	(9)	(9)
Recognition of acquisition inventory fair value step-up	Cost of sales	—	(2)	(5)
Total restructuring, acquisition and integration-related costs		\$ (28)	\$ (40)	\$ (68)

Adjusted Earnings Before Interest and Taxes (“Adjusted EBIT”)

Adjusted EBIT is a non-GAAP measure that excludes certain items that management does not allocate to our segment results because it believes they are not representative of the Company’s ongoing operations. Adjusted EBIT is used internally by the Company for various purposes, including reporting results of operations to the Board of Directors of the Company, analysis of performance and related employee compensation measures. Although management believes that these adjustments result in a measure that provides a useful representation of our operational performance, the adjusted measure should not be considered in isolation or as a substitute for Net earnings attributable to Owens Corning as prepared in accordance with accounting principles generally accepted in the United States.

Adjusting (expense) income items to EBIT are shown in the table below (in millions):

	Twelve Months Ended December 31,		
	2019	2018	2017
Restructuring costs	\$ (28)	\$ (22)	\$ (48)
Acquisition-related costs	—	(16)	(15)
Recognition of acquisition inventory fair value step-up	—	(2)	(5)
Litigation settlement gain, net of legal fees	—	—	29
Pension settlement losses	(43)	—	(64)
Environmental liability charges	(4)	—	(15)
Total adjusting items	\$ (75)	\$ (40)	\$ (118)

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

The reconciliation from Net earnings attributable to Owens Corning to EBIT and Adjusted EBIT is shown in the table below (in millions):

	Twelve Months Ended December 31,		
	2019	2018	2017
NET EARNINGS ATTRIBUTABLE TO OWENS CORNING	\$ 405	\$ 545	\$ 289
Net earnings attributable to noncontrolling interests	—	2	1
NET EARNINGS	405	547	290
Equity in net earnings / (loss) of affiliates	1	(1)	—
Income tax expense	186	156	269
EARNINGS BEFORE TAXES	590	704	559
Interest expense, net	131	117	107
Loss on extinguishment of debt	32	—	71
EARNINGS BEFORE INTEREST AND TAXES	753	821	737
Adjusting items from above	(75)	(40)	(118)
ADJUSTED EBIT	\$ 828	\$ 861	\$ 855

Segment Results

EBIT by segment consists of net sales less related costs and expenses and is presented on a basis that is used internally for evaluating segment performance. Certain items, such as general corporate expenses or income and certain other expense or income items, are excluded from the internal evaluation of segment performance. Accordingly, these items are not reflected in EBIT for our reportable segments and are included in the Corporate, Other and Eliminations category, which is presented following the discussion of our reportable segments.

Composites

The table below provides a summary of net sales, EBIT and depreciation and amortization expense for the Composites segment (in millions):

	Twelve Months Ended December 31,		
	2019	2018	2017
Net sales	\$ 2,059	\$ 2,041	\$ 2,068
<i>% change from prior year</i>	<i>1 %</i>	<i>-1 %</i>	<i>6 %</i>
EBIT	\$ 247	\$ 251	\$ 291
<i>EBIT as a % of net sales</i>	<i>12 %</i>	<i>12 %</i>	<i>14 %</i>
Depreciation and amortization expense	\$ 154	\$ 147	\$ 144

NET SALES

Net sales in our Composites segment increased \$18 million in 2019 compared to 2018. The positive impact of higher sales volumes of approximately 4% was partially offset by the \$50 million negative impact of translating sales denominated in foreign currency into United States dollars, \$11 million of lower selling prices and unfavorable customer mix.

EBIT

EBIT in our Composites segment decreased \$4 million in 2019 compared to 2018. The unfavorable impact of higher input cost inflation of \$22 million was partially offset by the \$17 million of positive impact of improved manufacturing performance. The favorable impact of higher sales volumes was offset by the impact of unfavorable product and customer mix. The benefit of lower rebuild and start-up costs and lower delivery costs was offset by lower selling prices and the unfavorable impact of translating sales and costs denominated in foreign currencies into United States dollars.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS (continued)
OUTLOOK

Global glass reinforcements market demand has historically grown on average as a function of global industrial production and we believe this relationship will continue. In 2020, the Company expects modest global industrial production growth.

Insulation

The table below provides a summary of net sales, EBIT and depreciation and amortization expense for the Insulation segment (in millions):

	Twelve Months Ended December 31,		
	2019	2018	2017
Net sales	\$ 2,668	\$ 2,720	\$ 2,001
<i>% change from prior year</i>	-2 %	36 %	14 %
EBIT	\$ 230	\$ 290	\$ 177
<i>EBIT as a % of net sales</i>	9 %	11 %	9 %
Depreciation and amortization expense	\$ 194	\$ 186	\$ 124

NET SALES

In our Insulation segment, 2019 net sales decreased \$52 million compared to 2018. The unfavorable impact of lower sales volumes of about 4% and the \$45 million unfavorable impact of translating sales denominated in foreign currencies into United States dollars was partially offset by higher selling prices of \$48 million, the \$38 million impact of our acquisition of Paroc (net sales from January 1, 2019 through February 4, 2019 that were related to the one-year post-acquisition period) and the favorable impact of product and customer mix.

EBIT

In our Insulation segment, EBIT decreased \$60 million in 2019 compared to 2018, due to production curtailment actions primarily taken in our North American residential fiberglass business, which resulted in \$62 million of lower fixed cost absorption on lower production volumes. The impact of higher selling prices was offset primarily by lower sales volumes. Favorable manufacturing performance and the favorable impact of lower rebuild and start-up costs were offset by higher input cost inflation of \$25 million.

OUTLOOK

The outlook for Insulation demand is driven by commercial construction and industrial construction activity in the United States, Canada, Europe, Asia-Pacific and Latin America; new North American residential construction; and remodeling and repair activity. Demand for commercial and industrial insulation is most closely correlated to commercial construction activity and industrial production growth in the global markets we serve. Demand for residential insulation is most closely correlated to U.S. housing starts. During the fourth quarter of 2019, the average Seasonally Adjusted Annual Rate (SAAR) of U.S. housing starts was approximately 1.441 million starts, which was up from 1.185 million starts in the fourth quarter of 2018.

We believe the geographic, product and channel mix of our portfolio may continue to moderate the impact of market demand-driven variability associated with the U.S. housing market.

Roofing

The table below provides a summary of net sales, EBIT and depreciation and amortization expense for the Roofing segment (in millions):

	Twelve Months Ended December 31,		
	2019	2018	2017
Net sales	\$ 2,634	\$ 2,492	\$ 2,553
<i>% change from prior year</i>	6 %	-2 %	16 %
EBIT	\$ 455	\$ 434	\$ 535
<i>EBIT as a % of net sales</i>	17 %	17 %	21 %
Depreciation and amortization expense	\$ 54	\$ 51	\$ 50

ITEM 7. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS (continued)

NET SALES

In our Roofing segment, net sales increased \$142 million in 2019 compared to 2018. The increase was driven by higher sales volumes of about 4% primarily on higher shingle volumes, \$20 million of higher selling prices, and higher third-party asphalt sales.

EBIT

In our Roofing segment, EBIT increased \$21 million in 2019 compared to 2018. The favorable impact of higher selling prices of \$20 million and lower transportation costs more than offset \$45 million higher input cost inflation. The favorable impact of higher sales volumes were partially offset by the unfavorable impact of lower first quarter production volumes compared to the same period a year ago.

OUTLOOK

In our Roofing business, we expect the factors that have driven margins in recent years, such as growth from new construction and reroof demand, along with higher sales of roofing components, to continue to deliver profitability. Uncertainties that may impact our Roofing margins include demand from storm and other weather events, competitive pricing pressure and the cost and availability of raw materials, particularly asphalt.

Corporate, Other and Eliminations

The table below provides a summary of EBIT and depreciation and amortization expense for the Corporate, Other and Eliminations category (in millions):

	Twelve Months Ended December 31,		
	2019	2018	2017
Restructuring costs	\$ (28)	\$ (22)	\$ (48)
Acquisition-related costs	—	(16)	(15)
Recognition of acquisition inventory fair value step-up	—	(2)	(5)
Litigation settlement gain, net of legal fees	—	—	29
Pension settlement losses	(43)	—	(64)
Environmental liability charges	(4)	—	(15)
General corporate expense and other	(104)	(114)	(148)
EBIT	\$ (179)	\$ (154)	\$ (266)
Depreciation and amortization	\$ 55	\$ 49	\$ 53

EBIT

In Corporate, Other and Eliminations, EBIT losses in 2019 were \$25 million higher compared to 2018, primarily due to \$43 million of pension settlement losses, partially offset by lower general corporate expenses and lower acquisition-related costs in 2019.

General corporate expense and other in 2019 was \$10 million lower than in 2018, primarily driven by lower general corporate expenses.

OUTLOOK

In 2020, we expect general corporate expenses to range between \$125 million and \$135 million, an increase from 2019 due to the reset of performance-based compensation.

ITEM 7. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS (continued)

SAFETY

Working safely is a condition of employment at Owens Corning. We believe this organization-wide expectation provides for a safer work environment for employees, improves our manufacturing processes, reduces our costs and enhances our reputation. Furthermore, striving to be a world-class leader in safety provides a platform for all employees to understand and apply the resolve necessary to be a high-performing, global organization. We measure our progress on safety based on Recordable Incidence Rate (“RIR”) as defined by the United States Department of Labor, Bureau of Labor Statistics. For the year ended December 31, 2019, our RIR was 0.65, compared to 0.54 in the same period a year ago.

LIQUIDITY, CAPITAL RESOURCES AND OTHER RELATED MATTERS

Liquidity

The Company's primary external sources of liquidity are its Senior Revolving Credit Facility and its Receivables Securitization Facility.

The Company has an \$800 million senior revolving credit facility (the "Senior Revolving Credit Facility") that has been amended from time to time, which matures in May 2024.

The Company has a \$280 million securitization facility (the "Receivables Securitization Facility") that has been amended from time to time, which matures in April 2022.

The following table shows how the Company utilized its primary sources of liquidity (in millions):

	As of December 31, 2019	
	Senior Revolving Credit Facility	Receivables Securitization Facility
Facility size	\$ 800	\$ 280
Collateral capacity limitation on availability	n/a	—
Outstanding borrowings	—	—
Outstanding letters of credit	4	2
Availability on facility	\$ 796	\$ 278

The Company issued \$450 million of 2029 senior notes on August 12, 2019, subject to \$5 million of discounts and issuance costs. Interest on the 2029 senior notes is payable semiannually in arrears on February 15 and August 15 each year, beginning on February 15, 2020. The proceeds from the 2029 senior notes were used to repay portions of the 2022 senior notes and 2036 senior notes. The Company recognized \$32 million of loss on extinguishment of debt in the third quarter of 2019 associated with these actions.

The Company issued \$400 million of 2048 senior notes on January 25, 2018. Interest on these notes is payable semiannually in arrears on January 30 and July 30 each year, beginning on July 30, 2018. The proceeds from the 2048 senior notes, along with borrowings on a \$600 million term loan commitment and the Receivables Securitization Facility, were used to fund the purchase of Paroc in the first quarter of 2018.

The Company obtained a term loan borrowing on October 27, 2017 for \$600 million (the "Term Loan"). The Company entered into the Term Loan, in part, to pay a portion of the purchase price of the Paroc acquisition. The Term Loan requires minimum quarterly principal repayments, all of which have been paid as of December 31, 2019, and full repayment by February 2021. In March 2019, the Term Loan was amended to reduce the applicable interest rate on outstanding borrowings.

The Receivables Securitization Facility and Senior Revolving Credit Facility mature in 2022 and 2024, respectively. As of December 31, 2019, the Term Loan had \$200 million outstanding. The Company has no significant debt maturities of senior notes before 2022. As of December 31, 2019, the Company had \$3.0 billion of total debt and cash and cash equivalents of \$172 million.

Cash and cash equivalents held by foreign subsidiaries may be subject to foreign withholding taxes upon repatriation to the U.S. As of December 31, 2019 and December 31, 2018, the Company had \$30 million and \$67 million, respectively, in cash and

ITEM 7. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS (continued)

cash equivalents in certain of its foreign subsidiaries. The Company continues to assert indefinite reinvestment in accordance with ASC 740 based on the laws as of enactment of the tax legislation commonly known as the U.S. Tax Cuts and Jobs Act of 2017.

As a holding company, we have no operations of our own and most of our assets are held by our direct and indirect subsidiaries. Dividends and other payments or distributions from our subsidiaries will be used to meet our debt service and other obligations and to enable us to pay dividends to our stockholders. Please refer to the Risk Factors disclosed in Item 1A of this Form 10-K for details on the factors that could inhibit our subsidiaries’ abilities to pay dividends or make other distributions to the parent company.

We expect that our cash on hand, coupled with future cash flows from operations and other available sources of liquidity, including our Senior Revolving Credit Facility and Receivables Securitization Facility, will provide ample liquidity to enable us to meet our cash requirements. Our anticipated uses of cash include capital expenditures, working capital needs, pension contributions, meeting financial obligations, payments of quarterly dividends as authorized by our Board of Directors, and acquisitions.

We have outstanding share repurchase authorizations and will evaluate and consider repurchasing shares of our common stock, as well as strategic acquisitions, divestitures, joint ventures and other transactions to create stockholder value and enhance financial performance. Such transactions may require cash expenditures beyond current sources of liquidity or generate proceeds.

The credit agreements applicable to our Senior Revolving Credit Facility, Receivables Securitization Facility, and Term Loan contain various covenants that we believe are usual and customary. These covenants include a maximum allowed leverage ratio and a minimum required interest expense coverage ratio. We were in compliance with these covenants as of December 31, 2019.

Cash flows

The following table presents a summary of our cash balance, cash flows, and availability on credit facilities (in millions):

	Twelve Months Ended December 31,		
	2019	2018	2017
Cash and cash equivalents	\$ 172	\$ 78	\$ 246
Cash provided by operating activities	\$ 1,037	\$ 803	\$ 1,016
Cash used for investing activities	\$ (394)	\$ (1,589)	\$ (901)
Cash (used for) provided by financing activities	\$ (573)	\$ 647	\$ 3
Availability on the Senior Revolving Credit Facility	\$ 796	\$ 791	\$ 791
Availability on the Receivables Securitization Facility	\$ 278	\$ 202	\$ 221

Cash and cash equivalents: In 2019, the balance of cash and cash equivalents increased by \$94 million compared to 2018.

Operating activities: In 2019, the Company generated \$1,037 million of cash from operating activities compared to \$803 million in 2018. The change in cash provided by operating activities was primarily due to the favorable change in inventory compared to 2018.

Investing activities: The \$1,195 million decrease in cash used for investing activities in 2019 compared to 2018 was primarily driven by higher spending on acquisitions in the prior year.

Financing activities: Net cash used for financing activities in 2019 was \$573 million compared to net cash provided by financing activities of \$647 million in 2018. The change year-over-year was primarily due to higher long-term debt inflows to fund the purchase of Paroc in 2018.

2020 Investments

Capital Expenditures: The Company will continue a balanced approach to the use of its cash flows. Operational cash flow will be used to fund the Company’s growth and innovation. Capital expenditures in 2020 are expected to be approximately \$460 million.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS (continued)**Tax Net Operating Losses and U.S. Foreign Tax Credits**

As of December 31, 2019 and 2018, our federal tax net operating losses remaining were \$0.1 billion and \$0.4 billion, respectively. The decrease in U.S. federal tax NOLs is primarily due to the impact of 2019 estimated taxable income. The company generated a significant U.S. FTC in 2017 of approximately \$161 million as a result of changes from the Tax Act. As of December 31, 2019 and 2018, our remaining U.S. FTCs were \$119 million and \$161 million, respectively. Our NOL and FTC carryforwards are subject to the limitations imposed under sections 382 and 383 of the Internal Revenue Code. These limits are triggered when a change in control occurs and are computed based upon several variable factors including the share price of the Company's common stock on the date of the change in control. A change in control is generally defined as a cumulative change of more than 50% in the ownership positions of certain stockholders during a rolling three year period.

In addition to the United States federal tax NOLs described above, we have NOLs in various state and foreign jurisdictions which totaled \$1.4 billion and \$0.4 billion as of December 31, 2019, respectively, and \$1.6 billion and \$0.4 billion as of December 31, 2018, respectively. The state and foreign NOL decreased from prior year based on our estimate of 2019 taxable income. The evaluation of the amount of NOLs and FTCs expected to be realized necessarily involves forecasting the amount of taxable income that will be generated in future years. In assessing the realizability of our deferred tax assets, we have not relied on any material future tax planning strategies. We have forecasted future results in accordance with the recently enacted Tax Act using estimates management believes to be reasonable, which are based on independent evidence such as expected trends resulting from certain leading economic indicators, such as global industrial production and new U.S. residential housing starts. In order to utilize our NOLs and U.S. FTCs, we estimate that the Company will need to generate future federal, state and foreign earnings before taxes of approximately \$0.6 billion, \$1.4 billion and \$0.4 billion, respectively. Management believes the Company will generate sufficient future taxable income within the statutory limitations in order to fully realize the carrying value of its U.S. federal NOLs. As of December 31, 2019, a valuation allowance was established for U.S. FTC carryforwards and certain state and foreign jurisdictions' NOL carryforwards.

The realization of deferred income tax assets is dependent on future events. Actual results inevitably will vary from management's forecasts. Should we determine that it is likely that our deferred income tax assets are not realizable, we would be required to reduce our deferred tax assets reflected on our Consolidated Financial Statements to the net realizable amount by establishing an accounting valuation allowance and recording a corresponding charge to current earnings. Such adjustments could be material to the financial statements. To date, we have recorded valuation allowances against certain of these deferred tax assets totaling \$92 million as of December 31, 2019.

Pension contributions

Please refer to Note 14 of the Consolidated Financial Statements. The Company has several defined benefit pension plans. The Company made cash contributions of \$46 million and \$40 million to the plans during the twelve months ended December 31, 2019 and 2018, respectively. The Company expects to contribute \$50 million in cash to its pension plans during 2020. Actual contributions to the plans may change as a result of several factors, including changes in laws that impact funding requirements. The ultimate cash flow impact to the Company, if any, of the pension plan liability and the timing of any such impact will depend on numerous variables, including future changes in actuarial assumptions, legislative changes to pension funding laws, and market conditions.

Derivatives

Please refer to Note 5 of the Consolidated Financial Statements.

Fair Value Measurement

Please refer to Notes 1, 5, and 13 of the Consolidated Financial Statements.

OFF-BALANCE-SHEET ARRANGEMENTS

The Company has entered into limited off-balance-sheet arrangements, as defined under Securities and Exchange Commission rules, in the ordinary course of business. The Company does not believe these arrangements will have a material effect on the Company's financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources.

ITEM 7. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS (continued)

CONTRACTUAL OBLIGATIONS

In the ordinary course of business, the Company enters into contractual obligations to make cash payments to third parties. The Company’s known contractual obligations as of December 31, 2019 are as follows (in millions):

	Payments due by period						
	2020	2021	2022	2023	2024	2025 and beyond	Total
Long-term debt obligations	\$ —	\$ 200	\$ 184	\$ —	\$ 400	\$ 2,226	\$ 3,010
Interest on variable rate debt (1), fixed rate debt, finance lease payments	133	128	126	118	118	1,439	2,062
Finance lease obligations	7	7	6	4	1	1	26
Operating lease obligations	73	60	39	22	11	17	222
Purchase obligations (2)	182	93	80	55	19	48	477
Deferred acquisition payments	1	3	—	—	—	—	4
Pension contributions (3)	50	—	—	—	—	—	50
Total (4)	\$ 446	\$ 491	\$ 435	\$ 199	\$ 549	\$ 3,731	\$ 5,851

- (1) Interest on variable rate debt is calculated using LIBOR rates as of December 31, 2019 plus a facility credit spread for all future periods.
- (2) Purchase obligations are commitments to suppliers to purchase goods or services, and include take-or-pay arrangements, capital expenditures, and contractual commitments to purchase equipment. The Company did not include ordinary course of business purchase orders in this amount as the majority of such purchase orders may be canceled and are reflected in historical operating cash flow trends. The Company does not believe such purchase orders will adversely affect our liquidity position.
- (3) Pension contributions include estimated contributions for our defined benefit pension plans. The Company is not presenting estimated payments in the table above beyond 2020 as funding can vary significantly from year to year based upon changes in the fair value of plan assets, funding regulations and actuarial assumptions.
- (4) The Company has not included its accounting for uncertainty in income taxes liability in the contractual obligation table as the timing of payment, if any, cannot be reasonably estimated. The balance of this liability at December 31, 2019 was \$22 million.

CRITICAL ACCOUNTING ESTIMATES

Our discussion and analysis of our financial condition and results of operations is based upon our Consolidated Financial Statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. On an ongoing basis, management evaluates its estimates and judgments related to these assets, liabilities, revenues and expenses. We believe these estimates to be reasonable under the circumstances. Management bases its estimates and judgments on historical experience, expected future outcomes, and on various other factors that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates.

The Company believes that the following accounting estimates are critical to our financial results:

Tax Estimates. The determination of our tax provision is complex due to operations in several tax jurisdictions outside the United States. We apply a more-likely-than-not recognition threshold for all tax uncertainties. Such uncertainties include any claims by the Internal Revenue Service for income taxes, interest, and penalties attributable to audits of open tax years.

In addition, we record a valuation allowance to reduce our deferred tax assets to the amount that we believe is more likely than not to be realized. We estimate future taxable income and the effect of tax planning strategies in our consideration of whether deferred tax assets will more likely than not be realized. In the event we were to determine that we would not be able to realize all or part of our net deferred tax assets in the future, an adjustment to reduce the net deferred tax assets would be charged to

ITEM 7. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS (continued)

earnings in the period such determination was made. Conversely, if we were to determine that we would be able to realize our net deferred tax assets in the future in excess of their currently recorded amount, an adjustment to increase the net deferred tax assets would be credited to earnings in the period such determination was made.

Impairment of Assets. The Company exercises judgment in evaluating assets for impairment. Goodwill and other indefinite-lived intangible assets are tested for impairment annually, or when circumstances arise which indicate there may be an impairment. Long-lived assets are tested for impairment when economic conditions or management decisions indicate an impairment may exist. These tests require comparing recorded values to estimated fair values for the assets under review.

The Company has recorded its goodwill and conducted testing for potential goodwill impairment at a reporting unit level. Our reporting units represent a business for which discrete financial information is available and segment management regularly reviews the operating results. The Company has three reporting units: Composites, Insulation and Roofing. The following table summarizes the segment allocation of recorded goodwill on our Consolidated Balance Sheet (in millions):

Segment	December 31, 2019	Percent of Total
Composites	\$ 57	3 %
Insulation	1,479	77 %
Roofing	396	20 %
Total goodwill	\$ 1,932	100 %

Goodwill is an intangible asset that is not subject to amortization; however, annual tests are required to be performed to determine whether impairment exists. Prior to performing the two-step impairment process described in ASC 350-20, the guidance permits companies to assess qualitative factors to determine if it is more likely than not that a reporting unit’s fair value is less than its carrying value. If, based on the review of the qualitative factors, we determine it is not more likely than not that the fair value of a reporting unit is less than its carrying value, we would bypass the two-step impairment test. Events and circumstances we consider in performing the qualitative assessment include macro-economic conditions, market and industry conditions, internal cost factors, and the operational stability and the overall financial performance of the reporting units. If it is more likely than not that a reporting unit’s fair value is greater than its carrying value, then no additional testing is required. If it is more likely than not that a reporting unit’s fair value is less than or close to its carrying value, then step one of the impairment test must be performed to determine if impairment is required.

In 2019, the Company has elected to perform the qualitative approach on its Roofing and Composites reporting units, and proceeded in performing a step one analysis for the Insulation reporting unit. After evaluating and weighing all relevant events and circumstances, we concluded that it is not more likely than not that the fair value of the Roofing and Composites reporting units was less than their carrying amounts. Consequently, we did not perform a step one quantitative analysis for the Roofing and Composites reporting units and determined goodwill was not impaired for 2019.

As part of our quantitative testing process for goodwill of the Insulation reporting unit, we estimated fair values using a discounted cash flow approach from the perspective of a market participant. Significant assumptions used in the discounted cash flow approach are revenue growth rates and EBIT margins used in estimating discrete period cash flow forecasts of the reporting unit, the discount rate, and the long-term revenue growth rate and EBIT margins used in estimating the terminal business value. The cash flow forecasts of the reporting unit are based upon management’s long-term view of our markets and are the forecasts that are used by senior management and the Board of Directors to evaluate operating performance. The discount rate utilized is management’s estimate of what the market’s weighted average cost of capital is for a company with a similar debt rating and stock volatility, as measured by beta. The terminal business value is determined by applying the long-term growth rate to the latest year for which a forecast exists. As part of our goodwill quantitative testing process, the Company evaluates whether there are reasonably likely changes to management’s estimates that would have a material impact on the results of the goodwill impairment testing.

As of October 1, 2019, the date of our annual test of goodwill impairment for the Insulation reporting unit, no impairment of goodwill existed. Testing did indicate that the business enterprise value for the Insulation reporting unit exceeded its carrying value by approximately 10%. There is uncertainty surrounding the macroeconomic factors that impact this reporting unit and a sustained downturn in these factors or a change in the long-term revenue growth or profitability for this reporting unit could increase the likelihood of a future impairment.

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

Other indefinite-lived intangible assets are the Company's trademarks. Fair values used in testing for potential impairment of our trademarks are calculated by applying an estimated market value royalty rate to the forecasted revenues of the businesses that utilize those assets. The assumed cash flows from this calculation are discounted at a rate based on a market participant discount rate. Our annual test of indefinite-lived intangibles was conducted as of October 1, 2019. The fair value of each of our indefinite-lived intangible assets was in excess of its carrying value and thus, no impairment exists. The fair value of these assets substantially exceeded the carrying value as of the date of our assessment.

Fair values for long-lived asset testing are calculated by estimating the undiscounted cash flows from the use and ultimate disposition of the asset or by estimating the amount that a willing third party would pay. For impairment testing, long-lived assets are grouped at the lowest level for which identifiable cash flows are largely independent of the cash flows of other groups of assets and liabilities. The Company groups long-lived assets based on manufacturing facilities that produce similar products either globally or within a geographic region. Management tests asset groups for potential impairment whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Current market conditions have caused the Company to have idle capacity. We consider such temporary idled capacity to be unimpaired because there has not been a significant change in the forecasted long-term cash flows at the asset group level to indicate that the carrying values may not be recoverable. While management's current strategy is to utilize this capacity to meet expected future demand, any significant decrease in this expectation or change in management's strategy could result in future impairment charges related to this excess capacity. We evaluated and concluded that there are not any reasonably likely changes to management's estimates that would indicate that the carrying value of our long-lived assets is unrecoverable.

In addition, changes in management intentions, market conditions, operating performance and other similar circumstances could affect the assumptions used in these impairment tests. Changes in the assumptions could result in impairment charges that could be material to our Consolidated Financial Statements in any given period.

Pensions and Other Postretirement Benefits. Accounting for pensions and other postretirement benefits involves estimating the cost of benefits to be provided well into the future and attributing that cost over the time period each employee works. To accomplish this, extensive use is made of assumptions about investment returns, discount rates, inflation, mortality, turnover, and medical costs. Changes in assumptions used could result in a material impact to our Consolidated Financial Statements in any given period.

Two key assumptions that could have a significant impact on the measurement of pension liabilities and pension expense are the discount rate and the expected return on plan assets. For our largest plan, the United States plan, the discount rate used for the December 31, 2019 measurement date was derived by matching projected benefit payments to bond yields obtained from the Towers Watson proprietary United States RATE:Link 40-90 pension discount curve developed as of the measurement date. The Towers Watson United States RATE:Link 40-90 pension discount curve is based on certain corporate bonds rated AA whose weighted average yields lie within the 40th to 90th percentiles of the bonds considered. Corporate bonds are considered to be AA graded if they receive an AA (or equivalent) rating from either or both of the two primary rating agencies in a given geography. For this purpose, we reference the two agencies with the highest ratings coverage for bonds in each region. Those two agencies are Standard and Poor's and Moody's.

The result supported a discount rate of 3.30% at December 31, 2019 compared to 4.25% at December 31, 2018. A 25 basis point increase (decrease) in the discount rate would decrease (increase) the December 31, 2019 projected benefit obligation for the United States pension plan by approximately \$24 million. A 25 basis point increase (decrease) in the discount rate would decrease (increase) 2020 net periodic pension cost by less than \$1 million.

The expected return on plan assets in the United States was derived by taking into consideration the target plan asset allocation, historical rates of return on those assets, projected future asset class returns and net outperformance of the market by active investment managers and plan related and investment related expenses paid from the plan trust. The Company uses the target plan asset allocation because we rebalance our portfolio to target on a quarterly basis. An asset return model was used to develop an expected range of returns on plan investments over a 20 year period, with the expected rate of return selected from a best estimate range within the total range of projected results. This process resulted in the selection of an expected return of 6.50% at the December 31, 2019 measurement date, which is used to determine net periodic pension cost for the year 2020. This assumption is down from the 6.75% return selected at the December 31, 2018 measurement date. A 25 basis point increase (decrease) in return on plan assets assumption would result in a respective decrease (increase) of 2020 net periodic pension cost by approximately \$2 million.

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

The discount rate for our United States postretirement plan was selected using the same method as described for the pension plan. The result supported a discount rate of 3.10% at December 31, 2019 compared to 4.15% at December 31, 2018. A 25 basis point increase (decrease) in the discount rate would decrease (increase) the United States postretirement benefit obligation by approximately \$4 million and decrease (increase) 2020 net periodic postretirement benefit cost by less than \$1 million.

The methods corresponding to those described above are used to determine the discount rate and expected return on assets for non-U.S. pension and postretirement plans, to the extent applicable.

RECENT ACCOUNTING PRONOUNCEMENTS

Please refer to Note 1 of the Consolidated Financial Statements.

ENVIRONMENTAL MATTERS

Please refer to Note 16 of the Consolidated Financial Statements.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS (continued)**CAUTIONARY STATEMENT CONCERNING FORWARD-LOOKING STATEMENTS**

Our disclosures and analysis in this report, including Management's Discussion and Analysis of Financial Condition and Results of Operations, contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934 (the "Exchange Act"). Forward-looking statements present our current forecasts and estimates of future events. These statements do not strictly relate to historical or current results and can be identified by words such as "anticipate," "appear," "assume," "believe," "estimate," "expect," "forecast," "intend," "likely," "may," "plan," "project," "seek," "should," "strategy," "will" and other terms of similar meaning or import in connection with any discussion of future operating, financial or other performance. These forward-looking statements are subject to risks, uncertainties and other factors and actual results may differ materially from those results projected in the statements. These risks, uncertainties and other factors include, without limitation:

- levels of residential and commercial or industrial construction activity;
- levels of global industrial production;
- competitive and pricing factors;
- demand for our products;
- relationships with key customers and customer concentration in certain areas;
- industry and economic conditions that affect the market and operating conditions of our customers, suppliers or lenders;
- domestic and international economic and political conditions, policies or other governmental actions;
- legislation and related regulations or interpretations, in the United States or elsewhere;
- changes to tariff, trade or investment policies or laws;
- uninsured losses, including those from natural disasters, pandemics, catastrophe, theft or sabotage;
- climate change, weather conditions and storm activity;
- availability and cost of energy and raw materials;
- environmental, product-related or other legal and regulatory liabilities, proceedings or, actions;
- research and development activities and intellectual property protection;
- issues involving implementation and protection of information technology systems;
- our level of indebtedness;
- availability and cost of credit;
- levels of goodwill or other indefinite-lived intangible assets;
- achievement of expected synergies, cost reductions and/or productivity improvements;
- the level of fixed costs required to run our business;
- our ability to utilize our net operating loss carryforwards and foreign tax credits;
- issues related to acquisitions, divestitures and joint ventures or expansions;
- foreign exchange and commodity price fluctuations;
- price volatility in certain wind energy markets in the U.S.;
- loss of key employees, labor disputes or shortages; and
- defined benefit plan funding obligations.

All forward-looking statements in this report should be considered in the context of the risks and other factors described in the Risk Factors outlined in Item 1A above, and as detailed from time to time in the Company's filings with the U.S. Securities and Exchange Commission. Any forward-looking statements speak only as of the date the statement is made and we undertake no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise except as required by federal securities laws. It is not possible to identify all of the risks, uncertainties and other factors that may affect future results. In light of these risks and uncertainties, the forward-looking events and circumstances discussed in this report may not occur and actual results may differ materially from those anticipated or implied in the forward-looking statements. Accordingly, users of this report are cautioned not to place undue reliance on the forward-looking statements.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The Company is exposed to the impact of changes in foreign currency exchange rates, interest rates and the prices of various commodities used in the normal course of business. To mitigate some of the near-term volatility in our earnings and cash flows, the Company manages certain of our exposures through the use of financial contracts, contracts for physical delivery of a particular commodity, and derivative financial instruments. The Company's objective with these instruments is to reduce exposure to near-term fluctuations in earnings and cash flows. The Company's policy enables the use of foreign currency, interest rate and commodity derivative financial instruments only to the extent necessary to manage exposures as described above. The Company does not enter into such transactions for trading purposes.

A discussion of the Company's accounting policies for derivative financial instruments, as well as the Company's exposure to market risk, is included in Notes 1 and 5 to the Consolidated Financial Statements. Please refer to Note 5 for details of the fair values of derivative financial instruments and their classification on the Consolidated Balance Sheets.

For purposes of disclosing the market risk inherent in its derivative financial instruments the Company uses sensitivity analysis disclosures that express the potential loss in fair values of market rate sensitive instruments resulting from changes in interest rates, foreign currency exchange rates, and commodity prices that assume instantaneous, parallel shifts in exchange rates, interest rate yield curves, and commodity prices. The following analysis provides such quantitative information regarding market risk. There are certain shortcomings inherent in the sensitivity analysis presented, primarily due to the assumption that exchange rates change instantaneously and that interest rates change in a parallel fashion. In addition, the analyses are unable to reflect the complex market reactions that normally would arise from the market shifts modeled.

Foreign Exchange Rate Risk

The Company has transactional foreign currency exposures related to buying, selling, and financing in currencies other than the local currencies in which it operates. The Company enters into various forward contracts, which change in value as foreign currency exchange rates change, to preserve the carrying amount of foreign currency-denominated assets, liabilities, commitments, and certain anticipated foreign currency transactions. Exposures are related to the United States Dollar primarily relative to the Brazilian Real, Chinese Yuan, European Euro, Indian Rupee, and South Korean Won exchange rates. Also, there are additional exposures related to the European Euro primarily versus the Russian Ruble. These transactional risks are mitigated through the use of derivative financial instruments and balancing of cash deposits and loans. The net fair value of derivative financial instruments used to limit exposure to foreign currency risk was \$9 million and \$8 million as of December 31, 2019 and 2018, respectively. As of December 31, 2019, the potential change in fair value for such financial instruments from an increase (decrease) of 10% in the quoted foreign currency exchange rates would be a (decrease) increase of approximately \$49 million and \$49 million, respectively. As of December 31, 2018, the potential change in fair value for such financial instruments from an increase (decrease) of 10% in the quoted foreign currency exchange rates would be a (decrease) increase of approximately \$45 million and \$44 million, respectively.

We have translation exposure resulting from translating the financial statements of foreign subsidiaries into United States dollars. Our most significant translation exposures are the Canadian Dollar, Chinese Yuan, European Euro, Indian Rupee, and Polish Zloty in relation to the United States Dollar. The Company has hedged a portion of the net investment in foreign subsidiaries against fluctuations in the European Euro through derivative financial instruments. The net fair value of these instruments was \$8 million as of December 31, 2019 and 2018. As of December 31, 2019 and 2018, the potential change in fair value for such financial instruments from an increase (decrease) of 10% in the quoted foreign currency exchange rates would be a (decrease) increase of approximately \$57 million and \$56 million, respectively.

Interest Rate Risk

The Company is subject to market risk from exposure to changes in interest rates due to its financing, investing, and cash management activities. The Company has a Senior Revolving Credit Facility, Receivables Securitization Facility, Term Loan, other floating rate debt and cash and cash equivalents which are exposed to floating interest rates and may impact cash flow. As of December 31, 2019, the Company had no borrowings on its Senior Revolving Credit Facility or Receivables Securitization Facility, and \$200 million outstanding on its Term Loan, with the balance of other floating rate debt of \$20 million. As of December 31, 2018, the Company had no borrowings on its Senior Revolving Credit Facility, \$75 million outstanding on its Receivables Securitization Facility, and \$500 million outstanding on its Term Loan, with the balance of other floating rate debt of \$16 million. Cash and cash equivalents were \$172 million and \$78 million at December 31, 2019 and 2018, respectively. Based on the year-end outstanding balances on the Term Loan and other floating rate debt, a one percentage point increase (decrease) in interest rates at December 31, 2019 and 2018 would increase (decrease) our annual net interest expense by \$2 million and \$6 million, respectively.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK (continued)

The fair market value of the Company's senior notes are subject to interest rate risk. The following table shows how a one percentage point increase / decrease in interest rates would impact the fair market value of the senior notes:

As of December 31, 2019:	Senior Notes Maturity Year						
	2022	2024	2026	2029	2036	2047	2048
<u>Increase in interest rates</u>							
Decrease in fair value	3%	4%	6%	8%	10%	14%	14%
<u>Decrease in interest rates</u>							
Increase in fair value	3%	5%	6%	8%	12%	18%	18%

As of December 31, 2018:	Senior Notes Maturity Year						
	2022	2024	2026	2029	2036	2047	2048
<u>Increase in interest rates</u>							
Decrease in fair value	4%	5%	6%	n/a	10%	13%	13%
<u>Decrease in interest rates</u>							
Increase in fair value	4%	6%	7%	n/a	12%	16%	16%

Commodity Price Risk

The Company is exposed to changes in prices of commodities used in its operations, primarily associated with energy, such as natural gas, and raw materials, such as asphalt and polystyrene. The Company enters into cash-settled natural gas swap contracts in certain markets to protect against changes in natural gas prices that mature within 15 months; however, no financial instruments are currently used to protect against changes in raw material costs. At December 31, 2019 and 2018, the net fair value of such swap contracts was \$3 million and less than \$1 million, respectively. The potential change in fair value at December 31, 2019 and 2018 resulting from an increase (decrease) of 10% in the underlying commodity prices would be an increase (decrease) of approximately \$1 million and \$1 million, respectively. This amount excludes the offsetting impact of the price risk inherent in the physical purchase of the underlying commodities.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Pages 49 through 101 of this filing are incorporated herein by reference.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

The Company maintains (a) disclosure controls and procedures (as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act), and (b) internal control over financial reporting (as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act).

The Company's management, with the participation of the Company's Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of the Company's disclosure controls and procedures as of the end of the period covered by this report. Based on such evaluation, the Company's Chief Executive Officer and Chief Financial Officer have concluded that, as of the end of such period, the Company's disclosure controls and procedures are effective.

There has been no change in the Company's internal control over financial reporting during the quarter ended December 31, 2019 that materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

A report of the Company's management on the Company's internal control over financial reporting is contained on page 50 hereof and is incorporated here by reference. PricewaterhouseCoopers LLP's report on the effectiveness of internal control over financial reporting is included in the Report of Independent Registered Public Accounting Firm beginning on page 51 hereof.

ITEM 9B. OTHER INFORMATION

None.

Part III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Information with respect to directors and corporate governance will be presented in the 2020 Proxy Statement in the sections titled “Information Concerning Directors,” “Governance Information” and “Delinquent Section 16(a) Reports,” and such information is incorporated herein by reference.

Information with respect to executive officers is included herein under Part I, “Information about our Executive Officers”.

Code of Ethics for Senior Financial Officers

Owens Corning has adopted an Ethics Policy for Chief Executive and Senior Financial Officers that applies to our Chief Executive Officer, Chief Financial Officer and Controller. This policy is available on our website (www.owenscorning.com) under “Corporate Governance” located in the "Investing in Owens Corning" section and print copies will be made available free of charge upon request to the Secretary of the Company. To the extent required by applicable SEC rules or New York Stock Exchange listing standards, the Company intends to post any amendments or waivers to the above referenced codes of ethics to our website, under the tab entitled "Corporate Governance".

ITEM 11. EXECUTIVE COMPENSATION

Information regarding executive officer and director compensation will be presented in the 2020 Proxy Statement under the section titled “Executive Compensation,” exclusive of the subsection titled “Compensation Committee Report,” and the section titled “2019 Non-Management Director Compensation,” and such information is incorporated herein by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

Information regarding security ownership of certain beneficial owners and management and related stockholder matters, as well as equity compensation plan information, will be presented in the 2020 Proxy Statement under the sections titled “Security Ownership of Certain Beneficial Owners and Management” and “Securities Authorized for Issuance Under Equity Compensation Plans,” and such information is incorporated herein by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, DIRECTOR INDEPENDENCE

Information regarding certain relationships and related transactions and director independence will be presented in the 2020 Proxy Statement under the sections titled “Review of Transactions with Related Persons,” “Director Qualifications Standards” and “Director Independence,” and such information is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

Information regarding principal accounting fees and services will be presented in the 2020 Proxy Statement under the sections titled “Principal Accountant Fees and Services,” and such information is incorporated herein by reference.

Part IV**ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES****(a) DOCUMENTS FILED AS PART OF THIS REPORT**

1. See Index to Consolidated Financial Statements on page 49 hereof.
2. See Index to Financial Statement Schedules on page 102 hereof.

EXHIBIT INDEX

Pursuant to the rules and regulations of the SEC, the Company has filed or incorporated by reference certain agreements as exhibits to this Annual Report on Form 10-K. These agreements may contain representations and warranties by the parties. These representations and warranties have been made solely for the benefit of the other party or parties to such agreements and (i) may have been qualified by disclosures made to such other party or parties, (ii) were made only as of the date of such agreements or such other date(s) as may be specified in such agreements and are subject to more recent developments, which may not be fully reflected in the Company's public disclosure, (iii) may reflect the allocation of risk among the parties to such agreements and (iv) may apply materiality standards different from what may be viewed as material to investors. Accordingly, these representations and warranties may not describe the Company's actual state of affairs at the date hereof and should not be relied upon.

Exhibit Number	Description
2.1	<u>Purchase Agreement, dated as of October 27, 2017, by and among Owens Corning Finland Oy, Parry Investment S.A. and the individuals party thereto (incorporated by reference to Exhibit 2.1 to Owens Corning's Current Report on Form 8-K (File No. 1-33100), filed February 5, 2018).</u> [±]
2.2	<u>Amendment Agreement, dated February 2, 2018 related to the Purchase Agreement, dated October 27, 2017, by and among Owens Corning Finland Oy, Parry Investment S.A. and the individuals party thereto (incorporated by reference to Exhibit 2.1 to Owens Corning's Quarterly Report of Form 10-Q (File No. 1-33100) for the quarter ended March 31, 2018).</u>
3.1	<u>Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 of Owens Corning's Quarterly Report on Form 10-Q (File No. 1-33100), for the quarter ended March 31, 2016).</u>
3.2	<u>Second Amended and Restated Bylaws of the Company, effective as of June 19, 2019 (incorporated by reference to Exhibit 3.1 to Owens Corning's Current Report on Form 10-Q (File No. 1-33100), for the quarter ended June 30, 2019).</u>
4.1	<u>Indenture, dated as of October 31, 2006, by and among Owens Corning, each of the guarantors named therein and LaSalle Bank, National Association, as trustee (incorporated by reference to Exhibit 4.1 to Owens Corning's Current Report on Form 8-K (File No. 1-33100), filed November 2, 2006).</u>
4.2	<u>First Supplemental Indenture, dated as of April 13, 2007, by and among Owens Corning, each of the guarantors named therein and LaSalle Bank National Association, as trustee (incorporated by reference to Exhibit 4.1 to Owens Corning's Current Report on Form 8-K (File No. 1-33100), filed April 13, 2007).</u>
4.3	<u>Second Supplemental Indenture, dated as of December 12, 2007, by and among Owens Corning, each of the guarantors named therein and LaSalle Bank National Association, as trustee (incorporated by reference to Exhibit 4.3 to Owens Corning's Annual Report on Form 10-K (File No. 1-33100) for the year ended December 31, 2007).</u>
4.4	<u>Third Supplemental Indenture, dated as of April 24, 2008, by and among Owens Corning, each of the guarantors named therein and LaSalle Bank National Association, as trustee (incorporated by reference to Exhibit 4.1 to Owens Corning's Quarterly Report on Form 10-Q (File No. 1-33100) for the quarter ended June 30, 2008).</u>
4.5	<u>Fourth Supplemental Indenture, dated as of May 26, 2010, by and among Owens Corning, each of the guarantors named therein and Wells Fargo Bank, National Association, as trustee (incorporated by reference to Exhibit 4.1 to Owens Corning's Current Report on Form 8-K (File No. 1-33100), filed May 28, 2010).</u>

- 4.6 [Fifth Supplemental Indenture, dated as of October 3, 2016, by and among Owens Corning, each of the guarantors named therein and Wells Fargo Bank, National Association, as trustee \(incorporated by reference to Exhibit 4.7 to Owens Corning's Annual Report on Form 10-K \(File No. 1-33100\) for the year ended December 31, 2017\).](#)
 - 4.7 [Sixth Supplemental Indenture, dated as of February 27, 2017, by and among Owens Corning, each of the guarantors named therein and Wells Fargo Bank, National Association, as trustee \(incorporated by reference to Exhibit 4.8 to Owens Corning's Annual Report on Form 10-K \(File No. 1-33100\) for the year ended December 31, 2017\).](#)
 - 4.8 [Seventh Supplemental Indenture, dated as of August 23, 2017, by and among Owens Corning, the guarantor named therein and Wells Fargo Bank, National Association, as successor trustee \(incorporated by reference to Exhibit 4.5 to Owens Corning's Quarterly Report on Form 10-Q \(File No. 1-33100\), for the quarter ended September 30, 2017\).](#)
 - 4.9 [Indenture, dated as of June 2, 2009, between Owens Corning, certain of Owens Corning's subsidiaries and Wells Fargo Bank, National Association, as trustee \(incorporated by reference to Exhibit 4.1 to Owens Corning's Registration Statement on Form S-3 \(File No. 333-159689\), filed June 3, 2009\).](#)
 - 4.10 [Second Supplemental Indenture, dated as of May 26, 2010, by and among Owens Corning, certain subsidiaries, and Wells Fargo Bank, National Association, as Trustee \(incorporated by reference to Exhibit 4.2 to Owens Corning's Current Report on Form 8-K \(File No. 1-33100\), filed May 28, 2010\).](#)
 - 4.11 [Third Supplemental Indenture, dated as of October 22, 2012, by and among Owens Corning, certain subsidiaries, and Wells Fargo Bank, National Association, as successor Trustee \(incorporated by reference to Exhibit 4.1 to Owens Corning's Current Form 8-K \(File No. 1-33100\), filed October 22, 2012\).](#)
 - 4.12 [Form of 4.200% Senior Notes due 2022 \(incorporated by reference to Exhibit 4.1 to Owens Corning's Current Report on Form 8-K \(File No. 1-33100\), filed October 22, 2012\).](#)
 - 4.13 [Fourth Supplemental Indenture, dated as of November 12, 2014, by and among Owens Corning, the guarantors named therein and Wells Fargo Bank, National Association, as Trustee \(incorporated by reference to Exhibit 4.1 to Owens Corning's Current Report on Form 8-K \(File No. 1-33100\) filed November 12, 2014\).](#)
 - 4.14 [Form of 4.200% Senior Notes due 2024 \(incorporated by reference to Exhibit 4.1 to Owens Corning's Current Report on Form 8-K \(File No. 1-33100\), filed November 12, 2014\).](#)
 - 4.15 [Fifth Supplemental Indenture, dated as of August 8, 2016, by and among the Company, the guarantors party thereto and Wells Fargo Bank, National Association, as Trustee \(incorporated by reference to Exhibit 4.1 to Owens Corning's Current Report on Form 8-K \(File No. 1-33100\) filed August 8, 2016\).](#)
 - 4.16 [Form of 3.400% Senior Notes due 2026 \(incorporated by reference to Exhibit 4.1 to Owens Corning's Current Report on Form 8-K \(File No. 1-33100\) filed August 8, 2016\).](#)
 - 4.17 [Sixth Supplemental Indenture, dated as of October 3, 2016, by and among Owens Corning, the guarantors party thereto and Wells Fargo Bank, National Association, as trustee \(incorporated by reference to Exhibit 4.9 to Post-Effective Amendment No. 1 to Owens Corning's Registration Statement on Form S-3 \(Registration No. 333-202011\), filed June 21, 2017\).](#)
 - 4.18 [Seventh Supplemental Indenture, dated as of February 27, 2017, by and among Owens Corning, the guarantors party thereto and Wells Fargo Bank, National Association, as trustee \(incorporated by reference to Exhibit 4.10 to Post-Effective Amendment No. 1 to Owens Corning's Registration Statement on Form S-3 \(Registration No. 333-202011\), filed June 21, 2017\).](#)
 - 4.19 [Eighth Supplemental Indenture, dated as of June 26, 2017, by and among Owens Corning, the guarantors party thereto and Wells Fargo Bank, National Association, as trustee \(incorporated by reference to Exhibit 4.1 to Owens Corning's Current Report on Form 8-K \(File No. 1-33100\), filed June 26, 2017\).](#)
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- 4.20 [Form of 4.300% Senior Notes due 2047 \(incorporated by reference to Exhibit 4.2 to Owens Corning's Current Report on Form 8-K \(File No. 1-33100\), filed June 26, 2017\).](#)
 - 4.21 [Ninth Supplemental Indenture, dated as of August 23, 2017, by and among Owens Corning, the guarantor named therein and Wells Fargo Bank, National Association, as trustee \(incorporated by reference to Exhibit 4.6 to Owens Corning's Quarterly Report on Form 10-Q \(File No. 1-33100\), for the quarter ended September 30, 2017\).](#)
 - 4.22 [Tenth Supplemental Indenture, dated as of January 25, 2018, by and among Owens Corning, the guarantors party thereto and Wells Fargo Bank, National Association, as trustee \(incorporated by reference to Exhibit 4.1 to Owens Corning's Current Report on Form 8-K \(File No. 1-33100\), filed January 25, 2018\).](#)
 - 4.23 [Form of 4.400% Senior Notes due 2048 \(incorporated by reference to Exhibit 4.2 to Owens Corning's Current Report on Form 8-K \(File No. 1-33100\), filed January 25, 2018\).](#)
 - 4.24 [Eleventh Supplemental Indenture, dated as of August 12, 2019, by and among Owens Corning and BofA Securities, Inc., Citigroup Global Markets Inc., and Wells Fargo Securities, LLC as representatives of the several underwriters named therein \(incorporated by reference to Exhibit 4.1 to Owens Corning's Current Report on Form 8-K \(File No. 1-33100\), filed August 12, 2019\).](#)
 - 4.25 [Form of 3.950% Senior Note due 2029 \(incorporated by reference to Exhibit 4.2 to Owens Corning's Current Report on Form 8-K \(File No. 1-33100\), filed August 12, 2019\).](#)
 - 4.26 [Description of Securities Registered under Section 12 of the Securities Exchange Act of 1934 \(filed herewith\).](#)
 - 10.1 [Credit Agreement, dated as of May 4, 2018, by and among the Company, the lenders signatory thereto and Wells Fargo Bank, National Association, as administrative agent \(incorporated by reference to Exhibit 10.1 to Owens Corning's Current Report on Form 8-K \(File No. 1-33100\), filed May 4, 2018\).](#)
 - 10.2 [Extension Agreement, dated April 9, 2019, to the Credit Agreement by and among Owens Corning, Wells Fargo Bank, National Association and other signatory lenders \(incorporated by reference to Exhibit 10.2 to Owens Corning's Quarterly Report on Form 10-Q \(File 1-133100\) for the quarter ended June 30, 2019\).](#)
 - 10.3 [Second Amended and Restated Receivables Purchase Agreement, dated as of May 5, 2017 \(incorporated by reference to Exhibit 10.1 to Owens Corning's Current Report on Form 8-K \(File No. 1-33100\), filed May 9, 2017\).](#)
 - 10.4 [First Amendment, dated April 12, 2018 related to the Second Amended and Restated Receivables Purchase Agreement, dated as of May 5, 2017 \(incorporated by reference to Exhibit 10.1 to Owens Corning's Quarterly Report on Form 10-Q \(File No. 1-33100\) for the quarter ended March 31, 2018\).](#)
 - 10.5 [Second Amendment to Second Amended and Restated Receivables Purchase Agreement, dated April 8, 2019 \(incorporated by reference to Exhibit 10.1 to Owens Corning's Quarterly Report on Form 10-Q \(File 1-133100\) for the quarter ended June 30, 2019\).](#)
 - 10.6 [Purchase and Sale Agreement dated as of March 31, 2011 between Owens Corning Sales, LLC and Owens Corning Receivables, LLC \(incorporated by reference to Exhibit 10.2 to Owens Corning's Current Report on Form 8-K \(File No. 1-33100\), filed April 5, 2011\).](#)
 - 10.7 [First Amendment to Purchase and Sale Agreement, dated as of May 5, 2017, by and between Owens Corning Sales, LLC and Owens Corning Receivables LLC \(incorporated by reference to Exhibit 10.2 to Owens Corning's Quarterly Report on Form 10-Q \(File No. 1-33100\), for the quarter ended June 30, 2017\).](#)
 - 10.8 [Amended and Restated Performance Guaranty, dated as of May 5, 2017 \(incorporated by reference to Exhibit 10.3 to Owens Corning's Quarterly Report on Form 10-Q \(File No. 1-33100\), for the quarter ended June 30, 2017\).](#)
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- 10.9 [Term Loan Agreement, dated as of June 8, 2017, by and among Owens Corning, the lenders referred to therein and Wells Fargo Bank, National Association, as administrative agent \(incorporated by reference to Exhibit 10.4 to Owens Corning's Quarterly Report on Form 10-Q \(File No. 1-33100\), for the quarter ended June 30, 2017\).](#)
 - 10.10 [Term Loan Agreement, dated as of October 27, 2017, by and among Owens Corning, the lenders signatory thereto and JPMorgan Chase Bank, N.A., as administrative agent \(incorporated by reference to Exhibit 10.13 to Owens Corning's Annual Report on Form 10-K \(File No. 1-33100\) for the year ended December 31, 2017\).](#)
 - 10.11 [First Amendment to Term Loan Agreement, dated as of May 4, 2018, by and among the Company, the lenders signatory thereto and JPMorgan Chase Bank, N.A., as administrative agent \(incorporated by reference to Exhibit 10.2 to Owens Corning's Current Report on Form 8-K \(File No. 1-33100\), filed May 4, 2018\).](#)
 - 10.12 [Second Amendment to Term Loan Agreement, dated as of March 29, 2019 by and among Owens Corning, the Lenders party to the Credit Agreement and JPMorgan Chase Bank, N.A. \(incorporated by reference to Exhibit 10.3 to Owens Corning's Quarterly Report on Form 10-Q \(File 1-133100\) for the quarter ended March 31, 2019\).](#)
 - 10.13 [Form of Key Management Severance Agreement for Executive Officers* \(incorporated by reference to Exhibit 10.10 to Owens Corning's Annual Report on Form 10-K \(File No. 1-33100\) for the year ended December 31, 2013\).*](#)
 - 10.14 [Amended and Restated Key Management Severance Agreement with Michael H. Thaman \(incorporated by reference to Exhibit 10 to Owens Corning Sales, LLC's Annual Report on Form 10-K \(File No. 1-3660\) for the year ended December 31, 2005\).*](#)
 - 10.15 [Amendment, dated April 16, 2015, to Key Management Severance Agreement with Michael H. Thaman \(incorporated by reference to Exhibit 10.31 to Owens Corning's Quarterly Report on Form 10-Q \(File 1-33100\), for the quarter ended March 31, 2015\).*](#)
 - 10.16 [Transition Agreement with Michael H. Thaman, dated January 3, 2019 \(incorporated by reference to Exhibit 10.16 of Owens Corning's Annual Report on Form 10-K \(File No. 1-33100\) for the year ended December 31, 2018\).](#)
 - 10.17 [Form of Directors' Indemnification Agreement \(incorporated by reference to Exhibit 10.2 of Owens Corning's Current Report on Form 8-K \(File No. 1-33100\), filed November 2, 2006\).](#)
 - 10.18 [Owens Corning Long-Term Incentive Plan \(incorporated by reference to Exhibit 10 to Owens Corning Sales, LLC's Quarterly Report on Form 10-Q \(File No. 1-3660\) for the quarter ended June 30, 2003\).*](#)
 - 10.19 [Owens Corning Executive Supplemental Benefit Plan, 2009 Restatement \(incorporated by reference to Exhibit 10.28 to Owens Corning's annual report on Form 10-K \(File No. 1-33100\) for the year ended December 31, 2008\).*](#)
 - 10.20 [Owens Corning Supplemental Executive Retirement Plan, as amended and restated, effective as of January 1, 2009 \(incorporated by reference to Exhibit 10.30 to Owens Corning's annual report on Form 10-K \(File No. 1-33100\) for the year ended December 31, 2008\).*](#)
 - 10.21 [Corporate Incentive Plan Terms Applicable to Key Employees Other Than Certain Executive Officers \(incorporated by reference to Exhibit 10 to Owens Corning Sales, LLC's Quarterly Report on Form 10-Q \(File No. 1-3660\) for the quarter ended June 30, 1999\).*](#)
 - 10.22 [Corporate Incentive Plan Terms Applicable to Certain Executive Officers \(As Amended and Restated as of January 1, 2016\) \(incorporated by reference to Exhibit 10.38 to Owens Corning's Quarterly Report on Form 10-Q \(File No. 1-33100\) for the quarter ended March 31, 2016\).*](#)
 - 10.23 [Owens Corning Deferred Compensation Plan, effective as of January 1, 2007 \(incorporated by reference to Exhibit 10.5 to Owens Corning's Quarterly Report on Form 10-Q \(File No. 1-33100\) for the quarter ended March 31, 2007\).*](#)
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- 10.24 [First Amendment to the Owens Corning Deferred Compensation Plan, effective as of January 1, 2008 \(incorporated by reference to Exhibit 10.33 to Owens Corning's annual report on Form 10-K \(File No. 1-33100\) for the year ended December 31, 2008\).*](#)
 - 10.25 [Owens Corning Amended and Restated Deferred Compensation Plan, effective as of January 1, 2014 \(incorporated by reference to Exhibit 10.22 to Owens Corning's Annual Report on Form 10-K \(File No. 1-33100\) for the year ended December 31, 2013\).*](#)
 - 10.26 [Owens Corning 2010 Stock Plan \(incorporated by reference to Exhibit 10.1 to Owens Corning's Current Report on Form 8-K \(File No. 1-33100\), filed April 23, 2010\).*](#)
 - 10.27 [Owens Corning 2013 Stock Plan \(incorporated by reference to Annex C to Owens Corning's Proxy Statement \(File No 1-33100\), filed March 14, 2013\).*](#)
 - 10.28 [Owens Corning 2016 Stock Plan \(incorporated by reference to Exhibit 10.39 to Owens Corning's Quarterly Report on Form 10-Q \(File No. 1-33100\) for the quarter ended March 31, 2016\).*](#)
 - 10.29 [Owens Corning 2019 Stock Plan \(incorporated by reference to Exhibit 10.1 to Owens Corning's Quarterly Report on Form 10-Q \(File No. 1-33100\) for the quarter ended March 31, 2019\).*](#)
 - 10.30 [Owens Corning Employee Stock Purchase Plan, effective as of April 18, 2013, \(incorporated by reference to Annex B to Owens Corning's Proxy Statement \(File No. 1-33100\), filed March 14, 2013\).*](#)
 - 10.31 [Form of Owens Corning 2013 Long Term Incentive Program Award Agreement for Option Award \(incorporated by reference to Exhibit 10.27 to Owens Corning's Annual Report on Form 10-K \(File No. 1-33100\) for the year ended December 31, 2013\).*](#)
 - 10.32 [Form of Owens Corning 2013 Long Term Incentive Program Award Agreement for Performance Share Unit \(incorporated by reference to Exhibit 10.28 to Owens Corning's Annual Report on Form 10-K \(File No. 1-33100\) for the year ended December 31, 2013\).*](#)
 - 10.33 [Form of Owens Corning 2016 Long Term Incentive Program Award Agreement for Performance Share Unit \(incorporated by reference to Exhibit 10.29 to Owens Corning's Annual Report on Form 10-K \(File No. 1-33100\) for the year ended December 31, 2016\).*](#)
 - 10.34 [Form of Owens Corning 2018 Long Term Incentive Program Award Agreement for Performance Share Units \(incorporated by reference to Exhibit 10.2 to Owens Corning's Quarterly Report on Form 10-Q \(File No. 1-33100\) for the quarter ended March 31, 2018\).](#)
 - 10.35 [Form of Owens Corning 2013 Long Term Incentive Program Award Agreement for Restricted Stock Unit \(incorporated by reference to Exhibit 10.29 to Owens Corning's Annual Report on Form 10-K \(File No. 1-33100\) for the year ended December 31, 2013\).*](#)
 - 10.36 [Form of Owens Corning 2013 Long Term Incentive Program Award Agreement for Restricted Stock \(incorporated by reference to Exhibit 10.30 to Owens Corning's Annual Report on Form 10-K \(File No. 1-33100\) for the year ended December 31, 2013\).*](#)
 - 10.37 [Form of Owens Corning 2018 Long Term Incentive Program Award Agreement for Restricted Stock \(incorporated by reference to Exhibit 10.3 to Owens Corning's Quarterly Report on Form 10-Q \(File No. 1-33100\) for the quarter ended March 31, 2018\).](#)
 - 10.38 [Form of Owens Corning 2019 Long Term Incentive Program Award Agreement pursuant to the Owens Corning 2016 Stock Plan for Restricted Stock Unit Award \(incorporated by reference to Exhibit 10.2 to Owens Corning's Quarterly Report on Form 10-Q \(File 1-133100\) for the quarter ended March 31, 2019\).*](#)
 - 10.39 [Form of Deferred Stock Unit Award Agreement for Directors \(incorporated by reference to Exhibit 10.32 to Owens Corning's Quarterly Report on Form 10-Q \(File 1-33100\), for the quarter ended June 30, 2015\).*](#)
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10.40	Form of Long Term Incentive Program Award Agreement for Restricted Stock Unit (incorporated by reference to Exhibit 10.33 to Owens Corning's Quarterly Report on Form 10-Q (File 1-33100), for the quarter ended June 30, 2015).*
10.41	Form of Long Term Incentive Program Award Agreement for Performance Share Unit (incorporated by reference to Exhibit 10.34 to Owens Corning's Quarterly Report on Form 10-Q (File 1-33100), for the quarter ended June 30, 2015).*
10.42	Form of Long Term Incentive Program Award Agreement for Restricted Stock (incorporated by reference to Exhibit 10.35 to Owens Corning's Quarterly Report on Form 10-Q (File 1-33100), for the quarter ended June 30, 2015).*
21.1	Subsidiaries of Owens Corning (filed herewith).
23.1	Consent of PricewaterhouseCoopers LLP (filed herewith).
31.1	Certification of Chief Executive Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a) (filed herewith).
31.2	Certification of Chief Financial Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a) (filed herewith).
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350.
32.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350.
101	The following materials from the Annual Report on Form 10-K for Owens Corning for the period ended December 31, 2019, formatted in iXBRL (Inline Extensible Business Reporting Language): (i) Consolidated Statements of Earnings; (ii) Consolidated Statements of Comprehensive Earnings; (iii) Consolidated Balance Sheets (iv) Consolidated Statements of Stockholders' Equity, (v) Consolidated Statements of Cash Flows, (vi) related notes to these financial statements and (vii) document and entity information.
104	The cover page from this Annual Report on Form 10-K, formatted as Inline XBRL

+ Schedules have been omitted pursuant to Item 601(a)(5) of Regulation S-K. Owens Corning agrees to furnish supplementally to the Securities and Exchange Commission a copy of any omitted schedule upon request.

* Denotes management contract or compensatory plan or arrangement required to be filed as an exhibit pursuant to Form 10-K.

Owens Corning agrees to furnish to the U.S. Securities and Exchange Commission, upon request, copies of all instruments defining the rights of holders of long-term debt of Owens Corning where the total amount of securities authorized under each issue does not exceed 10% of the total assets of Owens Corning and its subsidiaries on a consolidated basis.

ITEM 16. FORM 10-K SUMMARY

None.

SIGNATURES

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

OWENS CORNING

By /s/ Brian D. Chambers

 February 19, 2020

Brian D. Chambers
Chief Executive Officer
(Principal Executive Officer)

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

<u>/s/ Brian D. Chambers</u> Brian D. Chambers, Chief Executive Officer and Director (Principal Executive Officer)	<u>February 19, 2020</u>
<u>/s/ Prithvi S. Gandhi</u> Prithvi S. Gandhi, Interim Chief Financial Officer (Principal Financial Officer)	<u>February 19, 2020</u>
<u>/s/ Kelly J. Schmidt</u> Kelly J. Schmidt, Vice President and Controller	<u>February 19, 2020</u>
<u>/s/ Eduardo Cordeiro</u> Eduardo Cordeiro, Director	<u>February 19, 2020</u>
<u>/s/ Adrienne Elsner</u> Adrienne Elsner, Director	<u>February 19, 2020</u>
<u>/s/ J. Brian Ferguson</u> J. Brian Ferguson, Director	<u>February 19, 2020</u>
<u>/s/ Ralph F. Hake</u> Ralph F. Hake, Director	<u>February 19, 2020</u>
<u>/s/ Edward F. Lonergan</u> Edward F. Lonergan, Director	<u>February 19, 2020</u>

<u>/s/ Maryann T. Mannen</u> Maryann T. Mannen, Director	<u>February 19, 2020</u>
<u>/s/ W. Howard Morris</u> W. Howard Morris, Director	<u>February 19, 2020</u>
<u>/s/ Suzanne P. Nimocks</u> Suzanne P. Nimocks, Director	<u>February 19, 2020</u>
<u>/s/ Michael H. Thaman</u> Michael H. Thaman, Executive Chairman of the Board	<u>February 19, 2020</u>
<u>/s/ John D. Williams</u> John D. Williams, Director	<u>February 19, 2020</u>

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Management's Report on Internal Control Over Financial Reporting

Management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934.

Management has assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2019 based on criteria established in the Internal Control-Integrated Framework in 2013 issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

PricewaterhouseCoopers LLP has audited the effectiveness of the internal controls over financial reporting as of December 31, 2019 as stated in their Report of Independent Registered Public Accounting Firm on page 51 hereof.

Based on our assessment, management determined that, as of December 31, 2019, the Company's internal control over financial reporting was effective.

/s/ Brian D. Chambers

Brian D. Chambers,
Chief Executive Officer
(Principal Executive Officer)

February 19, 2020

/s/ Prithvi S. Gandhi

Prithvi S. Gandhi,
Interim Chief Financial Officer
(Principal Financial Officer)

February 19, 2020

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of Owens Corning:

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Owens Corning and its subsidiaries (the “Company”) as of December 31, 2019 and 2018, and the related consolidated statements of earnings, of comprehensive earnings, of stockholders’ equity and of cash flows for each of the three years in the period ended December 31, 2019, including the related notes and schedule of valuation and qualifying accounts and reserves for each of the three years in the period ended December 31, 2019 appearing after the index to condensed financial statement schedule (collectively referred to as the “consolidated financial statements”). We also have audited the Company’s internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control - Integrated Framework (2013) issued by the COSO.

Change in Accounting Principle

As discussed in Note 1 to the consolidated financial statements, the Company changed the manner in which it accounts for leases in 2019.

Basis for Opinions

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

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

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

Definition and Limitations of Internal Control over Financial Reporting

A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit

preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Goodwill Impairment Assessment - Insulation Reporting Unit

As described in Notes 1 and 6 to the consolidated financial statements, the Company's consolidated goodwill balance was \$1,932 million as of December 31, 2019, and the goodwill associated with the Insulation reporting unit was \$1,479 million. Management tests goodwill for impairment as of October 1 of each year, or more frequently should circumstances change or events occur that would more likely than not reduce the fair value of a reporting unit below its carrying amount. Management estimates fair value using a discounted cash flow approach from the perspective of a market participant. Management's determination of fair value included the use of significant assumptions in the discounted cash flow approach which are the revenue growth rates and earnings before interest and taxes ("EBIT") margins used in estimating the discrete period cash flow forecasts of the reporting unit, the discount rate, and the long-term revenue growth rate and EBIT margin used in estimating the terminal business value.

The principal considerations for our determination that performing procedures relating to the goodwill impairment assessment of the Insulation reporting unit is a critical audit matter are there was significant judgment used by management when developing the fair value measurement of the reporting unit. This in turn led to a high degree of auditor judgment, subjectivity and effort in performing procedures and in evaluating management's significant assumptions, including the revenue growth rates and EBIT margins used in estimating the discrete period cash flow forecasts, the discount rate, and the long-term revenue growth rate and EBIT margins used in estimating the terminal business value. In addition, the audit effort involved the use of professionals with specialized skill and knowledge to assist in performing these procedures and evaluating the audit evidence obtained.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's goodwill impairment assessment, including controls over the review of significant assumptions used in the valuation of the Insulation reporting unit. These procedures also included, among others, testing management's process for developing the fair value estimate of the Insulation reporting unit, evaluating the appropriateness of the discounted cash flow approach, and evaluating the significant assumptions used by management, including the revenue growth rates and EBIT margins used in estimating the discrete period cash flow forecasts, the discount rate, and the long-term revenue growth rate and EBIT margin used in estimating the terminal business value. Evaluating management's assumptions related to discrete period revenue growth rates, and EBIT margins used in estimating both the discrete period cash flow forecasts and terminal business value involved evaluating whether the assumptions used by management were reasonable considering (i) the current and past performance of the reporting unit, (ii) the consistency with external market and industry data, and (iii) whether these assumptions were consistent with evidence obtained in other areas of the audit. Professionals with specialized skill and knowledge were used to assist in the evaluation of the Company's discounted cash flow approach and certain significant assumptions, including the discount rate and long-term revenue growth rate.

/s/ PricewaterhouseCoopers LLP

Toledo, Ohio

February 19, 2020

We have served as the Company's auditor since 2002.

OWENS CORNING AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF EARNINGS
 (in millions, except per share amounts)

	Twelve Months Ended December 31,		
	2019	2018	2017
NET SALES	\$ 7,160	\$ 7,057	\$ 6,384
COST OF SALES	5,551	5,425	4,815
Gross margin	1,609	1,632	1,569
OPERATING EXPENSES			
Marketing and administrative expenses	698	700	620
Science and technology expenses	87	89	85
Other expenses, net	37	36	67
Total operating expenses	822	825	772
OPERATING INCOME	787	807	797
Non-operating expense (income)	34	(14)	60
EARNINGS BEFORE INTEREST AND TAXES	753	821	737
Interest expense, net	131	117	107
Loss on extinguishment of debt	32	—	71
EARNINGS BEFORE TAXES	590	704	559
Income tax expense	186	156	269
Equity in net earnings / (loss) of affiliates	1	(1)	—
NET EARNINGS	405	547	290
Net earnings attributable to noncontrolling interests	—	2	1
NET EARNINGS ATTRIBUTABLE TO OWENS CORNING	\$ 405	\$ 545	\$ 289
EARNINGS PER COMMON SHARE ATTRIBUTABLE TO OWENS CORNING COMMON STOCKHOLDERS			
Basic	\$ 3.71	\$ 4.94	\$ 2.59
Diluted	\$ 3.68	\$ 4.89	\$ 2.55
WEIGHTED AVERAGE COMMON SHARES			
Basic	109.2	110.4	111.5
Diluted	110.1	111.4	113.2

The accompanying Notes to the Consolidated Financial Statements are an integral part of this Statement.

OWENS CORNING AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE EARNINGS
(in millions)

	Twelve Months Ended December 31,		
	2019	2018	2017
NET EARNINGS	\$ 405	\$ 547	\$ 290
Currency translation adjustment (net of tax of \$(4), \$(4) and \$15, for the periods ended December 31, 2019, 2018 and 2017, respectively)	24	(123)	101
Pension and other postretirement adjustment (net of tax of \$(10), \$6, and \$(32), for the periods ended December 31, 2019, 2018 and 2017, respectively)	24	(19)	98
Hedging adjustment (net of tax of \$1, \$0 and \$2, for the periods ended December 31, 2019, 2018 and 2017, respectively)	(2)	—	(3)
COMPREHENSIVE EARNINGS	451	405	486
Comprehensive earnings attributable to noncontrolling interests	—	2	1
COMPREHENSIVE EARNINGS ATTRIBUTABLE TO OWENS CORNING	\$ 451	\$ 403	\$ 485

The accompanying Notes to the Consolidated Financial Statements are an integral part of this Statement.

OWENS CORNING AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(in millions)

	<u>December 31,</u> <u>2019</u>	<u>December 31,</u> <u>2018</u>
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	\$ 172	\$ 78
Receivables, less allowances of \$11 at December 31, 2019 and \$16 at December 31, 2018	770	794
Inventories	1,033	1,072
Other current assets	86	76
Total current assets	<u>2,061</u>	<u>2,020</u>
Property, plant and equipment, net	3,855	3,811
Operating lease right-of-use assets	203	—
Goodwill	1,932	1,949
Intangible assets, net	1,721	1,779
Deferred income taxes	46	43
Other non-current assets	188	169
TOTAL ASSETS	<u>\$ 10,006</u>	<u>\$ 9,771</u>
LIABILITIES AND EQUITY		
Total current liabilities	\$ 1,329	\$ 1,278
Long-term debt, net of current portion	2,986	3,362
Pension plan liability	231	268
Other employee benefits liability	179	190
Non-current operating lease liabilities	138	—
Deferred income taxes	272	141
Other liabilities	200	208
OWENS CORNING STOCKHOLDERS' EQUITY		
Preferred stock, par value \$0.01 per share (a)	—	—
Common stock, par value \$0.01 per share (b)	1	1
Additional paid in capital	4,051	4,028
Accumulated earnings	2,319	2,013
Accumulated other comprehensive deficit	(610)	(656)
Cost of common stock in treasury (c)	(1,130)	(1,103)
Total Owens Corning stockholders' equity	<u>4,631</u>	<u>4,283</u>
Noncontrolling interests	40	41
Total equity	<u>4,671</u>	<u>4,324</u>
TOTAL LIABILITIES AND EQUITY	<u>\$ 10,006</u>	<u>\$ 9,771</u>

(a) 10 shares authorized; none issued or outstanding at December 31, 2019 and December 31, 2018

(b) 400 shares authorized; 135.5 issued and 109.0 outstanding at December 31, 2019; 135.5 issued and 109.5 outstanding at December 31, 2018

(c) 26.5 shares at December 31, 2019 and 26.0 shares at December 31, 2018

The accompanying Notes to the Consolidated Financial Statements are an integral part of this Statement.

OWENS CORNING AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(in millions)

	Common Stock Outstanding		Treasury Stock		APIC (a)	Accumulated Earnings	AOCI (b)	NCI (c)	Total
	Shares	Par Value	Shares	Cost					
Balance at December 31, 2016	112.7	\$ 1	22.8	\$ (803)	\$ 3,984	\$ 1,377	\$ (710)	\$ 40	\$ 3,889
Net earnings attributable to Owens Corning	—	—	—	—	—	289	—	—	289
Net earnings attributable to noncontrolling interests	—	—	—	—	—	—	—	1	1
Currency translation adjustment	—	—	—	—	—	—	101	4	105
Pension and other postretirement adjustment (net of tax)	—	—	—	—	—	—	98	—	98
Deferred gain on hedging transactions (net of tax)	—	—	—	—	—	—	(3)	—	(3)
Redeemable equity redeemed and changes in subsidiary shares from noncontrolling interests	—	—	—	—	2	—	—	(1)	1
Issuance of common stock under share-based payment plans	1.3	—	(1.3)	48	(19)	—	—	—	29
Purchases of treasury stock	(2.5)	—	2.5	(156)	—	—	—	—	(156)
Stock-based compensation expense	—	—	—	—	44	—	—	—	44
Dividends declared (e)	—	—	—	—	—	(91)	—	(2)	(93)
Balance at December 31, 2017	111.5	\$ 1	24.0	\$ (911)	\$ 4,011	\$ 1,575	\$ (514)	\$ 42	\$ 4,204
Net earnings attributable to Owens Corning	—	—	—	—	—	545	—	—	545
Net earnings attributable to noncontrolling interests	—	—	—	—	—	—	—	2	2
Currency translation adjustment	—	—	—	—	—	—	(123)	(2)	(125)
Pension and other postretirement adjustment (net of tax)	—	—	—	—	—	—	(19)	—	(19)
Issuance of common stock under share-based payment plans	1.0	—	(1.0)	44	(30)	—	—	—	14
Purchases of treasury stock	(3.0)	—	3.0	(236)	—	—	—	—	(236)
Stock-based compensation expense	—	—	—	—	47	—	—	—	47
Cumulative effect of accounting change (d)	—	—	—	—	—	(12)	—	—	(12)
Dividends declared (e)	—	—	—	—	—	(95)	—	(1)	(96)
Balance at December 31, 2018	109.5	\$ 1	26.0	\$ (1,103)	\$ 4,028	\$ 2,013	\$ (656)	\$ 41	\$ 4,324
Net earnings attributable to Owens Corning	—	—	—	—	—	405	—	—	405
Net earnings attributable to noncontrolling interests	—	—	—	—	—	—	—	—	—
Currency translation adjustment	—	—	—	—	—	—	24	(1)	23
Pension and other postretirement adjustment (net of tax)	—	—	—	—	—	—	24	—	24
Deferred loss on hedging transactions (net of tax)	—	—	—	—	—	—	(2)	—	(2)
Issuance of common stock under share-based payment plans	0.8	—	(0.8)	34	(16)	—	—	—	18
Purchases of treasury stock	(1.3)	—	1.3	(61)	—	—	—	—	(61)
Stock-based compensation expense	—	—	—	—	39	—	—	—	39
Dividends declared (e)	—	—	—	—	—	(99)	—	—	(99)
Balance at December 31, 2019	109.0	\$ 1	26.5	\$ (1,130)	\$ 4,051	\$ 2,319	\$ (610)	\$ 40	\$ 4,671

(a) Additional Paid in Capital (APIC)

(b) Accumulated Other Comprehensive Earnings (Deficit) ("AOCI")

(c) Noncontrolling Interest ("NCI")

(d) Cumulative effect of accounting change relates to our adoption of ASU 2014-09 "Revenue from Contracts with Customers (Topic 606)" and ASU 2016-16 "Intra-Entity Transfers of Assets Other Than Inventory (Topic 740)."

(e) Dividend declarations of \$0.90 per share as of December 31, 2019, \$0.85 per share as of December 31, 2018, and \$0.81 per share as of December 31, 2017.

The accompanying Notes to the Consolidated Financial Statements are an integral part of this Statement.

OWENS CORNING AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
 (in millions)

	Twelve Months Ended December 31,		
	2019	2018	2017
NET CASH FLOW PROVIDED BY OPERATING ACTIVITIES			
Net earnings	\$ 405	\$ 547	\$ 290
Adjustments to reconcile net earnings to cash provided by operating activities:			
Depreciation and amortization	457	433	371
Deferred income taxes	118	141	183
Provision for pension and other employee benefits liabilities	45	—	74
Stock-based compensation expense	39	47	44
Loss on extinguishment of debt	32	—	71
Other adjustments to reconcile net earnings to cash provided by operating activities	(28)	(49)	18
Change in operating assets and liabilities:			
Changes in receivables, net	19	39	(66)
Changes in inventories	35	(216)	(57)
Changes in accounts payable and accrued liabilities	(11)	(89)	187
Changes in other operating assets and liabilities	(10)	7	(10)
Pension fund contributions	(46)	(40)	(72)
Payments for other employee benefits liabilities	(15)	(19)	(18)
Other	(3)	2	1
Net cash flow provided by operating activities	<u>1,037</u>	<u>803</u>	<u>1,016</u>
NET CASH FLOW USED FOR INVESTING ACTIVITIES			
Cash paid for property, plant and equipment	(447)	(537)	(337)
Derivative settlements	31	64	3
Proceeds from the sale of assets or affiliates	22	27	3
Investment in subsidiaries and affiliates, net of cash acquired	—	(1,143)	(570)
Net cash flow used for investing activities	<u>(394)</u>	<u>(1,589)</u>	<u>(901)</u>
NET CASH FLOW (USED FOR) PROVIDED BY FINANCING ACTIVITIES			
Proceeds from senior revolving credit and receivables securitization facilities	2,172	1,954	1,133
Payments on senior revolving credit and receivables securitization facilities	(2,248)	(1,879)	(1,133)
Proceeds from term loan borrowing	—	600	—
Payments on term loan borrowing	(300)	(100)	—
Proceeds from long-term debt	445	389	588
Payments on long-term debt	(484)	—	(351)
Dividends paid	(95)	(92)	(89)
Net increase in short-term debt	4	16	1
Purchases of treasury stock	(61)	(236)	(159)
Other	(6)	(5)	13
Net cash flow (used for) provided by financing activities	<u>(573)</u>	<u>647</u>	<u>3</u>
Effect of exchange rate changes on cash	24	(29)	17
Net increase (decrease) in cash, cash equivalents and restricted cash	94	(168)	135
Cash, cash equivalents and restricted cash at beginning of period	85	253	118
CASH, CASH EQUIVALENTS AND RESTRICTED CASH AT END OF PERIOD	<u>\$ 179</u>	<u>\$ 85</u>	<u>\$ 253</u>
DISCLOSURE OF CASH FLOW INFORMATION			
Cash paid during the year for income taxes	\$ 58	\$ 91	\$ 67
Cash paid during the year for interest	\$ 131	\$ 158	\$ 106

The accompanying Notes to the Consolidated Financial Statements are an integral part of this Statement.

OWENS CORNING AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. BUSINESS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**Description of Business**

Owens Corning, a Delaware corporation, is a leading global producer of glass fiber reinforcements and other materials for composite systems and of residential and commercial building materials. The Company operates within three segments: Composites, which includes the Company's Reinforcements and Downstream businesses; Insulation and Roofing. Through these lines of business, Owens Corning manufactures and sells products worldwide. The Company maintains leading market positions in many of its major product categories.

General

On February 6, 2020, the Board of Directors declared a quarterly dividend of \$0.24 per common share payable on April 3, 2020 to shareholders of record as of March 6, 2020.

Basis of Presentation

Unless the context requires otherwise, the terms "Owens Corning," "Company," "we" and "our" in these notes refer to Owens Corning and its subsidiaries.

The accompanying Consolidated Financial Statements have been prepared in accordance with accounting principles generally accepted in the United States.

Principles of Consolidation

The Consolidated Financial Statements of the Company include the accounts of majority-owned subsidiaries. Intercompany accounts and transactions are eliminated.

Reclassifications

Certain reclassifications have been made to the 2018 and 2017 Consolidated Financial Statements and Notes to the Consolidated Financial Statements to conform to the classifications used in 2019.

Use of Estimates and Assumptions

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ materially from those estimates.

Revenue Recognition

We recognize revenue as the amount of consideration that we expect to receive in exchange for transferring promised goods or services to customers. We do not adjust the transaction price for the effects of a significant financing component, as the time period between control transfer of goods and services and expected payment is one year or less. At the time of sale, we estimate provisions for different forms of variable consideration (discounts, rebates, returns and other refund liabilities) based on historical experience, current conditions and contractual obligations, as applicable. The estimated transaction price is typically not subject to significant reversals. We adjust these estimates when the most likely amount of consideration we expect to receive changes, although these changes are typically minor. Sales, value-added and other similar taxes that we collect are excluded from revenue.

Many of our customer volume commitments are short-term and our performance obligations are generally limited to single purchase orders. Substantially all of our revenue is recognized at a point-in-time when control of goods transfers to the customer. Control transfer typically occurs when goods are shipped from our facilities or at other predetermined control transfer points (for instance, destination terms or consignment arrangements).

OWENS CORNING AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

1. BUSINESS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)**Revenue Recognition (continued)**

We typically do not satisfy performance obligations without obtaining an unconditional right to payment from customers and, therefore, do not carry contract asset balances on the Consolidated Balance Sheets. Contract liability balances are recorded separately from receivables on the Consolidated Balance Sheets in either Total current liabilities or Other liabilities, depending on the timing of performance obligation satisfaction.

We sell separately-priced warranties that extend certain product and workmanship coverages beyond our standard product warranty, which is described in Note 11. The up-front consideration on extended warranty contracts is deferred and recognized as revenue over time, based on the respective coverage period, ranging from 16 to 20 years. On an annual basis, we expect to recognize approximately \$3 million of revenue associated with these extended warranty contracts. Additionally, in certain limited cases, we receive consideration before goods or services are transferred to the customer. These customer down payments and deposits are deferred, and typically recognized as revenue in the following quarter when we satisfy the related performance obligations.

As a practical expedient, we recognize incremental costs of obtaining a contract, if any, as an expense when incurred if the amortization period of the asset would have been one year or less. We do not have any costs to obtain or fulfill a contract that are capitalized under Accounting Standard Codification (ASC) 606.

Cost of Sales

Cost of sales includes material, labor, energy and manufacturing overhead costs, including depreciation and amortization expense associated with the manufacture and distribution of the Company's products. Provisions for warranties are provided in the same period that the related sales are recorded and are based on historical experience, current conditions and contractual obligations, as applicable. Distribution costs include inbound freight costs; purchasing and receiving costs; inspection costs; warehousing costs; shipping and handling costs, which include costs incurred relating to preparing, packaging, and shipping products to customers; and other costs of the Company's distribution network. We account for shipping and handling activities that occur after control of the related good transfers as fulfillment activities instead of performance obligations. All shipping and handling costs billed to the customer are included as net sales in the Consolidated Statements of Earnings.

Marketing and Advertising Expenses

Marketing and advertising expenses are included in Marketing and administrative expenses. These costs include advertising and marketing communications, which are expensed the first time the advertisement takes place. Marketing and advertising expenses for the years ended December 31, 2019, 2018 and 2017 were \$117 million, \$120 million and \$108 million, respectively.

Science and Technology Expenses

The Company incurs certain expenses related to science and technology. These expenses include salaries, building and equipment costs, utilities, administrative expenses, materials and supplies associated with the improvement and development of the Company's products and manufacturing processes. These costs are expensed as incurred.

Earnings per Share

Basic earnings per share are computed using the weighted-average number of common shares outstanding during the period. Diluted earnings per share reflect the dilutive effect of common equivalent shares and increased shares that would result from the conversion of equity securities. The effects of anti-dilution are not presented.

OWENS CORNING AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

1. BUSINESS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)**Cash, Cash Equivalents and Restricted Cash**

The Company defines cash and cash equivalents as cash and time deposits with maturities of three months or less when purchased. On the Consolidated Statements of Cash Flows, the total of Cash, cash equivalents and restricted cash includes restricted cash of \$7 million as of December 31, 2019, 2018 and 2017. Restricted cash primarily represents amounts received from a counterparty related to its performance assurance on an executory contract, and is included in Other current assets on the Consolidated Balance Sheets. These amounts are contractually required to be set aside, and the counterparty can exchange the cash for another form of performance assurance at its discretion.

Accounts Receivable

Trade accounts receivable are recorded at the invoiced amount and do not bear interest. The allowance for doubtful accounts is an estimate of the amount of probable credit losses in our existing accounts receivable. Account balances are charged off against the allowance when the Company believes it is probable the receivable will not be recovered.

Inventory Valuation

Inventory costs include material, labor, and manufacturing overhead costs, including depreciation and amortization expense associated with the manufacture and distribution of the Company's products. Inventories are stated at lower of cost or net realizable value and expense estimates are made for excess and obsolete inventories. Cost is determined by the first-in, first-out ("FIFO") method.

Investments in Affiliates

The Company accounts for investments in affiliates of 20% to 50% ownership when the Company does not have a controlling financial interest using the equity method under which the Company's share of earnings and losses of the affiliate is reflected in earnings, and dividends are credited against the investment in affiliate when declared. Investments in affiliates are recorded in Other non-current assets on the Consolidated Balance Sheets and as of December 31, 2019 and 2018, the total value of investments was \$51 million.

Goodwill and Other Intangible Assets

Goodwill assets are not amortized but are tested for impairment on at least an annual basis. In the current year, as part of the annual assessment, the Company used both a qualitative and quantitative approach to determine whether the fair value of a reporting unit was less than its carrying amount.

Events and circumstances we consider in performing the qualitative assessment include macro-economic conditions, market and industry conditions, internal cost factors, and the overall financial performance of the reporting units. As part of our quantitative testing process for goodwill, the Company estimates fair values using a discounted cash flow approach from the perspective of a market participant. Significant assumptions used in the discounted cash flow approach are revenue growth rates and earnings before interest and taxes ("EBIT") margins used in estimating discrete period cash flow forecasts of the reporting unit, the discount rate, and the long-term revenue growth rate and EBIT margins used in estimating the terminal business value. The cash flow forecasts of the reporting units are based upon management's long-term view of our markets and are the forecasts that are used by senior management and the Board of Directors to evaluate operating performance. The discount rate utilized is management's estimate of what the market's weighted average cost of capital is for a company with a similar debt rating and stock volatility, as measured by beta. The terminal business value is determined by applying the long-term growth rate to the latest year for which a forecast exists. As part of our goodwill quantitative testing process, we would evaluate whether there are reasonably likely changes to management's estimates that would have a material impact on the results of the goodwill impairment testing.

OWENS CORNING AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

1. BUSINESS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Other indefinite-lived intangible assets are not amortized but are tested for impairment on at least an annual basis or when determined to have a finite useful life. Substantially all of the indefinite-lived intangible assets are in trademarks and trade names. The Company uses the royalty relief approach to determine whether it is more likely than not that the fair value of these assets is less than its carrying amount. This review is performed annually, or when circumstances arise which indicate there may be impairment. When applying the royalty relief approach, the Company performs a discounted cash flow analysis based on the value derived from owning these trademarks and trade names and being relieved from paying royalty to third parties. Significant assumptions used include projected cash flows, royalty rates, discount rate, and terminal value.

The inputs for the goodwill and indefinite-lived intangible tests are considered Level 3 inputs under the fair value hierarchy as they are the Company's own data, and are unobservable in the marketplace. Indefinite-lived intangible assets purchased through acquisition are generally tested qualitatively for impairment in the first year following the acquisition before transitioning to the standard methodology described herein in subsequent years.

Properties and Depreciation

Property, plant and equipment are stated at cost and depreciated over their estimated useful lives using the straight-line method. Property, plant and equipment accounts are relieved of the cost and related accumulated depreciation when assets are disposed of or otherwise retired.

Precious metals used in our production tooling are included in property, plant and equipment and are depleted as they are consumed during the production process. Depletion typically represents an annual expense of less than 3% of the outstanding value and is recorded in Cost of sales on the Consolidated Statements of Earnings.

The range of useful lives for the major components of the Company's plant and equipment is as follows:

Buildings and leasehold improvements	15 – 40 years
Machinery and equipment	
Furnaces	4 – 15 years
Information systems	5 – 10 years
Equipment	5 – 20 years

Expenditures for normal maintenance and repairs are expensed as incurred.

Asset Impairments

The Company evaluates tangible and intangible long-lived assets for impairment when triggering events have occurred. This requires significant assumptions including projected cash flows, projected income tax rate and terminal business value. These inputs are considered Level 3 inputs under the fair value hierarchy as they are the Company's own data, and are unobservable in the marketplace. Changes in management intentions, market conditions or operating performance could indicate that impairment charges might be necessary that could be material to the Company's Consolidated Financial Statements in any given period.

OWENS CORNING AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

1. BUSINESS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)**Income Taxes**

The Company recognizes current tax liabilities and assets for the estimated taxes payable or refundable on the tax returns for the current year. Deferred tax balances reflect the impact of temporary differences between the carrying amount of assets and liabilities and their tax basis. Amounts are stated at enacted tax rates expected to be in effect when taxes are actually paid or recovered. In addition, realization of certain deferred tax assets is dependent upon our ability to generate future taxable income. The Company records a valuation allowance to reduce its deferred tax assets to the amount that it believes is more likely than not to be realized. In addition, the Company estimates tax reserves to cover potential taxing authority claims for income taxes and interest attributable to audits of open tax years.

Taxes Collected from Customers and Remitted to Government Authorities and Taxes Paid to Vendors

Taxes are assessed by various governmental authorities at different rates on many different types of transactions. The Company charges sales tax or value-added tax (VAT) on sales to customers where applicable, as well as captures and claims back all available VAT that has been paid on purchases. VAT is recorded in separate payable or receivable accounts and does not affect revenue or cost of sales line items in the income statement. VAT receivable is recorded as a percentage of qualifying purchases at the time the vendor invoice is processed. VAT payable is recorded as a percentage of qualifying sales at the time an Owens Corning sale to a customer subject to VAT occurs. Amounts are paid to the taxing authority according to the method and collection prescribed by local regulations. Where applicable, VAT payable is netted against VAT receivable. The Company also pays sales tax to vendors who include a tax, required by government regulations, to the purchase price charged to the Company.

Pension and Other Postretirement Benefits

Accounting for pensions and other postretirement benefits involves estimating the cost of benefits to be provided well into the future and attributing that cost over the time period each employee works. To accomplish this, extensive use is made of assumptions about investment returns, discount rates, inflation, mortality, turnover and medical costs.

Derivative Financial Instruments

The Company recognizes all derivative instruments as either assets or liabilities at fair value on the balance sheet. Please refer to Note 5 for further disclosure on derivatives.

The Company performs an analysis for effectiveness of its derivatives designated as hedging instruments at the end of each quarter based on the terms of the contracts and the underlying items being hedged. The change in the fair value of cash flow hedges is deferred in Accumulated other comprehensive income (deficit) ("AOCI") and is subsequently recognized in Cost of sales (for commodity and foreign currency cash flow hedges) on the Consolidated Statements of Earnings in order to mirror the location of the hedged items impacting earnings. Cash settlements for commodity and foreign currency hedges qualifying as cash flow hedges are included in Operating activities in the Consolidated Statements of Cash Flows.

The Company has translation exposure resulting from translating the financial statements of foreign subsidiaries into U.S. Dollars, which is recognized in Currency translation adjustment (a component of AOCI). The Company uses cross-currency forward contracts to hedge a portion of the net investment in foreign subsidiaries against fluctuations in foreign exchange rates. The changes in fair values of these derivative instruments are recognized in Currency translation adjustment (a component of AOCI), with recognition of the excluded components amortized to Interest expense, net on the Consolidated Statements of Earnings. Cash settlements for derivatives qualifying as net investment hedges are included in Investing activities in the Consolidated Statements of Cash Flows.

OWENS CORNING AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

1. BUSINESS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

The Company uses forward currency exchange contracts to manage existing exposures to foreign exchange risk related to assets and liabilities recorded on the Consolidated Balance Sheets. Gains and losses resulting from the changes in fair value of these instruments are recorded in Other expenses, net on the Consolidated Statements of Earnings, and are substantially offset by net revaluation impacts on foreign currency denominated balance sheet exposures (which are also recorded in Other expenses, net). Cash settlements for non-designated derivatives are included in the Consolidated Statements of Cash Flows in the category that is consistent with the nature of the derivative instrument, which is generally the same category as the underlying item being hedged.

Fair Value Measurements

The carrying value of cash and cash equivalents, accounts receivable and short-term debt approximate fair value because of the short-term maturity of the instruments. The Company uses widely accepted valuation tools to determine fair value of our derivatives, such as discounting cash flows to calculate a present value for the derivatives. Our derivatives consist of natural gas forward swaps, cross currency swaps and foreign exchange forward contracts, all of which are over-the-counter and not traded through an exchange. The models use Level 2 inputs, such as forward curves and other commonly quoted observable transactions and prices. The fair value of our derivatives and hedging instruments are all classified as Level 2 investments within the three-tier hierarchy.

Please refer to Notes 5 and 13 for additional fair value disclosure of derivative financial instruments and long-term debt, respectively.

Foreign Currency

The functional currency of the Company's subsidiaries is generally the applicable local currency. Assets and liabilities of foreign subsidiaries are translated into United States dollars at the period-end rate of exchange, and their Statements of Earnings and Statements of Cash Flows are converted on an ongoing basis at the monthly average rate. The resulting translation adjustment is included in AOCI in the Consolidated Balance Sheets and Consolidated Statements of Stockholders' Equity. Transaction gains and losses that arise from exchange rate fluctuations on transactions denominated in a currency other than the functional currency are recorded in Other expenses, net in the Consolidated Statements of Earnings as incurred. As discussed in the Derivative Financial Instruments section above, the Company uses non-designated foreign currency derivative financial instruments to mitigate this risk. The Company recorded foreign currency transactional gains (net of associated derivative activity) of \$12 million and \$7 million during the years ended December 31, 2019 and December 31, 2018, respectively, and foreign currency transactional losses (net of associated derivative activity) of \$4 million during the year ended December 31, 2017. Please refer to Note 5 for additional disclosures related to non-designated derivatives.

OWENS CORNING AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

1. BUSINESS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Accounting Pronouncements

The following table summarizes recent accounting standard updates (ASU) issued by the Financial Accounting Standards Board (FASB) that could have an impact on the Company's Consolidated Financial Statements:

Standard	Description	Effective Date for Company	Effect on the Consolidated Financial Statements
<i>Recently adopted standards:</i>			
ASU 2016-02, "Leases (Topic 842)," as amended by ASU 2017-13, 2018-01, 2018-10, 2018-11, and 2019-01	The standard requires lessees to recognize a right-of-use asset and lease liability for all leases with terms of more than 12 months. The recognition and presentation of expenses will depend on classification as a finance or operating lease. Entities may elect to apply the provisions of the new leasing standard on January 1, 2019, without adjusting the comparative periods presented by recognizing a cumulative-effect adjustment to the opening balance of retained earnings.	January 1, 2019	We adopted this standard using the optional transition method in the first quarter of 2019. Please refer to Note 9 of the Consolidated Financial Statements for transition disclosures as well as other ongoing disclosure requirements.
<i>Recently issued standards:</i>			
ASU 2016-13 "Financial Instruments - Credit Losses (Topic 326)," as amended by ASU 2018-19, 2019-04, 2019-05, 2019-10 and 2019-11	This standard replaces the incurred loss methodology for recognizing credit losses with a current expected credit losses model and applies to all financial assets, including trade receivables. Entities will adopt the standard using a modified-retrospective approach.	January 1, 2020	We do not believe the adoption of this guidance will have a material effect on our consolidated financial statements. Our current accounts receivable policy (as described in Note 1 of the Consolidated Financial Statements) uses historical and forward-looking information to estimate the amount of expected credit losses in our existing accounts receivable. We have determined that our current systems, policies and procedures comply with the requirements of this standard.

OWENS CORNING AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

2. SEGMENT INFORMATION

The Company has three reportable segments: Composites, Insulation and Roofing. Accounting policies for the segments are the same as those for the Company. The Company's three reportable segments are defined as follows:

Composites – The Company manufactures, fabricates and sells glass reinforcements in the form of fiber. Glass reinforcement materials are also used downstream by the Composites segment to manufacture and sell glass fiber products in the form of fabrics, non-wovens and other specialized products.

Insulation – Within our Insulation segment, the Company manufactures and sells fiberglass insulation into residential, commercial, industrial and other markets for both thermal and acoustical applications. It also manufactures and sells glass fiber pipe insulation, flexible duct media, bonded and granulated mineral wool insulation, cellular glass insulation and foam insulation used in above- and below-grade construction applications.

Roofing – Within our Roofing segment, the Company manufactures and sells residential roofing shingles, oxidized asphalt materials, roofing components used in residential and commercial construction and specialty applications, and synthetic packaging materials.

NET SALES

The following table summarizes our net sales by segment and geographic region (in millions). Corporate eliminations (shown below) largely reflect intercompany sales from Composites to Roofing. External customer sales are attributed to geographic region based upon the location from which the product is sold to the external customer.

	Twelve Months Ended December 31,		
	2019	2018	2017
<u>Reportable Segments</u>			
Composites	\$ 2,059	\$ 2,041	\$ 2,068
Insulation	2,668	2,720	2,001
Roofing	2,634	2,492	2,553
Total reportable segments	7,361	7,253	6,622
Corporate eliminations	(201)	(196)	(238)
NET SALES	\$ 7,160	\$ 7,057	\$ 6,384

External Customer Sales by Geographic Region

United States	\$ 4,776	\$ 4,647	\$ 4,495
Europe	1,209	1,209	661
Asia Pacific	664	656	675
Canada and other	511	545	553
NET SALES	\$ 7,160	\$ 7,057	\$ 6,384

EARNINGS BEFORE INTEREST AND TAXES

Earnings before interest and taxes (EBIT) by segment consists of net sales less related costs and expenses and are presented on a basis that is used internally for evaluating segment performance. Certain items, such as general corporate expenses or income and certain other expense or income items, are excluded from the internal evaluation of segment performance. Accordingly, these items are not reflected in EBIT for our reportable segments and are included within Corporate, Other and Eliminations.

OWENS CORNING AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

2. SEGMENT INFORMATION (continued)

The following table summarizes EBIT by segment (in millions):

	Twelve Months Ended December 31,		
	2019	2018	2017
<u>Reportable Segments</u>			
Composites	\$ 247	\$ 251	\$ 291
Insulation	230	290	177
Roofing	455	434	535
Total reportable segments	932	975	1,003
Restructuring costs	(28)	(22)	(48)
Acquisition-related costs	—	(16)	(15)
Recognition of acquisition inventory fair value step-up	—	(2)	(5)
Litigation settlement gain, net of legal fees	—	—	29
Pension settlement losses	(43)	—	(64)
Environmental liability charges	(4)	—	(15)
General corporate expense and other	(104)	(114)	(148)
Total Corporate, other and eliminations	(179)	(154)	(266)
EBIT	\$ 753	\$ 821	\$ 737

TOTAL ASSETS AND PROPERTY, PLANT AND EQUIPMENT

The following table summarizes total assets by segment and property, plant and equipment by geographic region (in millions):

	December 31,	
	2019	2018
TOTAL ASSETS		
<u>Reportable Segments</u>		
Composites	\$ 2,470	\$ 2,480
Insulation	4,975	4,907
Roofing	1,784	1,750
Total reportable segments	9,229	9,137
Cash and cash equivalents	172	78
Noncurrent deferred income taxes	46	43
Investments in affiliates	51	51
Assets held for sale	1	3
Corporate property, plant and equipment, other assets and eliminations	507	459
CONSOLIDATED TOTAL ASSETS	\$ 10,006	\$ 9,771

	December 31,	
	2019	2018
PROPERTY, PLANT AND EQUIPMENT BY GEOGRAPHIC REGION		
United States	\$ 2,204	\$ 2,166
Europe	762	779
Asia Pacific	601	567
Canada and other	288	299
TOTAL PROPERTY, PLANT AND EQUIPMENT	\$ 3,855	\$ 3,811

OWENS CORNING AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

2. SEGMENT INFORMATION (continued)

PROVISION FOR DEPRECIATION AND AMORTIZATION

The following table summarizes the provision for depreciation and amortization by segment (in millions):

	Twelve Months Ended December 31,		
	2019	2018	2017
<u>Reportable Segments</u>			
Composites	\$ 154	\$ 147	\$ 144
Insulation	194	186	124
Roofing	54	51	50
Total reportable segments	402	384	318
General corporate depreciation and amortization (a)	55	49	53
CONSOLIDATED PROVISION FOR DEPRECIATION AND AMORTIZATION	\$ 457	\$ 433	\$ 371

(a) In 2019, 2018 and 2017, General corporate depreciation and amortization expense included \$9 million, \$10 million and \$17 million, respectively, of accelerated depreciation related to restructuring actions further explained in Note 12 to the Consolidated Financial Statements.

ADDITIONS TO PROPERTY, PLANT AND EQUIPMENT

The following table summarizes additions to property, plant and equipment on an accrual basis by segment (in millions):

	Twelve Months Ended December 31,		
	2019	2018	2017
<u>Reportable Segments</u>			
Composites	\$ 123	\$ 154	\$ 148
Insulation	210	240	151
Roofing	56	91	66
Total reportable segments	389	485	365
General corporate additions	62	57	37
CONSOLIDATED ADDITIONS TO PROPERTY, PLANT AND EQUIPMENT	\$ 451	\$ 542	\$ 402

3. REVENUE

ASU 2014-09 Adoption

On January 1, 2018, we adopted ASU 2014-09 "Revenue from Contracts with Customers (Topic 606)" and the related amendments (collectively, "ASC 606"). We used the modified retrospective method of adoption, in which the cumulative effect of initially applying the new standard to existing contracts (as of January 1, 2018) was recorded as a \$2 million decrease to the January 1, 2018 opening balance of Accumulated earnings. The effect of this adoption was immaterial to our Consolidated Financial Statements, and we do not expect a material effect to our Consolidated Financial Statements on an ongoing basis. Under the modified-retrospective method of adoption, the comparative information in the Consolidated Financial Statements has not been revised and continues to be reported under the previously applicable revenue accounting guidance ("ASC 605"). If ASC 605 had been applied to the year 2018, the impact would have been immaterial to our Consolidated Financial Statements. Please refer to Significant Policies in Note 1 for other disclosures required by ASC 606.

OWENS CORNING AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

3. REVENUE (continued)

Disaggregated Revenue

The following tables show a disaggregation of Net sales (in millions):

Twelve Months Ended December 31, 2019						
Reportable Segments	Composites	Insulation	Roofing	Eliminations	Consolidated	
<u>Disaggregation Categories</u>						
U.S. residential	\$ 269	\$ 927	\$ 2,375	\$ (195)	\$ 3,376	
U.S. commercial and industrial	614	643	143	—	1,400	
Europe	572	625	13	(1)	1,209	
Asia-Pacific	475	176	13	—	664	
Rest of world	129	297	90	(5)	511	
NET SALES	\$ 2,059	\$ 2,668	\$ 2,634	\$ (201)	\$ 7,160	

Twelve Months Ended December 31, 2018						
Reportable Segments	Composites	Insulation	Roofing	Eliminations	Consolidated	
<u>Disaggregation Categories</u>						
U.S. residential	\$ 263	\$ 990	\$ 2,199	\$ (177)	\$ 3,275	
U.S. commercial and industrial	598	625	161	(12)	1,372	
Europe	590	605	14	—	1,209	
Asia-Pacific	464	178	15	(1)	656	
Rest of world	126	322	103	(6)	545	
NET SALES	\$ 2,041	\$ 2,720	\$ 2,492	\$ (196)	\$ 7,057	

Please refer to Note 2 and Item 1 of our 2019 Form 10-K for further information on our three reportable segments (Composites, Insulation and Roofing). Our contracts with customers are broadly similar in nature throughout our reportable segments, but the amount, timing and uncertainty of revenue and cash flows may vary in each reportable segment due to geographic and end-market economic factors.

In the United States, sales are primarily related to the residential housing market and commercial and industrial applications. Residential market demand is driven by housing starts and repair and remodeling activity (influenced by existing home sales, seasonal home improvement and damage from major storms). Significant portions of our residential products across our three reportable segments are used interchangeably in both new construction and repair and remodeling, and our customers typically distribute (or use) the products for both applications. U.S. commercial and industrial revenues are largely driven by U.S. industrial production growth, commercial construction activity and overall economic conditions in the U.S.

Outside of the United States (Europe, Asia-Pacific and Rest of world), sales are primarily related to commercial and industrial applications and, to a lesser extent, residential applications in certain countries. Throughout the international regions, demand is primarily driven by industrial production growth, commercial construction activity and overall economic conditions in each respective geographical region.

Contract Balances

As of December 31, 2018, our contract liability balances (for extended warranties, down payments and deposits, collectively) totaled \$53 million, of which \$17 million was recognized as revenue throughout 2019. As of December 31, 2019, our contract liability balances totaled \$60 million.

OWENS CORNING AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

4. INVENTORIES

Inventories consist of the following (in millions):

	December 31,	
	2019	2018
Finished goods	\$ 715	\$ 730
Materials and supplies	318	342
Total inventories	\$ 1,033	\$ 1,072

5. DERIVATIVE FINANCIAL INSTRUMENTS

The Company is exposed to, among other risks, the impact of changes in commodity prices, foreign currency exchange rates, and interest rates in the normal course of business. The Company's risk management program is designed to manage the exposure and volatility arising from these risks, and utilizes derivative financial instruments to offset a portion of these risks. The Company uses derivative financial instruments only to the extent necessary to hedge identified business risks, and does not enter into such transactions for trading purposes.

The Company generally does not require collateral or other security with counterparties to these financial instruments and is therefore subject to credit risk in the event of nonperformance; however, the Company monitors credit risk and currently does not anticipate nonperformance by other parties. Contracts with counterparties generally contain right of offset provisions. These provisions effectively reduce the Company's exposure to credit risk in situations where the Company has gain and loss positions outstanding with a single counterparty. It is the Company's policy to offset on the Consolidated Balance Sheets the amounts recognized for derivative instruments with any cash collateral arising from derivative instruments executed with the same counterparty under a master netting agreement. As of December 31, 2019 and 2018, the Company did not have any amounts on deposit with any of its counterparties, nor did any of its counterparties have any amounts on deposit with the Company.

Derivative Fair Values

The following table presents the fair value of derivatives and hedging instruments and the respective location on the Consolidated Balance Sheets (in millions):

	Location	Fair Value at	
		December 31, 2019	December 31, 2018
<u>Derivative assets designated as hedging instruments:</u>			
<u>Net investment hedges:</u>			
Cross currency swaps	Other current assets	\$ 12	\$ 9
Cross currency swaps	Other non-current assets	\$ 1	\$ —
<u>Derivative liabilities designated as hedging instruments:</u>			
<u>Net investment hedges:</u>			
Cross-currency swaps	Other liabilities	\$ 4	\$ 17
<u>Cash flow hedges:</u>			
Natural gas forward swaps	Current liabilities	\$ 3	\$ 1
<u>Derivative assets not designated as hedging instruments:</u>			
Foreign exchange forward contracts	Other current assets	\$ 9	\$ 1
<u>Derivative liabilities not designated as hedging instruments:</u>			
Foreign exchange forward contracts	Current liabilities	\$ 1	\$ 8

OWENS CORNING AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

5. DERIVATIVE FINANCIAL INSTRUMENTS (continued)

Consolidated Statements of Earnings Activity

The following table presents the impact and respective location of derivative activities on the Consolidated Statements of Earnings (in millions):

	Location	Twelve Months Ended December 31,		
		2019	2018	2017
Derivative activity designated as hedging instruments:				
<u>Natural gas cash flow hedges:</u>				
Amount of loss/(gain) reclassified from AOCI into earnings	Cost of sales	\$ 4	\$ (2)	\$ (1)
Amount of loss recognized in earnings (ineffective portion)	Other expenses, net	\$ —	\$ —	\$ 2
<u>Cross-currency swap net investment hedges:</u>				
Amount of gain recognized in earnings on derivative amounts excluded from effectiveness testing	Interest expense, net	\$ (13)	\$ (12)	\$ —
Derivative activity not designated as hedging instruments:				
<u>Foreign currency:</u>				
Amount of (gain)/loss recognized in earnings (a)	Other expenses, net	\$ (35)	\$ (55)	\$ 5

(a) (Gains)/losses related to foreign currency derivatives were substantially offset by net revaluation impacts on foreign currency denominated balance sheet exposures, which were also recorded in Other expenses, net. Please refer to the "Other Derivatives" section below for additional detail.

Consolidated Statements of Comprehensive Earnings Activity

The following table presents the impact of derivative activities on the Consolidated Statements of Comprehensive Earnings (in millions):

Hedging Type	Derivative Financial Instrument	Amount of (Gain) Loss Recognized in Comprehensive Earnings	
		Twelve Months Ended December 31, 2019	2018
Net investment hedge	Cross-currency swaps	\$ (18)	\$ (18)
Cash flow hedge	Natural gas forward swaps	\$ 2	\$ —

Net Investment Hedges

The Company has translation exposure resulting from translating the financial statements of foreign subsidiaries into U.S. Dollars, which is recognized in Currency translation adjustment (a component of AOCI). The Company uses cross-currency forward contracts to hedge a portion of the net investment in foreign subsidiaries against fluctuations in foreign exchange rates. As of December 31, 2019, the notional amount of these derivative financial instruments was \$516 million related to the U.S Dollar and European Euro.

Cash Flow Hedges

The Company uses a combination of derivative financial instruments, which qualify as cash flow hedges, and physical contracts to manage forecasted exposure to electricity and natural gas prices. As of December 31, 2019, the notional amounts of these natural gas forward swaps was 2 MMBTu (or MMBTu equivalent based on U.S. and European indices), which is in line with the notional amounts at December 31, 2018.

OWENS CORNING AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

5. DERIVATIVE FINANCIAL INSTRUMENTS (continued)

Other Derivatives

The Company uses forward currency exchange contracts to manage existing exposures to foreign exchange risk related to assets and liabilities recorded on the Consolidated Balance Sheets. As of December 31, 2019, the Company had notional amounts of \$704 million for non-designated derivative financial instruments related to foreign currency exposures in U.S. Dollars primarily related to Brazilian Real, Chinese Yuan, European Euro, Indian Rupee, and South Korean Won. In addition, the Company had notional amounts of \$82 million for non-designated derivative financial instruments related to foreign currency exposures in European Euro primarily related to the Russian Ruble.

6. GOODWILL AND OTHER INTANGIBLE ASSETS

Goodwill

The Company tests goodwill and indefinite-lived intangible assets for impairment as of October 1 each year, or more frequently should circumstances change or events occur that would more likely than not reduce the fair value of a reporting unit below its carrying amount.

The changes in the net carrying amount of goodwill by segment are as follows (in millions):

	Composites	Insulation	Roofing	Total
Balance at December 31, 2018	\$ 57	\$ 1,495	\$ 397	\$ 1,949
Foreign currency translation	—	(16)	(1)	(17)
Balance at December 31, 2019	<u>\$ 57</u>	<u>\$ 1,479</u>	<u>\$ 396</u>	<u>\$ 1,932</u>

The annual tests performed in 2019 resulted in no impairment of goodwill or indefinite-lived intangible assets. Testing did indicate that the business enterprise value for the Insulation reporting unit exceeded its carrying value by approximately 10%. There is uncertainty surrounding the macroeconomic factors that impact this reporting unit and a sustained downturn in these factors or a change in the long-term revenue growth or profitability for this reporting unit could increase the likelihood of a future impairment.

Other Intangible Assets

The Company amortizes the cost of other intangible assets over their estimated useful lives which, individually, range up to 45 years. The Company's future cash flows are not materially impacted by its ability to extend or renew agreements related to its amortizable intangible assets.

The Other category below primarily includes franchise agreements and quarry and emissions rights. Other intangible assets consist of the following (in millions):

	December 31, 2019			December 31, 2018		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Trademarks	\$ 1,139	\$ —	\$ 1,139	\$ 1,144	\$ —	\$ 1,144
Customer relationships	550	(167)	383	554	(138)	416
Technology	319	(152)	167	321	(134)	187
Other	67	(35)	32	60	(28)	32
Total other intangible assets	<u>\$ 2,075</u>	<u>\$ (354)</u>	<u>\$ 1,721</u>	<u>\$ 2,079</u>	<u>\$ (300)</u>	<u>\$ 1,779</u>

OWENS CORNING AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

6. GOODWILL AND OTHER INTANGIBLE ASSETS (continued)

Amortization expense for the years ended December 31, 2019, 2018, and 2017 was \$54 million, \$49 million, and \$31 million, respectively. The estimated amortization expense for intangible assets for the next five years is as follows (in millions):

Period	Amortization	
2020	\$	48
2021	\$	48
2022	\$	45
2023	\$	42
2024	\$	39

7. PROPERTY, PLANT AND EQUIPMENT

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

	December 31, 2019	December 31, 2018
Land	\$ 221	\$ 224
Buildings and leasehold improvements	1,186	1,091
Machinery and equipment	4,978	4,628
Construction in progress	310	443
	6,695	6,386
Accumulated depreciation	(2,840)	(2,575)
Property, plant and equipment, net	\$ 3,855	\$ 3,811

Machinery and equipment includes certain precious metals used in our production tooling, which comprise approximately 10% and 11% of total machinery and equipment as of December 31, 2019 and December 31, 2018, respectively.

For the years ended December 31, 2019, 2018 and 2017, depreciation expense was \$403 million, \$384 million and \$340 million, respectively, which includes depletion expense related to precious metals used in our production tooling. In 2019, 2018 and 2017, depreciation expense included \$9 million, \$10 million and \$17 million, respectively, of accelerated depreciation related to restructuring actions further explained in Note 12 to the Consolidated Financial Statements.

8. ACQUISITIONS**Paroc Acquisition**

On February 5, 2018, the Company acquired all the outstanding equity of Paroc Group Oy ("Paroc"), a leading producer of mineral wool insulation for building and technical applications in Europe, for \$1,121 million, net of cash acquired. The acquisition of Paroc expands the Company's mineral wool technology, grows its presence in the European insulation market, provides access to a variety of new end-use markets and will increase the Insulation segment's geographic sales mix outside of the U.S. and Canada. Paroc's operating results have been included in the Company's Insulation segment within the Consolidated Financial Statements since the date of acquisition. During 2019, the Consolidated Statements of Earnings included \$38 million in Net Sales attributable to the acquisition (net sales from January 1, 2019 through February 4, 2019 that were related to the one-year post-acquisition period). The pro forma effect of this acquisition on Net sales and Net earnings attributable to Owens Corning was immaterial.

OWENS CORNING AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

9. LEASES**ASU 2016-02 Adoption**

On January 1, 2019, we adopted ASU 2016-02, "Leases (Topic 842)," and the related amendments (collectively "ASC 842"). We used the optional transition method of adoption, in which the cumulative effect of initially applying the new standard to existing leases was \$237 million to record the operating lease right-of-use assets and the related liabilities as of January 1, 2019. Under this method of adoption, the comparative information in the Consolidated Financial Statements has not been revised and continues to be reported under the previously applicable lease accounting guidance (ASC 840). We elected the package of practical expedients permitted under the transition guidance, which included the carry-forward of historical lease classifications.

As of December 31, 2018, leases classified as capital leases under ASC 840 of \$16 million were included in Property, plant and equipment, net. Finance lease right-of-use assets, which were previously classified as capital leases under ASC 840, are now included in Other non-current assets. As of both December 31, 2018 and December 31, 2019, liabilities associated with capital leases and finance leases are included in Long-term debt and represent indebtedness for bank covenant purposes.

Leases

The Company leases certain equipment and facilities under both operating and finance leases expiring on various dates through 2032. The nature of these leases generally fall into the following five categories: real estate, material handling, fleet vehicles, office equipment and energy equipment.

For leases with initial terms greater than 12 months, we consider these our right-of-use assets and record the related asset and obligation at the present value of lease payments over the term. For leases with initial terms equal to or less than 12 months, we do not consider them as right-of-use assets and instead consider them short-term lease costs that are recognized on a straight-line basis over the lease term.

Many of our leases include escalation clauses, renewal options and/or termination options that are factored into our determination of lease payments when reasonably certain. These options to extend or terminate a lease are at our discretion. We have elected to take the practical expedient and not separate lease and non-lease components of contracts. We estimate our incremental borrowing rate to discount the lease payments based on information available at lease commencement. Our lease agreements do not contain any material residual value guarantees.

OWENS CORNING AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

9. LEASES (continued)

Balance Sheet Classification

The table below presents the lease-related assets and liabilities recorded on the balance sheet (in millions):

Leases	Classification on Balance Sheet	December 31, 2019	
Assets			
Operating lease assets	Operating lease right-of-use assets	\$	203
Finance lease assets	Other non-current assets		21
Total lease assets		\$	224
Liabilities			
Current			
Operating	Current liabilities	\$	66
Finance	Current liabilities		7
Non-Current			
Operating	Non-current operating lease liabilities		138
Finance	Long-term debt, net of current portion		19
Total lease liabilities		\$	230

Lease Costs

For the year ended December 31, 2019, the Company recorded \$81 million of operating lease expense and \$10 million of short-term lease expense. The Company had an immaterial amount of finance lease expense and variable lease expense. Cash paid for operating leases approximated operating lease expense and non-cash right-of-use asset amortization for the year ended December 31, 2019. We added \$47 million of operating lease liabilities as a result of obtaining operating lease right-of-use assets in the year ended December 31, 2019.

Other Information

The tables below present supplemental information related to leases as of December 31, 2019:

Weighted-average remaining lease term (years)	December 31, 2019
Operating leases	4.0
Finance leases	3.9

Weighted-average discount rate	December 31, 2019
Operating leases	3.30 %
Finance leases	6.29 %

OWENS CORNING AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

9. LEASES (continued)

Maturities of Lease Liabilities

The table below reconciles the undiscounted cash flows for each of the first five years and the total of the remaining years to the finance lease liabilities and operating lease liabilities recorded on the balance sheet as of December 31, 2019 (in millions):

Period	Operating Leases	Finance Leases
2020	\$ 73	\$ 8
2021	60	8
2022	39	6
2023	22	4
2024	11	2
2025 and beyond	17	1
Total minimum lease payments	222	29
Less: implied interest	18	3
Present value of future minimum lease payments	204	26
Less: current lease obligations	66	7
Long-term lease obligations	\$ 138	\$ 19

As of December 31, 2019, we have an immaterial amount of leases that have not yet commenced.

Information Presented in 2018 Form 10-K under ASC 840

As presented in our 2018 Form 10-K, the minimum future rental commitments under ASC 840 for non-cancelable operating leases with initial maturities greater than one year, payable over the remaining lives of the leases as of December 31, 2018 were (in millions):

Period	Minimum Future Rental Commitments
2019	\$ 83
2020	\$ 64
2021	\$ 47
2022	\$ 31
2023	\$ 18
2024 and beyond	\$ 27

Total rent expense was \$106 million, \$87 million and \$79 million in the years ended December 31, 2018, 2017 and 2016, respectively.

OWENS CORNING AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

10. TOTAL CURRENT LIABILITIES

Current liabilities consist of the following current portions of these liabilities (in millions):

	December 31,	
	2019	2018
Accounts payable	\$ 815	\$ 851
Payroll, vacation pay and incentive compensation	172	157
Current operating lease liabilities	66	—
Other	276	270
Total	\$ 1,329	\$ 1,278

11. WARRANTIES

The Company records a liability for warranty obligations at the date the related products are sold. Adjustments are made as new information becomes available. Please refer to Note 1 for information about our separately-priced extended warranty contracts. A reconciliation of the warranty liability is as follows (in millions):

	December 31,	
	2019	2018
Beginning balance	\$ 60	\$ 55
Amounts accrued for current year	21	20
Settlements of warranty claims	(17)	(15)
Ending balance	\$ 64	\$ 60

12. RESTRUCTURING AND ACQUISITION-RELATED COSTS

The Company may incur restructuring, transaction and integration costs related to acquisitions, and may incur restructuring costs in connection with its global cost reduction and productivity initiatives.

Restructuring Costs**Insulation Network Optimization Restructuring**

In October 2019, the Company took actions to primarily restructure certain U.S. insulation operations and to reduce the cost structure throughout the Insulation network. Investments in productivity and process technologies enabled the Company to optimize its network and improve its cost position. During 2019, the Company recorded \$24 million of charges, comprised of \$8 million of severance, \$9 million of accelerated depreciation and \$7 million of other exit costs. The Company expects to recognize approximately \$6 million of incremental costs in 2020.

Acquisition-Related Restructuring

Following the acquisitions of Paroc and Pittsburgh Corning into the Company's Insulation segment, the Company took actions to realize expected synergies from the newly acquired operations. During 2019, the Company recorded \$9 million of charges related to these actions, comprised of \$6 million of severance and \$3 million of other exit costs. The Company expects there will be minimal incremental costs in 2020.

2017 Cost Reduction Actions

During the second quarter of 2017, the Company took actions to avoid future capital outlays and reduce costs in its Composites segment, mainly through decisions to close certain sub-scale manufacturing facilities in Asia Pacific (Doudian, People's Republic of China and Thimmapur, India) and North America (Mexico City, Mexico and Brunswick, Maine) and to reposition assets in its Chambery, France operation. During 2019, the Company recorded \$3 million of other exit costs and \$1 million of severance charges, offset by a \$3 million non-cash gain related to a lease termination in Mexico City, Mexico, associated with these actions. The Company expects there will be no incremental costs in 2020.

OWENS CORNING AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

12. RESTRUCTURING AND ACQUISITION-RELATED COSTS (continued)

Consolidated Statements of Earnings Classification

The following table presents the impact and respective location of total restructuring costs on the Consolidated Statements of Earnings, which are included in our Corporate, Other and Eliminations category (in millions):

Type of Cost	Location	Twelve Months Ended December 31,		
		2019	2018	2017
Accelerated depreciation	Cost of sales	\$ 9	\$ 10	\$ 17
Other exit costs	Cost of sales	6	7	3
Severance	Other expenses, net	13	4	27
Other exit (gains)/costs (a)	Other expenses, net	(1)	1	1
Other exit costs	Non-operating expense (income)	1	—	—
Total restructuring costs		\$ 28	\$ 22	\$ 48

(a) Other exit (gains)/costs in 2019 includes a \$6 million gain related to the sale of an idle residential fiberglass insulation facility in Canada resulting from the 2016 Cost Reductions Actions. Please refer to Note 11 of our 2016 Form 10-K for more information about these restructuring actions.

Summary of Unpaid Liabilities

The following table summarizes the status of the unpaid liabilities from the Company's restructuring activities (in millions):

	Insulation Network		
	Optimization Restructuring	2017 Cost Reduction Actions	Acquisition-Related Restructuring
Balance at December 31, 2018	\$ —	\$ 10	\$ 7
Restructuring costs	24	1	9
Payments	(10)	(12)	(5)
Non-cash items	(9)	1	—
Balance at December 31, 2019	\$ 5	\$ —	\$ 11
Cumulative charges incurred	\$ 24	\$ 49	\$ 29

As of December 31, 2019, the remaining liability balance is comprised of \$16 million of severance, inclusive of \$4 of non-current severance and \$12 million of severance the Company expects to pay over the next twelve months.

OWENS CORNING AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

13. DEBT

Details of the Company's outstanding long-term debt, as well as the fair values, are as follows (in millions):

	December 31, 2019		December 31, 2018	
	Carrying Value	Fair Value	Carrying Value	Fair Value
4.20% senior notes, net of discount and financing fees, due 2022	\$ 183	104 %	\$ 598	99 %
4.20% senior notes, net of discount and financing fees, due 2024	395	106 %	393	99 %
3.40% senior notes, net of discount and financing fees, due 2026	396	101 %	396	90 %
3.95% senior notes, net of discount and financing fees, due 2029	445	104 %	—	— %
7.00% senior notes, net of discount and financing fees, due 2036	367	126 %	400	112 %
4.30% senior notes, net of discount and financing fees, due 2047	588	95 %	588	76 %
4.40% senior notes, net of discount and financing fees, due 2048	390	97 %	389	77 %
Accounts receivable securitization facility, maturing in 2022 (a)	—	— %	75	100 %
Various finance leases, due through 2032 (a) (b)	26	100 %	24	100 %
Term loan borrowing, maturing in 2021 (a)	200	100 %	500	100 %
Other	3	n/a	8	n/a
Total long-term debt	2,993	n/a	3,371	n/a
Less – current portion (a)	7	100 %	9	100 %
Long-term debt, net of current portion	\$ 2,986	n/a	\$ 3,362	n/a

(a) The Company determined that the book value of the above noted long-term debt instruments approximates fair value.

(b) Amounts reflected for December 31, 2018 represent capital lease obligations as recorded under ASC 840.

The fair values of the Company's outstanding long-term debt instruments were estimated using market observable inputs, including quoted prices in active markets, market indices and interest rate measurements. Within the hierarchy of fair value measurements, these are Level 2 fair values.

Senior Notes

The Company issued \$450 million of 2029 senior notes on August 12, 2019 subject to \$5 million of discounts and issuance costs. Interest on the notes is payable semiannually in arrears on February 15 and August 15 each year, beginning on February 15, 2020. The proceeds from these notes were used to repay \$416 million of our 2022 senior notes and \$34 million of our 2036 senior notes. The Company recognized approximately \$32 million of loss on extinguishment of debt in the third quarter of 2019 associated with these actions.

The Company issued \$400 million of 2048 senior notes on January 25, 2018. Interest on the notes is payable semiannually in arrears on January 30 and July 30 each year, beginning on July 30, 2018. The proceeds from these notes were used, along with borrowings on a \$600 million term loan commitment and borrowings on the Receivables Securitization Facility (as defined below), to fund the purchase of Paroc in the first quarter of 2018.

The Company issued \$600 million of 2047 senior notes on June 26, 2017. Interest on the notes is payable semiannually in arrears on January 15 and July 15 each year, beginning on January 15, 2018. A portion of the proceeds from these notes was used to fund the purchase of Pittsburgh Corning in 2017 and for general corporate purposes. The remaining proceeds were used to repay \$144 million of our 2019 senior notes and \$140 million of our 2036 senior notes.

The Company issued \$400 million of 2026 senior notes on August 8, 2016. Interest on the notes is payable semiannually in arrears on February 15 and August 15 each year, beginning on February 15, 2017. A portion of the proceeds from these notes was used to redeem \$158 million of our 2016 senior notes. The remaining proceeds were used to pay down portions of our Receivables Securitization Facility and for general corporate purposes.

OWENS CORNING AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

13. DEBT (continued)

The Company issued \$400 million of 2024 senior notes on November 12, 2014. Interest on the notes is payable semiannually in arrears on June 1 and December 1 each year, beginning on June 1, 2015. A portion of the proceeds from these notes was used to repay \$242 million of our 2016 senior notes and \$105 million of our 2019 senior notes. The remaining proceeds were used to pay down our Senior Revolving Credit Facility (as defined below), finance general working capital needs, and for general corporate purposes.

The Company issued \$600 million of 2022 senior notes on October 17, 2012. Interest on the notes is payable semiannually in arrears on June 15 and December 15 each year, beginning on June 15, 2013. The proceeds of these notes were used to refinance \$250 million of our 2016 senior notes and \$100 million of our 2019 senior notes and pay down our Senior Revolving Credit Facility.

On October 31, 2006, the Company issued \$550 million of 2036 senior notes. The proceeds of these notes were used to pay certain unsecured and administrative claims, finance general working capital needs and for general corporate purposes.

Collectively, the notes above are referred to as the "Senior Notes." The Senior Notes are general unsecured obligations of the Company and rank *pari passu* with all existing and future senior unsecured indebtedness of the Company.

In May 2018, the Company entered into a new agreement covering our Senior Revolving Credit Facility. This new agreement, among other things, removed all subsidiaries of the Company as guarantors under our Senior Revolving Credit Facility, unless certain conditions precedent are met that do not exist at this time, and had the effect of removing the guarantees of such subsidiaries under our Senior Notes. In addition, we elected to amend our Registration Statement on Form S-3 to eliminate the guarantees of our Senior Notes as registered securities.

The Company has the option to redeem all or part of the Senior Notes at any time at a "make-whole" redemption price. The Company is subject to certain covenants in connection with the issuance of the Senior Notes that it believes are usual and customary. The Company was in compliance with these covenants as of December 31, 2019.

In the first quarter of 2016, the Company terminated interest rate swaps designated to hedge a portion of the 4.20% senior notes due 2022. The residual fair value of the swaps was previously recognized in Long-term debt, net of current portion on the Consolidated Balance Sheets as an unamortized interest rate swap basis adjustment and accounts for \$5 million of the Other balance in the above table as of December 31, 2018. As a result of the repurchase of a portion of these notes in a tender offer in the third quarter of 2019, the remaining unamortized portion of the swaps was recognized on the Consolidated Statements of Earnings as a \$4 million reduction to the loss on extinguishment of debt.

Senior Revolving Credit Facility

The Company has an \$800 million Senior Revolving Credit Facility that includes both borrowings and letters of credit. Borrowings under the Senior Revolving Credit Facility may be used for general corporate purposes and working capital. The Company has the discretion to borrow under multiple options, which provide for varying terms and interest rates including the United States prime rate, federal funds rate plus a spread or LIBOR plus a spread. In April 2019, the Company entered into an amendment to extend the maturity date of the Senior Revolving Credit Facility by one year to 2024.

The Senior Revolving Credit Facility contains various covenants, including a maximum allowed leverage ratio and a minimum required interest expense coverage ratio, that the Company believes are usual and customary for a senior unsecured credit agreement. The Company was in compliance with these covenants as of December 31, 2019. Please refer to the Credit Facility Utilization paragraph below for liquidity information as of December 31, 2019.

OWENS CORNING AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

13. DEBT (continued)**Term Loan Borrowing**

The Company obtained a term loan borrowing on October 27, 2017 for \$600 million (the "Term Loan"). The Company entered into the Term Loan, in part, to pay a portion of the purchase price of the Paroc acquisition. In the first quarter of 2018, the Company borrowed on the Term Loan, along with borrowings on the Receivables Securitization Facility and the proceeds of the 2048 senior notes, to fund the purchase of Paroc. The Term Loan requires partial quarterly principal repayments, all of which have been paid as of December 31, 2019, and full repayment by February 2021. As of December 31, 2019, the Term Loan had \$200 million outstanding. In March 2019, the Term Loan was amended to reduce the applicable interest rate on outstanding borrowings.

The Term Loan contains various covenants, including a maximum allowed leverage ratio and a minimum required interest expense coverage ratio, that the Company believes are usual and customary for a term loan. The Company was in compliance with these covenants as of December 31, 2019.

Receivables Securitization Facility

Included in long-term debt on the Consolidated Balance Sheets are borrowings outstanding under a Receivables Purchase Agreement (RPA) that are accounted for as secured borrowings in accordance with ASC 860, "Accounting for Transfers and Servicing." Owens Corning Sales, LLC and Owens Corning Receivables LLC, each a subsidiary of the Company, have a \$280 million RPA with certain financial institutions. The Company has the ability to borrow at the lenders' cost of funds, which approximates A-1/P-1 commercial paper rates vs. LIBOR, plus a fixed spread. In April 2019, the securitization facility (the "Receivables Securitization Facility") was amended to extend the maturity date to April 2022.

The Receivables Securitization Facility contains various covenants, including a maximum allowed leverage ratio and a minimum required interest expense coverage ratio that the Company believes are usual and customary for a securitization facility. The Company was in compliance with these covenants as of December 31, 2019. Please refer to the Credit Facility Utilization section below for liquidity information as of December 31, 2019.

Owens Corning Receivables LLC's sole business consists of the purchase or acceptance through capital contributions of trade receivables and related rights from Owens Corning Sales, LLC and the subsequent retransfer of or granting of a security interest in such trade receivables and related rights to certain purchasers who are party to the RPA. Owens Corning Receivables LLC is a separate legal entity with its own separate creditors who will be entitled, upon its liquidation, to be satisfied out of Owens Corning Receivables LLC's assets prior to any assets or value in Owens Corning Receivables LLC becoming available to Owens Corning Receivables LLC's equity holders. The assets of Owens Corning Receivables LLC are not available to pay creditors of the Company or any other affiliates of the Company or Owens Corning Sales, LLC.

Credit Facility Utilization

The following table shows how the Company utilized its primary sources of liquidity (in millions):

	Balance at December 31, 2019	
	Senior Revolving Credit Facility	Receivables Securitization Facility
Facility size	\$ 800	\$ 280
Collateral capacity limitation on availability	n/a	—
Outstanding borrowings	—	—
Outstanding letters of credit	4	2
Availability on facility	\$ 796	\$ 278

OWENS CORNING AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

13. DEBT (continued)**Debt Maturities**

The aggregate maturities for all outstanding long-term debt borrowings for each of the five years following December 31, 2019 and thereafter are presented in the table below (in millions). The maturities below are the aggregate par amounts of the outstanding senior notes, borrowings from the Term Loan and finance lease liabilities:

<u>Period</u>	<u>Maturities</u>
2020	\$ 8
2021	208
2022	190
2023	4
2024	401
2025 and beyond	2,227
Total	<u>\$ 3,038</u>

Short-Term Debt

At December 31, 2019 and December 31, 2018, short-term borrowings were \$20 million and \$16 million, respectively. The short-term borrowings for both periods consisted of various operating lines of credit and working capital facilities. Certain of these borrowings are collateralized by receivables, inventories or property. The borrowing facilities are typically for one-year renewable terms. The weighted average interest rate on all short-term borrowings was approximately 7.8% and 3.0% for December 31, 2019 and December 31, 2018, respectively.

14. PENSION PLANS**Pension Plans**

The Company sponsors defined benefit pension plans. Under the plans, pension benefits are based on an employee's years of service and, for certain categories of employees, qualifying compensation. Company contributions to these pension plans are determined by an independent actuary to meet or exceed minimum funding requirements. In our U.S. plan, the unrecognized cost of any retroactive amendments and actuarial gains and losses are amortized over the average remaining life expectancy of inactive participants. In all of our Non-U.S. plans, the unrecognized cost of any retroactive amendments and actuarial gains and losses are amortized over the average future service period of plan participants expected to receive benefits.

During 2019 and 2017, the Company completed balance sheet risk mitigation actions related to certain U.S. and non-U.S. pension plans. These actions included the purchase of non-participating annuity contracts from insurance companies and the payment of lump sums to retirees, which resulted in the settlement of liabilities to affected participants. As a result of these transactions, the Company recognized pension settlement losses of \$43 million during the twelve months ended December 31, 2019 and \$64 million during the twelve months ended December 31, 2017. These losses are included in Non-operating expense (income) on the Consolidated Statements of Earnings in our Corporate, Other and Eliminations category. These transactions did not have a material effect on the plans' funded status.

OWENS CORNING AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

14. PENSION PLANS (continued)

The following tables provide a reconciliation of the change in the projected benefit obligation, the change in plan assets and the net amount recognized in the Consolidated Balance Sheets (in millions):

	December 31, 2019			December 31, 2018		
	U.S.	Non-U.S.	Total	U.S.	Non-U.S.	Total
Change in Projected Benefit Obligation						
Benefit obligation at beginning of period	\$ 891	\$ 427	\$ 1,318	\$ 993	\$ 457	\$ 1,450
Service cost	5	5	10	6	6	12
Interest cost	34	13	47	34	13	47
Actuarial loss (gain)	85	42	127	(67)	(18)	(85)
Currency loss (gain)	—	13	13	—	(26)	(26)
Benefits paid	(45)	(18)	(63)	(75)	(17)	(92)
Settlements/curtailments	(104)	(7)	(111)	—	(6)	(6)
Acquisition	—	—	—	—	11	11
Other	—	—	—	—	7	7
Benefit obligation at end of period	\$ 866	\$ 475	\$ 1,341	\$ 891	\$ 427	\$ 1,318

	December 31, 2019			December 31, 2018		
	U.S.	Non-U.S.	Total	U.S.	Non-U.S.	Total
Change in Plan Assets						
Fair value of assets at beginning of period	\$ 727	\$ 328	\$ 1,055	\$ 836	\$ 364	\$ 1,200
Actual return on plan assets	130	50	180	(59)	(8)	(67)
Currency gain (loss)	—	11	11	—	(20)	(20)
Company contributions	25	21	46	25	15	40
Benefits paid	(45)	(18)	(63)	(75)	(17)	(92)
Settlements/curtailments	(104)	(5)	(109)	—	(6)	(6)
Other	—	(1)	(1)	—	—	—
Fair value of assets at end of period	\$ 733	\$ 386	\$ 1,119	\$ 727	\$ 328	\$ 1,055
Funded status	\$ (133)	\$ (89)	\$ (222)	\$ (164)	\$ (99)	\$ (263)

	December 31, 2019			December 31, 2018		
	U.S.	Non-U.S.	Total	U.S.	Non-U.S.	Total
Amounts Recognized in the Consolidated Balance Sheets						
Prepaid pension cost	\$ —	\$ 11	\$ 11	\$ —	\$ 7	\$ 7
Accrued pension cost – current	—	(2)	(2)	—	(2)	(2)
Accrued pension cost – non-current	(133)	(98)	(231)	(164)	(104)	(268)
Net amount recognized	\$ (133)	\$ (89)	\$ (222)	\$ (164)	\$ (99)	\$ (263)

Amounts Recorded in AOCI						
Net actuarial loss	\$ (345)	\$ (97)	\$ (442)	\$ (392)	\$ (92)	\$ (484)

OWENS CORNING AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

14. PENSION PLANS (continued)

The following table presents information about the projected benefit obligation, accumulated benefit obligation (ABO) and plan assets of the Company's pension plans (in millions):

	December 31, 2019			December 31, 2018		
	U.S.	Non-U.S.	Total	U.S.	Non-U.S.	Total
<u>Plans with ABO in excess of fair value of plan assets:</u>						
Projected benefit obligation	\$ 866	\$ 300	\$ 1,166	\$ 891	\$ 269	\$ 1,160
Accumulated benefit obligation	\$ 866	\$ 295	\$ 1,161	\$ 891	\$ 265	\$ 1,156
Fair value of plan assets	\$ 733	\$ 205	\$ 938	\$ 727	\$ 169	\$ 896
<u>Plans with fair value of assets in excess of ABO:</u>						
Projected benefit obligation	\$ —	\$ 175	\$ 175	\$ —	\$ 158	\$ 158
Accumulated benefit obligation	\$ —	\$ 159	\$ 159	\$ —	\$ 140	\$ 140
Fair value of plan assets	\$ —	\$ 181	\$ 181	\$ —	\$ 159	\$ 159
<u>Summary of all plans:</u>						
Total projected benefit obligation	\$ 866	\$ 475	\$ 1,341	\$ 891	\$ 427	\$ 1,318
Total accumulated benefit obligation	\$ 866	\$ 454	\$ 1,320	\$ 891	\$ 405	\$ 1,296
Total fair value of plan assets	\$ 733	\$ 386	\$ 1,119	\$ 727	\$ 328	\$ 1,055

Weighted-Average Assumptions Used to Determine Benefit Obligation

The following table presents weighted average assumptions used to determine benefit obligations at the measurement dates:

	December 31,	
	2019	2018
United States Plans		
Discount rate	3.30 %	4.25 %
Expected return on plan assets	6.50 %	6.75 %
Non-United States Plans		
Discount rate	2.24 %	3.04 %
Expected return on plan assets	4.66 %	4.91 %
Rate of compensation increase	3.99 %	4.14 %

Components of Net Periodic Pension Cost

The following table presents the components of net periodic pension cost (in millions):

	Twelve Months Ended December 31,		
	2019	2018	2017
Service cost	\$ 10	\$ 12	\$ 12
Interest cost	47	47	55
Expected return on plan assets	(68)	(73)	(79)
Amortization of actuarial loss	15	15	18
Settlement/curtailment	44	—	64
Net periodic pension cost	\$ 48	\$ 1	\$ 70

OWENS CORNING AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

14. PENSION PLANS (continued)

Weighted-Average Assumptions Used to Determine Net Periodic Pension Cost

The following table presents weighted-average assumptions used to determine net periodic pension costs for the periods noted:

	Twelve Months Ended December 31,		
	2019	2018	2017
United States Plans			
Discount rate	4.25 %	3.55 %	3.95 %
Expected return on plan assets	6.75 %	6.75 %	6.75 %
Rate of compensation increase	N/A (a)	N/A (a)	N/A (a)
Non-United States Plans			
Discount rate	3.04 %	2.88 %	3.14 %
Expected return on plan assets	4.91 %	5.22 %	5.92 %
Rate of compensation increase	4.14 %	4.29 %	4.25 %

(a) Not applicable due to changes in plan made on August 1, 2009 that were effective beginning January 1, 2010.

The expected return on plan assets assumption is derived by taking into consideration the target plan asset allocation, historical rates of return on those assets, projected future asset class returns and net outperformance of the market by active investment managers. An asset return model is used to develop an expected range of returns on plan investments over a 20 year period, with the expected rate of return selected from a best estimate range within the total range of projected results. The result is then rounded down to the nearest 25 basis points.

Accumulated Other Comprehensive Earnings (Deficit)

Of the \$(442) million balance in AOCI, \$15 million is expected to be recognized as net periodic pension cost during 2020.

Items Measured at Fair Value

The Company classifies and discloses pension plan assets in one of the following three categories:

Level 1: Quoted market prices in active markets for identical assets.

Level 2: Observable market based inputs or unobservable inputs that are corroborated by market data.

Level 3: Unobservable inputs that are not corroborated by market data.

Plan Assets

The tables in this section show pension plan asset fair values and fair value leveling information. The assets are categorized into one of the three levels of the fair value hierarchy or are not subject to leveling, in the case of investments that are valued using the net asset value per share (or its equivalent) practical expedient ("NAV").

OWENS CORNING AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

14. PENSION PLANS (continued)

The following table summarizes the fair values and applicable fair value hierarchy levels of United States pension plan assets (in millions):

Asset Category	December 31, 2019			
	Level 1	Level 2	Level 3	Total
Equities:				
Domestic	\$ 57	\$ —	\$ —	\$ 57
International	55	—	—	55
Fixed income and cash equivalents:				
Corporate bonds	28	214	—	242
Government debt	—	85	—	85
Real estate investment trusts	22	—	—	22
Total United States plan assets subject to leveling	\$ 162	\$ 299	\$ —	461
Plan assets measured at NAV:				
Equities				130
Real assets				62
Fixed income and cash equivalents				33
Absolute return strategies				47
Total United States plan assets				\$ 733

Asset Category	December 31, 2018			
	Level 1	Level 2	Level 3	Total
Equities:				
Domestic	\$ 50	\$ —	\$ —	\$ 50
International	52	—	—	52
Fixed income and cash equivalents:				
Corporate bonds	—	236	—	236
Government debt	—	91	—	91
Real estate investment trusts	24	—	—	24
Total United States plan assets subject to leveling	\$ 126	\$ 327	\$ —	453
Plan assets measured at NAV:				
Equities				123
Real assets				54
Fixed income and cash equivalents				53
Absolute return strategies				44
Total United States plan assets				\$ 727

OWENS CORNING AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

14. PENSION PLANS (continued)

The following table summarizes the fair values and applicable fair value hierarchy levels of non-United States pension plan assets (in millions):

Asset Category	December 31, 2019			
	Level 1	Level 2	Level 3	Total
Equities	\$ —	\$ 4	\$ —	\$ 4
Fixed income and cash equivalents:				
Cash and cash equivalents	—	65	—	65
Corporate bonds	—	13	—	13
Total non-United States plan assets subject to leveling	\$ —	\$ 82	\$ —	82
Plan assets measured at NAV:				
Equities				71
Fixed income and cash equivalents				123
Absolute return strategies and other				110
Total non-United States plan assets				\$ 386

Asset Category	December 31, 2018			
	Level 1	Level 2	Level 3	Total
Equities	\$ —	\$ 4	\$ —	\$ 4
Fixed income and cash equivalents:				
Cash and cash equivalents	—	62	—	62
Corporate bonds	—	12	—	12
Total non-United States plan assets subject to leveling	\$ —	\$ 78	\$ —	78
Plan assets measured at NAV:				
Equities				41
Fixed income and cash equivalents				109
Absolute return strategies				100
Total non-United States plan assets				\$ 328

Investment Strategy

The current targeted asset allocation for the United States pension plan is to have 33% of assets invested in equities, 3% in real estate, 8% in real assets, 50% in intermediate and long-term fixed income securities and 6% in absolute return strategies. Assets are rebalanced quarterly to conform to policy tolerances. The Company actively evaluates the reasonableness of its asset mix given changes in the projected benefit obligation and market dynamics. Our investment policy and asset mix for the non-United States pension plans varies by location and is based on projected benefit obligation and market dynamics.

OWENS CORNING AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

14. PENSION PLANS (continued)

Estimated Future Benefit Payments

The following table shows estimated future benefit payments from the Company's pension plans (in millions):

Year	Estimated Benefit Payments
2020	\$ 76
2021	\$ 75
2022	\$ 75
2023	\$ 75
2024	\$ 75
2025-2029	\$ 390

Contributions

Owens Corning expects to contribute \$25 million in cash to the United States pension plan during 2020 and another \$25 million to non-United States plans. Actual contributions to the plans may change as a result of a variety of factors, including changes in laws that impact funding requirements.

Defined Contribution Plans

The Company sponsors two defined contribution plans which are available to substantially all United States employees. The Company matches a percentage of employee contributions up to a maximum level and contributes up to 2% of an employee's wages regardless of employee contributions. The Company recognized expense of \$48 million, \$48 million and \$42 million during the years ended December 31, 2019, 2018 and 2017, respectively, related to these plans.

15. POSTEMPLOYMENT AND POSTRETIREMENT BENEFITS OTHER THAN PENSIONS

The Company maintains health care and life insurance benefit plans for certain retired employees and their dependents. The health care plans in the United States are non-funded and pay either (1) stated percentages of covered medically necessary expenses, after subtracting payments by Medicare or other providers and after stated deductibles have been met, or (2) fixed amounts of medical expense reimbursement.

Salaried employees hired on or before December 31, 2005 become eligible to participate in the United States health care plans upon retirement if they have accumulated 10 years of service after age 45, 48 or 50, depending on the category of employee. For employees hired after December 31, 2005, the Company does not provide subsidized retiree health care. Some of the plans are contributory, with some retiree contributions adjusted annually. The Company has reserved the right to change or eliminate these benefit plans subject to the terms of collective bargaining agreements.

OWENS CORNING AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

15. POSTEMPLOYMENT AND POSTRETIREMENT BENEFITS OTHER THAN PENSIONS (continued)

The following table provides a reconciliation of the change in the projected benefit obligation and the net amount recognized in the Consolidated Balance Sheets for the years ended December 31, 2019 and 2018 (in millions):

	December 31, 2019			December 31, 2018		
	U.S.	Non-U.S.	Total	U.S.	Non-U.S.	Total
<u>Change in Projected Benefit Obligation</u>						
Benefit obligation at beginning of period	\$ 183	\$ 12	\$ 195	\$ 216	\$ 14	\$ 230
Service cost	1	—	1	1	—	1
Interest cost	7	1	8	8	—	8
Actuarial (gain)/loss	(7)	2	(5)	(25)	—	(25)
Currency loss	—	—	—	—	(1)	(1)
Plan amendments	(1)	—	(1)	(2)	—	(2)
Benefits paid	(14)	(1)	(15)	(15)	(1)	(16)
Benefit obligation at end of period	\$ 169	\$ 14	\$ 183	\$ 183	\$ 12	\$ 195
Funded status	\$ (169)	\$ (14)	\$ (183)	\$ (183)	\$ (12)	\$ (195)

Amounts Recognized in the Consolidated Balance Sheets

Accrued benefit obligation – current	\$ (15)	\$ (1)	\$ (16)	\$ (17)	\$ —	\$ (17)
Accrued benefit obligation – non-current	(154)	(13)	(167)	(166)	(12)	(178)
Net amount recognized	\$ (169)	\$ (14)	\$ (183)	\$ (183)	\$ (12)	\$ (195)

Amounts Recorded in AOCI

Net actuarial gain	\$ 48	\$ 3	\$ 51	\$ 49	\$ 5	\$ 54
Net prior service credit	6	—	6	9	—	9
Net amount recognized	\$ 54	\$ 3	\$ 57	\$ 58	\$ 5	\$ 63

Weighted-Average Assumptions Used to Determine Benefit Obligations

The following table presents the discount rates used to determine the benefit obligations:

	December 31,	
	2019	2018
United States plans	3.10 %	4.15 %
Non-United States plans	3.84 %	4.59 %

OWENS CORNING AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

15. POSTEMPLOYMENT AND POSTRETIREMENT BENEFITS OTHER THAN PENSIONS (continued)

Components of Net Periodic Postretirement Benefit Cost

The following table presents the components of net periodic postretirement benefit cost (in millions):

	Twelve Months Ended December 31,		
	2019	2018	2017
Service cost	\$ 1	\$ 1	\$ 2
Interest cost	8	8	9
Amortization of prior service credit	(4)	(4)	(4)
Amortization of actuarial gain	(8)	(6)	(3)
Net periodic postretirement benefit (income)/cost	\$ (3)	\$ (1)	\$ 4

Weighted-Average Assumptions Used to Determine Net Periodic Postretirement Benefit Cost

The following table presents the discount rates used to determine net periodic postretirement benefit cost:

	Twelve Months Ended December 31,		
	2019	2018	2017
United States plans	4.15 %	3.45 %	3.80 %
Non-United States plans	4.59 %	4.56 %	6.78 %

The following table presents health care cost trend rates used to determine net periodic postretirement benefit cost, as well as information regarding the ultimate rate and the year in which the ultimate rate is reached:

	Twelve Months Ended December 31,		
	2019	2018	2017
United States plans:			
Initial rate at end of year	6.50 %	6.75 %	6.56 %
Ultimate rate	5.00 %	5.00 %	5.00 %
Year in which ultimate rate is reached	2026	2026	2025
Non-United States plans:			
Initial rate at end of year	5.45 %	5.40 %	5.73 %
Ultimate rate	5.45 %	5.40 %	5.49 %
Year in which ultimate rate is reached	2019	2019	2019

The health care cost trend rate assumption can have an effect on the amounts reported. To illustrate, a one-percentage point change in the December 31, 2019 assumed health care cost trend rate would have the following effects (in millions):

	1-Percentage Point	
	Increase	Decrease
Increase (decrease) in total service cost and interest cost components of net periodic postretirement benefit cost	\$ —	\$ —
Increase (decrease) of accumulated postretirement benefit obligation	\$ 4	\$ (3)

Accumulated Other Comprehensive Earnings (Deficit)

Approximately \$11 million of the \$57 million balance in AOCI is expected to be recognized as net periodic postretirement benefit during 2020.

OWENS CORNING AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

15. POSTEMPLOYMENT AND POSTRETIREMENT BENEFITS OTHER THAN PENSIONS (continued)

Estimated Future Benefit Payments

The following table shows estimated future benefit payments from the Company's postretirement benefit plans (in millions):

Year		Estimated Benefit Payments
2020	\$	16
2021	\$	15
2022	\$	15
2023	\$	14
2024	\$	14
2025-2029	\$	60

Postemployment Benefits

The Company may also provide benefits to former or inactive employees after employment but before retirement under certain conditions. These benefits include continuation of benefits such as health care and life insurance coverage. The accrued postemployment benefits liability at December 31, 2019 and 2018 was \$11 million and \$12 million, respectively. The net periodic postemployment benefit expense for the years ended December 31, 2019, 2018, and 2017 were \$1 million, \$4 million and \$3 million, respectively.

16. CONTINGENT LIABILITIES AND OTHER MATTERS

The Company may be involved in various legal and regulatory proceedings relating to employment, antitrust, tax, product liability, environmental and other matters (collectively, "Proceedings"). The Company regularly reviews the status of such Proceedings along with legal counsel. Liabilities for such Proceedings are recorded when it is probable that the liability has been incurred and when the amount of the liability can be reasonably estimated. Liabilities are adjusted when additional information becomes available. Management believes that the amount of any reasonably possible losses in excess of any amounts accrued, if any, with respect to such Proceedings or any other known claim, including the matters described below under the caption Environmental Matters (the "Environmental Matters"), are not material to the Company's financial statements. Management believes that the ultimate disposition of the Proceedings and the Environmental Matters will not have a material adverse effect on the Company's financial condition. While the likelihood is remote, the disposition of the Proceedings and Environmental Matters could have a material impact on the results of operations, cash flows or liquidity in any given reporting period.

Litigation and Regulatory Proceedings

The Company is involved in litigation and regulatory proceedings from time to time in the regular course of its business. The Company believes that adequate provisions for resolution of all contingencies, claims and pending matters have been made for probable losses that are reasonably estimable.

Litigation Settlement Gain

In 2017, the Company and TopBuild Corp. entered into a settlement agreement in connection with a commercial breach of contract dispute. Under the terms of the settlement, TopBuild Corp. paid Owens Corning \$30 million in cash in 2017. During the second quarter of 2017, a \$29 million litigation settlement gain, net of legal fees, was recorded in Other expenses, net on the Consolidated Statements of Earnings in the Corporate, Other and Eliminations category.

OWENS CORNING AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

16. CONTINGENT LIABILITIES AND OTHER MATTERS (continued)**Environmental Matters**

The Company has established policies and procedures designed to ensure that its operations are conducted in compliance with all relevant laws and regulations and that enable the Company to meet its high standards for corporate sustainability and environmental stewardship. Our manufacturing facilities are subject to numerous foreign, federal, state and local laws and regulations relating to the presence of hazardous materials, pollution and protection of the environment, including emissions to air, reductions of greenhouse gases, discharges to water, management of hazardous materials, handling and disposal of solid wastes, and remediation of contaminated sites. All Company manufacturing facilities operate using an ISO 14001 or equivalent environmental management system. The Company's 2030 Sustainability Goals include significant global reductions in energy use, water consumption, waste to landfill, and emissions of greenhouse gases, fine particulate matter and toxic air emissions.

Owens Corning is involved in remedial response activities and is responsible for environmental remediation at a number of sites, including certain of its currently owned or formerly owned plants. These responsibilities arise under a number of laws, including, but not limited to, the Federal Resource Conservation and Recovery Act, and similar state or local laws pertaining to the management and remediation of hazardous materials and petroleum. The Company has also been named a potentially responsible party under the U.S. Federal Superfund law, or state equivalents, at a number of disposal sites. The Company became involved in these sites as a result of government action or in connection with business acquisitions. As of December 31, 2019, the Company was involved with a total of 21 sites worldwide, including 7 Superfund sites and 14 owned or formerly owned sites. None of the liabilities for these sites are individually significant to the Company.

Remediation activities generally involve a potential range of activities and costs related to soil and groundwater contamination. This can include pre-cleanup activities such as fact-finding and investigation, risk assessment, feasibility studies, remedial action design and implementation (where actions may range from monitoring to removal of contaminants, to installation of longer-term remediation systems). A number of factors affect the cost of environmental remediation, including the number of parties involved in a particular site, the determination of the extent of contamination, the length of time the remediation may require, the complexity of environmental regulations, variability in clean-up standards, the need for legal action, and changes in remediation technology. Taking these factors into account, Owens Corning has predicted the costs of remediation reasonably estimated to be paid over a period of years. The Company accrues an amount on an undiscounted basis, consistent with the reasonable estimates of these costs when it is probable that a liability has been incurred. Actual cost may differ from these estimates for the reasons mentioned above. At December 31, 2019, the Company had an accrual totaling \$9 million for these costs, of which the current portion is \$5 million. Changes in required remediation procedures or timing of those procedures, or discovery of contamination at additional sites, could result in material increases to the Company's environmental obligations.

17. STOCK COMPENSATION**Description of the Plan**

On April 18, 2019, the Company's stockholders approved the Owens Corning 2019 Stock Plan (the "2019 Stock Plan") which replaced the 2016 Stock Plan. The 2019 Stock Plan authorizes grants of stock options, stock appreciation rights, restricted stock awards, restricted stock units, bonus stock awards, performance stock awards and performance stock units. At December 31, 2019, the number of shares remaining available under the 2019 Stock Plan for all stock awards was 4.1 million.

Prior to 2019, employees were eligible to receive stock awards under the Owens Corning 2016 Stock Plan and the Owens Corning 2013 Stock Plan.

OWENS CORNING AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

17. STOCK COMPENSATION (continued)

Total Stock-Based Compensation Expense

Stock-based compensation expense included in Marketing and administrative expenses in the accompanying Consolidated Statements of Earnings is as follows (in millions):

	Twelve Months Ended December 31,		
	2019	2018	2017
Total stock-based compensation expense	\$ 39	\$ 47	\$ 44
Income tax benefit recognized on stock-based compensation expense	\$ 7	\$ 24	\$ 26

Stock Options

The Company has granted stock options under its stockholder approved stock plans. The Company calculates a weighted-average grant-date fair value using a Black-Scholes valuation model for options granted. Compensation expense for options is measured based on the fair market value of the option on the date of grant, and is recognized on a straight-line basis over a four year vesting period. In general, the exercise price of each option awarded was equal to the closing market price of the Company's common stock on the date of grant and an option's maximum term is 10 years. The volatility assumption was based on a benchmark study of our peers prior to 2014. Starting with the options granted in 2014, the volatility was based on the Company's historic volatility.

The Company has not granted stock options since the year ended December 31, 2014. As of December 31, 2019, there was no unrecognized compensation cost related to stock options and the range of exercise prices on outstanding stock options was \$25.45 - \$42.16.

The following table summarizes the Company's stock option activity in 2019:

	Number of Options	Weighted-Average		Intrinsic Value (in millions)
		Exercise Price	Remaining Contractual Life (in years)	
Outstanding, January 1, 2019	478,875	\$ 37.18	4.00	\$ 3
Exercised	(64,075)	33.26		
Outstanding, December 31, 2019	414,800	\$ 37.79	3.06	\$ 11
Exercisable, December 31, 2019	414,800	\$ 37.79	3.06	\$ 11

The total intrinsic value of stock options exercised and the resulting tax benefits received were as follows (in millions):

	Twelve Months Ended December 31,		
	2019	2018	2017
Cash received upon exercise of stock option awards	\$ 2	\$ 1	\$ 15
Income tax benefit received for stock option awards exercised	\$ —	\$ —	\$ 7

OWENS CORNING AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

17. STOCK COMPENSATION (continued)

Restricted Stock Awards and Restricted Stock Units

The Company has granted restricted stock awards and restricted stock units (collectively referred to as “RSUs”) under its stockholder approved stock plans. Compensation expense for restricted stock is measured based on the closing market price of the stock at date of grant and is recognized on a straight-line basis over the vesting period, which is typically three or four years. The Stock Plan allows alternate vesting schedules for death, disability, and retirement over various periods ending in 2020.

The weighted average grant date fair value of RSUs granted in 2019, 2018 and 2017 was \$52.60, \$84.34 and \$56.60, respectively.

The following table shows a summary of the Company’s RSU plans:

	Number of RSUs	Weighted- Average Fair Value
Balance at January 1, 2019	1,479,374	\$ 52.30
Granted	542,693	53.10
Vested	(390,673)	52.57
Forfeited/canceled	(115,688)	61.68
Balance at December 31, 2019	1,515,706	\$ 51.70

As of December 31, 2019, there was \$30 million of total unrecognized compensation cost related to restricted stock. That cost is expected to be recognized over a weighted-average period of 2.16 years. The total grant date fair value of shares vested during the years ended December 31, 2019, 2018 and 2017 was \$21 million, \$23 million and \$19 million, respectively.

Performance Stock Awards and Performance Stock Units

The Company has granted performance stock awards and performance stock units (collectively referred to as “PSUs”) as a part of its long-term incentive plan. All outstanding performance grants will fully settle in stock. The amount of stock ultimately distributed from the 2019, 2018 and 2017 grants is contingent on meeting internal company-based metrics or an external-based stock performance metric.

In 2019, 2018 and 2017, the Company granted both internal company-based and external-based metric PSUs.

Internal Company-based metrics

The internal company-based metrics vest after a three-year period and are based on various company-based metrics over a three-year period. The amount of stock distributed will vary from 0% to 200% of PSUs awarded depending on performance versus the company-based metrics.

The initial fair value for all internal company-based metric PSUs assumes that the performance goals will be achieved and is based on the grant date stock price. This assumption is monitored quarterly and if it becomes probable that such goals will not be achieved or will be exceeded, compensation expense recognized will be adjusted and previous surplus compensation expense recognized will be reversed or additional expense will be recognized. The expected term represents the period from the grant date to the end of the three-year performance period. Pro-rata vesting may be utilized in the case of death, disability or retirement, and awards, if earned, will be paid at the end of the three-year period.

External based metrics

The external-based metrics vest after a three-year period. Outstanding grants issued in or after 2018 will be based on the Company's total stockholder return relative to the performance of the Dow Jones U.S. Construction & Materials Index. The amount of stock distributed will vary from 0% to 200% of PSUs awarded depending on the relative stockholder return performance. The fair value of external-based metric PSUs has been estimated at the grant date using a Monte Carlo simulation that uses various assumptions.

OWENS CORNING AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

17. STOCK COMPENSATION (continued)

The following table provides a summary of these assumptions:

	Twelve Months Ended December 31,		
	2019	2018	2017
Expected volatility	26.67 %	24.56 %	26.06 %
Risk free interest rate	2.45 %	2.22 %	1.44 %
Expected term (in years)	2.90	2.92	2.92
Grant date fair value of units granted	\$ 68.65	\$ 94.14	\$ 59.71

The risk-free interest rate was based on zero coupon United States Treasury bills at the grant date. The expected term represents the period from the grant date to the end of the three-year performance period.

PSU Summary

As of December 31, 2019, there was \$9 million total unrecognized compensation cost related to PSUs. That cost is expected to be recognized over a weighted-average period of 1.6 years. The total grant date fair value of shares vested during the years ended December 31, 2019, 2018 and 2017, was \$14 million, \$23 million and \$9 million, respectively.

The following table shows a summary of the Company's PSU plans:

	Number of PSUs	Weighted-Average Grant Date Fair Value
Balance as of January 1, 2019	360,977	\$ 75.23
Granted	205,350	58.40
Vested	(169,052)	43.04
Forfeited/canceled	(84,550)	68.56
Balance as of December 31, 2019	312,725	\$ 69.23

Employee Stock Purchase Plan

The Owens Corning Employee Stock Purchase Plan (ESPP) is a tax qualified plan under Section 423 of the Internal Revenue Code. The purchase price of shares purchased under the ESPP is equal to 85% of the lower of the fair market value of shares of Owens Corning common stock at the beginning or ending of the offering period, which is a six month period ending on May 31 and November 30 of each year. There were 2 million shares available for purchase under the ESPP as of its approval date. The Company recognized expense related to the ESPP of \$5 million, \$4 million and \$3 million for the years ended December 31, 2019, 2018 and 2017, respectively. As of December 31, 2019, the Company had \$2 million of total unrecognized compensation costs related to the ESPP. Under the outstanding ESPP as of February 15, 2020, employees have contributed \$4 million to purchase shares for the current purchase period ending May 31, 2020.

The following table shows a summary of employee purchase activity under the ESPP:

	Twelve Months Ended December 31,		
	2019	2018	2017
Total shares purchased by employees	393,230	295,407	258,504
Average purchase price	\$ 41.33	\$ 48.93	\$ 48.48

OWENS CORNING AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

18. CHANGES IN ACCUMULATED OTHER COMPREHENSIVE DEFICIT

The following table summarizes the changes in accumulated other comprehensive income (deficit) (in millions):

	Twelve Months Ended December 31,	
	2019	2018
Currency Translation Adjustment		
Beginning balance	\$ (306)	\$ (183)
Net investment hedge amounts classified into AOCI, net of tax	13	14
Gain/(loss) on foreign currency translation	11	(137)
Other comprehensive income/(loss), net of tax	24	(123)
Ending balance	\$ (282)	\$ (306)
Pension and Other Postretirement Adjustment		
Beginning balance	\$ (350)	\$ (331)
Amounts reclassified from AOCI to net earnings, net of tax (a)	35	4
Amounts classified into AOCI, net of tax	(11)	(23)
Other comprehensive income/(loss), net of tax	24	(19)
Ending balance	\$ (326)	\$ (350)
Hedging Adjustment		
Beginning balance	\$ —	\$ —
Amounts reclassified from AOCI to net earnings, net of tax (b)	3	(1)
Amounts classified into AOCI, net of tax	(5)	1
Other comprehensive (loss), net of tax	(2)	—
Ending balance	\$ (2)	\$ —
Total AOCI ending balance	\$ (610)	\$ (656)

(a) These AOCI components are included in the computation of total Pension and Other Postretirement cost and are recorded in Non-operating expense (income). See Notes 14 and 15 for additional information.

(b) Amounts reclassified from (loss)/gain on cash flow hedges are reclassified from AOCI to income when the hedged item affects earnings and is recognized in Cost of sales. See Note 5 for additional information.

OWENS CORNING AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

19. EARNINGS PER SHARE

The following table is a reconciliation of weighted-average shares for calculating basic and diluted earnings per-share (in millions, except per share amounts):

	Twelve Months Ended December 31,		
	2019	2018	2017
Net earnings attributable to Owens Corning	\$ 405	\$ 545	\$ 289
Weighted-average number of shares outstanding used for basic earnings per share	109.2	110.4	111.5
Non-vested restricted and performance shares	0.7	0.8	1.5
Options to purchase common stock	0.2	0.2	0.2
Weighted-average number of shares outstanding and common equivalent shares used for diluted earnings per share	110.1	111.4	113.2
Earnings per common share attributable to Owens Corning common stockholders:			
Basic	\$ 3.71	\$ 4.94	\$ 2.59
Diluted	\$ 3.68	\$ 4.89	\$ 2.55

Basic earnings per share is calculated by dividing earnings attributable to Owens Corning by the weighted-average number of shares of the Company's common stock outstanding during the period. Outstanding shares consist of issued shares less treasury stock.

On October 24, 2016, the Board of Directors approved a new share buy-back program under which the Company is authorized to repurchase up to 10 million shares of the Company's outstanding common stock (the "Repurchase Authorization"). The Repurchase Authorization enables the Company to repurchase shares through the open market, privately negotiated, or other transactions. The actual number of shares repurchased will depend on timing, market conditions and other factors and is at the Company's discretion. The Company repurchased 1.0 million shares of its common stock for \$48 million for the year ended December 31, 2019 under the Repurchase Authorization. As of December 31, 2019, 3.6 million shares remain available for repurchase under the Repurchase Authorization.

For the year ended December 31, 2019, the Company did not have any non-vested restricted shares or non-vested performance shares that had an anti-dilutive effect on earnings per share. For the year ended December 31, 2018, the number of shares used in the calculation of diluted earnings per share did not include 0.3 million non-vested restricted shares and 0.3 million non-vested performance shares due to their anti-dilutive effect. For the year ended December 31, 2017, the Company did not have any non-vested restricted shares or non-vested performance shares that had an anti-dilutive effect on earnings per share.

OWENS CORNING AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

20. INCOME TAXES

The following table summarizes our Earnings before taxes and Income tax expense (in millions):

	Twelve Months Ended December 31,		
	2019	2018	2017
Earnings before taxes:			
United States	\$ 315	\$ 411	\$ 342
Foreign	275	293	217
Total	<u>\$ 590</u>	<u>\$ 704</u>	<u>\$ 559</u>
Income tax expense:			
Current			
United States	\$ (4)	\$ (10)	\$ (2)
State and local	11	6	5
Foreign	60	19	83
Total current	<u>67</u>	<u>15</u>	<u>86</u>
Deferred			
United States	112	114	196
State and local	11	12	3
Foreign	(4)	15	(16)
Total deferred	<u>119</u>	<u>141</u>	<u>183</u>
Total income tax expense	<u>\$ 186</u>	<u>\$ 156</u>	<u>\$ 269</u>

The reconciliation between the United States federal statutory rate and the Company's effective income tax rate from continuing operations is:

	Twelve Months Ended December 31,		
	2019	2018	2017
United States federal statutory rate	21 %	21 %	35 %
State and local income taxes, net of federal tax benefit	3	2	2
Foreign tax rate differential	—	—	(5)
U.S. tax expense on foreign earnings	1	2	49
Legislative tax rate changes	2	—	(9)
Foreign tax credits	—	—	(29)
Valuation allowance	3	2	3
Uncertain tax positions and settlements	—	(5)	1
Excess tax benefits related to stock compensation	—	(2)	(1)
Other, net	1	2	2
Effective tax rate	<u>31 %</u>	<u>22 %</u>	<u>48 %</u>

OWENS CORNING AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

20. INCOME TAXES (continued)

During the first quarter of 2018, the Company adopted ASU No. 2016-16, “Intra-Entity Transfers of Assets Other Than Inventory (Topic 740).” Under this standard, the tax effects of intra-entity sales of assets other than inventory will be recognized immediately in the seller's tax jurisdiction when the transfer occurs, even though the pre-tax effects of that transaction are eliminated in consolidation. Any deferred tax asset that arises in the buyer’s jurisdiction would also be recognized at the time of the transfer. The standard is applied using a modified retrospective transition method by means of a cumulative-effect adjustment to equity as of the beginning of the year of adoption. As of January 1, 2018, we recorded a \$17 million decrease in Other non-current assets, a \$7 million increase in Deferred income tax assets and a \$10 million decrease to Accumulated earnings.

Effective January 1, 2018, the U.S. Tax Cuts and Jobs Act of 2017 (the "Tax Act") created a new requirement to include global intangible low-taxed income (GILTI) earned by controlled foreign corporations (CFCs) in U.S. income. The GILTI must be included currently in the gross income of the CFCs’ U.S. shareholder. Under U.S. GAAP, we are allowed to make an accounting policy choice of either (1) treating taxes due on future U.S. inclusions related to GILTI as a current-period expense when incurred (the “period cost method”) or (2) factoring such amounts into a company’s measurement of its deferred taxes (the “deferred method”). During the first quarter of 2018, we selected the period cost method in recording the tax effects of GILTI in our financial statements.

In February 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 provides companies with an option to reclassify stranded tax effects resulting from enactment of the Tax Act from Accumulated other comprehensive income to Accumulated earnings. The standard was effective for the Company starting January 1, 2019. The Company has elected not to reclassify the income tax effects of the Tax Act from Accumulated other comprehensive income to Accumulated earnings.

The Company continues to assert indefinite reinvestment in accordance with ASC 740 based on the laws as of enactment of the Tax Act. As of December 31, 2019, the Company has not provided for withholding or income taxes on approximately \$1.6 billion of undistributed reserves of its foreign subsidiaries and affiliates as they are considered by management to be permanently reinvested. Quantification of the deferred tax liability associated with these undistributed reserves is not practicable.

The cumulative temporary differences giving rise to the deferred tax assets and liabilities are as follows (in millions):

	December 31, 2019		December 31, 2018	
	Deferred Tax Assets	Deferred Tax Liabilities	Deferred Tax Assets	Deferred Tax Liabilities
Other employee benefits	\$ 76	\$ —	\$ 87	\$ —
Pension plans	54	—	66	—
Operating loss and tax credit carryforwards	195	—	255	—
Depreciation	—	247	—	259
Leases - Right of Use Assets	—	49	—	—
Leases - Liability	49	—	—	—
Amortization	—	388	—	395
Foreign tax credits	97	—	161	—
State and local taxes	3	—	3	—
Other	76	—	61	—
Subtotal	550	684	633	654
Valuation allowances	(92)	—	(78)	—
Total deferred taxes	\$ 458	\$ 684	\$ 555	\$ 654

OWENS CORNING AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

20. INCOME TAXES (continued)

The following table summarizes the amount and expiration dates of our deferred tax assets related to operating loss and credit carryforwards at December 31, 2019 (in millions):

	Expiration Dates	Amounts
U.S. federal loss carryforwards	2036 - 2037	\$ 27
U.S. state loss carryforwards (a)	2020 – 2034	47
Foreign loss and tax credit carryforwards	Indefinite	30
Foreign loss and tax credit carryforwards (a)	2020 – 2037	61
Other U.S. federal and state tax credits	2028 – 2034	30
Total operating loss and tax credit carryforwards		\$ 195
U.S foreign tax credits	2027	\$ 97

(a) As of December 31, 2019, \$16 million of U.S. state and \$6 million of foreign deferred tax assets related to loss carryforwards that are set to expire over the next three years.

At December 31, 2019, the Company had federal, state and foreign net operating loss (NOL) carryforwards of \$0.1 billion, \$1.4 billion and \$0.4 billion, respectively. In order to utilize our NOLs and U.S. foreign tax credits ("FTCs"), the Company will need to generate federal, state, and foreign earnings before taxes of approximately \$0.6 billion, \$1.4 billion, and \$0.4 billion, respectively. Certain of these loss carryforwards are subject to limitation as a result of the acquisition of certain foreign entities in 2007. However, the Company believes that these limitations on its loss carryforwards will not result in a forfeiture of any of the carryforwards.

Deferred income taxes are provided for temporary differences between amounts of assets and liabilities for financial reporting purposes and the basis of such assets and liabilities as measured under enacted tax laws and regulations, as well as NOLs, tax credits and other carryforwards. A valuation allowance will be recorded to reduce deferred tax assets if, based on all available evidence, it is considered more likely than not that some portion or all of the recorded deferred tax assets will not be realized in future periods. To the extent the reversal of deferred tax liabilities is relied upon in our assessment of the realizability of deferred tax assets, they will reverse in the same period and jurisdiction as the temporary differences giving rise to the deferred tax assets. As of December 31, 2019, the Company had federal net deferred tax liabilities before valuation allowances of \$96 million, state net deferred tax assets of \$6 million, and foreign net deferred tax liabilities of \$44 million.

The valuation allowance of \$92 million as of December 31, 2019 is related to tax assets of \$43 million, \$11 million and \$38 million for U.S. federal FTCs and certain state and foreign jurisdictions, respectively. The realization of deferred tax assets depends on achieving a certain minimum level of future taxable income. Management currently believes that it is at least reasonably possible that the minimum level of taxable income will be met within the next 12 months to reduce the valuation allowance of certain foreign jurisdictions by a range of zero to \$5 million. The valuation allowance of \$78 million as of December 31, 2018 is related to tax assets of \$34 million, \$6 million, and \$38 million for U.S. federal FTC's and certain state and foreign jurisdictions, respectively.

The Company, or one of its subsidiaries, files income tax returns in the United States and other foreign jurisdictions. The Company is no longer subject to U.S. federal tax examinations for years before 2016 or state and foreign examinations for years before 2008. Due to the potential for resolution of federal, state and foreign examinations, and the expiration of various statutes of limitation, it is reasonably possible that the gross unrecognized tax benefits balance may change within the next 12 months by a range of zero to \$3 million.

OWENS CORNING AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

20. INCOME TAXES (continued)

A reconciliation of the beginning and ending amounts of unrecognized tax benefits is as follows (in millions):

	Twelve Months Ended December 31,		
	2019	2018	2017
Balance at beginning of period	\$ 84	\$ 90	\$ 98
Tax positions related to the current year			
Gross additions	—	6	1
Tax positions related to prior years			
Gross additions	1	36	13
Gross reductions	—	(37)	(11)
Settlements	(1)	(5)	(12)
Expiration of statute of limitations	(5)	(4)	—
Impact of currency changes	—	(2)	1
Balance at end of period	<u>\$ 79</u>	<u>\$ 84</u>	<u>\$ 90</u>

If these uncertain tax benefits (UTBs) were to be recognized as of December 31, 2019, the Company's income tax expense would decrease by about \$60 million.

The Company classifies all interest and penalties as income tax expense. As of December 31, 2019, 2018 and 2017, and for the periods then ended, the Company recognized \$8 million, \$10 million and \$11 million, respectively, in liabilities for tax related interest and penalties on its Consolidated Balance Sheets and \$2 million, \$1 million and \$1 million, respectively, of interest and penalty expense on its Consolidated Statements of Earnings.

On February 5, 2018, the Company acquired all the outstanding equity of Paroc, a leading producer of mineral wool insulation for building and technical applications in Europe. The acquisition included net uncertain tax benefits (UTBs) related to a transfer pricing dispute and interest expense. On December 18, 2018, the Finnish Supreme Administrative Court (SAC) ruled in favor of Paroc Oy Ag, a wholly-owned subsidiary of the Company, regarding the transfer pricing dispute for tax years 2006 to 2008. Based on the SAC decision, the Company reduced the UTB regarding the transfer pricing dispute by \$32 million and recorded a corresponding benefit to income tax expense.

OWENS CORNING AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (continued)

21. QUARTERLY FINANCIAL INFORMATION (unaudited)

Select quarterly financial information is presented in the tables below for the quarterly periods (in millions, except per share amounts):

	Quarter			
	First	Second	Third	Fourth
2019				
Net sales	\$ 1,667	\$ 1,918	\$ 1,883	\$ 1,692
Gross margin	\$ 325	\$ 440	\$ 461	\$ 383
Income tax expense	\$ 39	\$ 59	\$ 61	\$ 27
Net earnings attributable to Owens Corning	\$ 44	\$ 138	\$ 150	\$ 73
BASIC EARNINGS PER COMMON SHARE ATTRIBUTABLE TO OWENS CORNING COMMON STOCKHOLDERS				
	\$ 0.40	\$ 1.27	\$ 1.37	\$ 0.67
DILUTED EARNINGS PER COMMON SHARE ATTRIBUTABLE TO OWENS CORNING COMMON STOCKHOLDERS				
	\$ 0.40	\$ 1.26	\$ 1.36	\$ 0.66
2018				
Net sales	\$ 1,691	\$ 1,824	\$ 1,818	\$ 1,724
Gross margin	\$ 355	\$ 418	\$ 448	\$ 411
Income tax expense	\$ 11	\$ 49	\$ 67	\$ 29
Net earnings attributable to Owens Corning	\$ 92	\$ 121	\$ 161	\$ 171
BASIC EARNINGS PER COMMON SHARE ATTRIBUTABLE TO OWENS CORNING COMMON STOCKHOLDERS				
	\$ 0.83	\$ 1.09	\$ 1.46	\$ 1.56
DILUTED EARNINGS PER COMMON SHARE ATTRIBUTABLE TO OWENS CORNING COMMON STOCKHOLDERS				
	\$ 0.82	\$ 1.08	\$ 1.45	\$ 1.55

OWENS CORNING AND SUBSIDIARIES
INDEX TO CONDENSED FINANCIAL STATEMENT SCHEDULE

Number	Description	Page
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OWENS CORNING AND SUBSIDIARIES
SCHEDULE II – VALUATION AND QUALIFYING ACCOUNTS AND RESERVES FOR THE YEARS ENDED DECEMBER 31, 2019, 2018 AND
2017
(in millions)

	<u>Balance at Beginning of Period</u>	<u>Charged to Costs and Expenses</u>	<u>Charged to Other Accounts</u>	<u>Deductions</u>	<u>Acquisitions and Divestitures</u>	<u>Balance at End of Period</u>
FOR THE YEAR ENDED DECEMBER 31, 2019						
Allowance for doubtful accounts	\$ 16	\$ 2	\$ —	\$ (7) (a)	\$ —	\$ 11
Tax valuation allowance	\$ 78	\$ 19	\$ 1	\$ (6)	\$ —	\$ 92
FOR THE YEAR ENDED DECEMBER 31, 2018						
Allowance for doubtful accounts	\$ 19	\$ —	\$ —	\$ (4) (a)	\$ 1	\$ 16
Tax valuation allowance	\$ 94	\$ 13	\$ (4)	\$ (31)	\$ 6	\$ 78
FOR THE YEAR ENDED DECEMBER 31, 2017						
Allowance for doubtful accounts	\$ 9	\$ 12	\$ —	\$ (2) (a)	\$ —	\$ 19
Tax valuation allowance	\$ 103	\$ 9	\$ 7	\$ (25)	\$ —	\$ 94

(a) Uncollectible accounts written off, net of recoveries.

**DESCRIPTION OF SECURITIES REGISTERED UNDER
SECTION 12 OF THE SECURITIES EXCHANGE ACT OF 1934**

The following summary description of the common stock, par value \$0.01 per share (“common stock”), of Owens Corning, a Delaware corporation (the “Company”), is based on the provisions of the General Corporation Law of the State of Delaware (the “DGCL”) and the Company’s certificate of incorporation and bylaws. This description is only a summary and does not purport to be complete; therefore, it is subject to and is qualified in its entirety by reference to the terms of the Company’s certificate of incorporation and bylaws, which are incorporated by reference herein and attached as exhibits to the Company’s most recent Annual Report on Form 10-K filed with the Securities and Exchange Commission, and to applicable provisions of the DGCL.

Authorized Capital Stock

The Company’s authorized capital stock consists of 400,000,000 shares of common stock and 10,000,000 shares of preferred stock, par value \$0.01 per share (“preferred stock”). The Company may issue preferred stock in one or more series with rights and preferences as authorized by resolution by its board of directors. The issuance of any shares of any series of preferred stock in future financings, acquisitions or otherwise may result in dilution of voting power and relative equity interest of the holders of shares of common stock and will subject the common stock to the prior dividend and liquidation rights of the outstanding shares of each series of preferred stock.

Common Stock

Voting. The holders of common stock are entitled to one vote for each outstanding share of common stock owned by that stockholder on every matter properly submitted to the stockholders for their vote, subject only to any exclusive voting rights that may vest in holders of the preferred stock under the provisions of any series of the preferred stock established by the Company’s board of directors. Generally, all matters to be voted on by stockholders must be approved by a majority in voting power of the stock having voting power present in person or represented by proxy. However, questions governed expressly by provisions of the Company’s certificate of incorporation or bylaws, applicable stock exchange rules or applicable law require approval as set forth in the applicable governing document, stock exchange rule or law. The election of directors is by majority vote in uncontested director elections, and there is no cumulative voting for the election of directors. Certain provisions of the Company’s certificate of incorporation require a 75% vote of the outstanding common stock to be altered, amended or repealed.

Dividend Rights. Subject to the rights of the holders of any outstanding shares of preferred stock and any restrictions that may be imposed under the Company’s credit agreement governing its senior revolving credit facility or other contractual restrictions, the holders of common stock will be entitled to such dividends and other distributions of cash or any other right or property as may be declared by the board of directors out of the assets or funds legally available for such dividends or distributions. If there is any preferred stock outstanding at such time, dividends on the preferred stock must be paid in full or declared and set aside for payment before dividends may be paid to the holders of common stock. Under the Company’s credit agreement, the Company may not pay a cash dividend if a payment or bankruptcy default or event of default thereunder exists at the time of declaration or if a dividend payment violates the provisions of the Company’s formation documents or other material agreements.

Liquidation Rights. In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Company’s affairs, holders of common stock would be entitled to share ratably, based upon the number of shares held, in assets that are legally available for distribution to stockholders after payment of all of the Company’s debts and liabilities and the liquidation preference of any outstanding preferred stock.

Conversion, Redemption and Preemptive Rights. The common stock has no conversion rights nor are there any redemption or sinking fund provisions with respect to the common stock. The Company’s certificate of incorporation does not provide holders of common stock any preference or preemptive right to subscribe for or purchase additional shares of common stock or securities of the Company.

Provisions of the Company's Certificate of Incorporation and Bylaws that May Have an Anti-Takeover Effect

The Company's certificate of incorporation and bylaws contain several provisions that could have the effect of delaying, deterring or preventing the acquisition of control of the Company by means of a tender offer, open market purchases, a proxy contest or otherwise. Set forth below is a description of those provisions.

Number of Directors; Filling Vacancies. The Company's bylaws provide that the exact number of directors shall be fixed from time to time by the Company's board of directors. Although the Company's bylaws provide that any director may be removed from office at any time, with or without cause, by the affirmative vote of a majority in voting power of the then-outstanding voting stock, the bylaws also provide that vacant directorships may be filled by the board of directors.

Special Meetings of Stockholders; Stockholders Cannot Act by Written Consent. The Company's bylaws provide that a special meeting of stockholders may be called only by the Company's board of directors pursuant to a resolution approved by a majority of the whole board of directors, except as may otherwise be required by law. Stockholders are not permitted to call, or to require that the board of directors call, a special meeting of stockholders. The Company's certificate of incorporation requires that any action required or permitted to be taken by the Company's stockholders must be effected at a duly called annual or special meeting of stockholders and may not be effected by any consent in writing by the stockholders.

Advance Notice Requirements for Stockholder Proposals and Director Nominations. The Company's bylaws establish advance notice procedures with regard to stockholder proposals and the nomination, other than by or at the direction of the board of directors or a committee thereof, of candidates for election as directors. In addition to certain disclosure requirements, the bylaws provide that a stockholder must appear at the applicable meeting to present its nomination or proposed business to avoid the nomination or proposed business being disregarded.

Certain Effect of Authorized but Unissued Stock. Unissued and unreserved shares of common stock or preferred stock may be utilized for a variety of corporate purposes, including future public offerings to raise additional capital and for facilitating corporate acquisitions. One of the effects of unissued and unreserved shares of capital stock may be to enable the Company's board of directors to render more difficult or discourage an attempt to obtain control of the Company by means of a merger, tender offer, proxy contest or otherwise, and thereby to protect the continuity of the Company's management. If, in the due exercise of its fiduciary obligations, for example, the board of directors determines that a takeover proposal was not in the Company's best interests, such shares could be issued by the board of directors without stockholder approval in one or more private transactions or other transactions that might prevent or render more difficult or costly the completion of the takeover transaction by diluting the voting or other rights of the proposed acquirer or insurgent stockholder group, by creating a substantial voting block in institutional or other hands that might undertake to support the position of the incumbent board of directors, by effecting an acquisition that might complicate or preclude the takeover, or otherwise.

Section 203 of the General Corporation Law of the State of Delaware

The Company is subject to Section 203 of the DGCL, which, subject to certain exceptions, prohibits a Delaware corporation from engaging in any "business combination" (as defined below) with any "interested stockholder" (as defined below) for a period of three years following the date that such stockholder became an interested stockholder, unless:

- prior to such date, the corporation's board of directors approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
-

- on consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding those shares owned by (i) directors who are also officers and (ii) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or subsequent to such date, the business combination is approved by the corporation's board of directors and by the affirmative vote (and not by written consent) of at least 66 2/3% of the outstanding voting stock that is not owned by the interested stockholder.

Section 203 of the DGCL defines "business combination" to include: (i) any merger or consolidation involving the corporation and the interested stockholder; (ii) any sale, transfer, pledge or other disposition of 10% or more of the assets of the corporation involving the interested stockholder; (iii) subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder; (iv) any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder; or (v) the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation. In general, Section 203 of the DGCL defines an "interested stockholder" as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or controlled by such entity or person.

Subsidiaries of Owens Corning (12/31/2019)

0979301 B.C. ULC
AS Paroc
Crown Mfg. Inc.
Deutsche Foamglas GmbH
Dutch OC Coöperatief Invest U.A.
European Owens Corning Fiberglas SPRL
Finefiber (Shanghai) Building Material Co. Ltd.
Finefiber Insulation Co. Pte. Ltd.
FOAMGLAS (Italia) SRL
FOAMGLAS (Nordic) AB
IBCO SRL
International Packaging Products Pvt. Ltd.
InterWrap (Hong Kong) Ltd.
InterWrap (Qingdao) Trading Co., Ltd.
InterWrap Corp.
InterWrap Corp. Private Ltd.
Inversiones Owens Corning Chile Holdings Limitada
IPM Inc.
OC Canada Finance Inc.
OC Canada Holdings General Partnership
OC Celfortec Company
OC Latin American Holdings GmbH
OC NL Invest Coöperatief U.A.
OC PRO CV
OCCV1, Inc.
OCCV2, LLC
OCV (Thailand) Co. Limited
OCV Chambéry France
OCV Chambéry International
OCV Finance, LLC
OCV Intellectual Capital, LLC
OCV Italia Srl
OCV Mexico S. de R.L. de C.V.
OCV Servicios Mexico, S.A. de C.V.
OC Steklovolokno AO
OOO Paroc
Owens Corning (Australia) Pty Limited
Owens Corning (China) Investment Company Limited
Owens Corning (Guangzhou) Fiberglas Co., Ltd.
Owens Corning (Guangde) Rock Wood Manufacturing Co., Ltd
Owens Cornings (Hangzhou) Fiberglass Co., Ltd.

**State or Other Jurisdiction Under the Laws
of Which Organized**

Canada
Estonia
Canada
Germany
The Netherlands
Belgium
China
Singapore
Italy
Sweden
Barbados
India
Hong Kong
China
Oregon
India
Chile
Delaware
Canada
Delaware
Nova Scotia
Austria
The Netherlands
The Netherlands
Delaware
Delaware
Thailand
France
France
Delaware
Delaware
Italy
Mexico
Mexico
Russia
Russia
Australia
China
China
China
China

Owens Corning (Nanjing) Building Materials Co., Ltd.	China
Owens Corning (Shanghai) Fiberglas Co., Ltd.	China
Owens Corning (Singapore) Pte Ltd	Singapore
Owens Corning (Tianjin) Building Materials Co., Ltd.	China
Owens Corning (Xi'an) Building Materials Co., Ltd.	China
Owens Corning Alloy Canada GP Inc.	Canada
Owens Corning Alloy Canada LP	Canada
Owens Corning Argentina Sociedad de Responsabilidad Limitada	Argentina
Owens Corning Automotive, LLC	Delaware
Owens Corning BM (Korea), Ltd	Korea
Owens-Corning Britinvest Limited	United Kingdom
Owens Corning Canada GP Inc.	Canada
Owens Corning Canada Holdings B.V.	The Netherlands
Owens Corning Canada Holdings ULC	Canada
Owens Corning Canada LP	Canada
Owens Corning Cayman (China) Holdings	Cayman Islands
Owens-Corning Cayman Limited	Cayman Islands
Owens Corning Celfortec Canada GP Inc.	Canada
Owens Corning Celfortec LP	Canada
Owens Corning Composite Materials Canada GP Inc.	Canada
Owens Corning Composite Materials Canada LP	Canada
Owens Corning Composite Materials, LLC	Delaware
Owens Corning Composites (Beijing) Co., Ltd.	China
Owens Corning Composites (China) Co., Ltd.	China
Owens Corning Construction Services, LLC	Delaware
Owens Corning Corporate Services, LLC	Delaware
Owens Corning CV GP, LLC	Delaware
Owens Corning Elaminator Insulation Systems, LLC	Delaware
Owens Corning Enterprise (India) Pvt. Ltd.	India
Owens Corning Fabrics (Changzhou) Co., Ltd.	China
Owens Corning Fiberglas (U.K.) Pension Plan Ltd.	United Kingdom
Owens Corning Fiberglas A.S. Limitada	Brazil
Owens-Corning Fiberglas Deutschland GmbH	Germany
Owens Corning Fiberglas Espana, SL	Spain
Owens Corning Fiberglas France	France
Owens Corning Financial Services ULC	Canada
Owens Corning Finland Oy	Finland
Owens Corning Foam Insulation, LLC	Delaware
Owens-Corning Funding Corporation	Delaware
Owens Corning GlassMetal Services (Suzhou) Co., Ltd.	China
Owens Corning Global Holdings Limited Partnership	Canada
Owens Corning Global Holdings II Limited Partnership	Canada
Owens Corning Holdings 1 CV	The Netherlands
Owens Corning Holdings 3 CV	The Netherlands

Owens Corning Holdings 4 CV	The Netherlands
Owens Corning Holdings 5 CV	The Netherlands
Owens Corning Holdings Holland B.V.	The Netherlands
Owens Corning HOMEExperts, Inc.	Delaware
Owens Corning Hong Kong Limited	Hong Kong
Owens Corning HT, Inc.	Delaware
Owens Corning (India) Private Limited	India
Owens Corning Industries (India) Private Limited	India
Owens Corning Infrastructure Solutions, LLC	Delaware
Owens Corning Insulating Systems, LLC	Delaware
Owens Corning Insulating Systems Canada GP Inc.	Canada
Owens Corning Insulating Systems Canada LP	Canada
Owens Corning Intellectual Capital, LLC	Delaware
Owens Corning International Holdings C.V.	The Netherlands
Owens Corning InterWrap Canada GP Inc.	Canada
Owens Corning InterWrap Canada LP	Canada
Owens Corning Japan, LLC	Japan
Owens Corning Kohold B.V.	The Netherlands
Owens Corning Korea	Korea
Owens Corning Mexico, S. de R.L. de C.V.	Mexico
Owens Corning Mineral Wool, LLC	Delaware
Owens Corning Non-Woven - Blythewood, LLC	Delaware
Owens Corning Non-Woven Technology, LLC	Delaware
Owens Corning Receivables LLC	Delaware
Owens Corning Reinforcements (Hangzhou) Co., Ltd.	China
Owens Corning Remodeling Systems, LLC	Delaware
Owens Corning Roofing and Asphalt, LLC	Delaware
Owens Corning Roofing, S. de R.L. de C.V.	Mexico
Owens Corning Sales, LLC	Delaware
Owens Corning Science and Technology, LLC	Delaware
Owens Corning Supplementary Pension Plan Limited	United Kingdom
Owens Corning Technical Fabrics, LLC	Delaware
Owens Corning Treasury Services, LLC	Delaware
Owens Corning U.S. Holdings, LLC	Delaware
Owens-Corning Veil Netherlands B.V.	The Netherlands
Owens-Corning Veil U.K. Ltd.	United Kingdom
Paroc AB	Sweden
Paroc GmbH	Germany
Paroc Group Oy	Finland
Paroc Limited	United Kingdom
Paroc Oy Ab	Finland
Paroc Polska Sp. z o.o.	Poland
Pittsburgh Corning (United Kingdom) Limited	United Kingdom
Pittsburgh Corning (Yantai) Insulation Materials Co., Ltd	China

Pittsburgh Corning Asia Limited
Pittsburgh Corning, LLC
Pittsburgh Corning CR, S.R.O.
Pittsburgh Corning Europe N.V.
Pittsburgh Corning France
Pittsburgh Corning Gesellschaft m.b.h.
Pittsburgh Corning Nederland B.V.
Pittsburgh Corning Singapore Pte., Ltd
Pittsburgh Corning Suisse SA
Qingdao Novia Polymer Co., Ltd.
SIA Paroc
Soltech, Inc.
Thermafiber, Inc.
Transandina de Comercio S.A.
UAB Paroc

Hong Kong
Delaware
Czech Republic
Belgium
France
Austria
The Netherlands
Singapore
Switzerland
China
Latvia
Kentucky
Delaware
Chile
Lithuania

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-3 (No. 333-222514) and Form S-8 (Nos. 333-231002, 333-210939, 333-188091, 333-166347, 333-150771, 333-150770, and 333-138392) of Owens Corning of our report dated February 19, 2020 relating to the financial statements, financial statement schedule and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/PricewaterhouseCoopers LLP
Toledo, Ohio
February 19, 2020

CERTIFICATION

I, Brian D. Chambers, certify that:

1. I have reviewed this annual report on Form 10-K of Owens Corning;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 19, 2020

/s/ Brian D. Chambers
Brian D. Chambers
Chief Executive Officer

CERTIFICATION

I, Prithvi S. Gandhi, certify that:

1. I have reviewed this annual report on Form 10-K of Owens Corning;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 19, 2020

/s/ Prithvi S. Gandhi
Prithvi S. Gandhi
Interim Chief Financial Officer
(Principal Financial Officer)

SECTION 1350 CERTIFICATION

In connection with the Annual Report on Form 10-K of Owens Corning (the “Company”) for the fiscal year ended December 31, 2019 (the “Report”), I, Brian D. Chambers, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) Information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Brian D. Chambers
Brian D. Chambers
Chief Executive Officer
(Principal Executive Officer)

February 19, 2020

SECTION 1350 CERTIFICATION

In connection with the Annual Report on Form 10-K of Owens Corning (the “Company”) for the fiscal year ended December 31, 2019 (the “Report”), I, Prithvi Gandhi, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) Information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Prithvi Gandhi

Prithvi Gandhi
Interim Chief Financial Officer

February 19, 2020