

**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, 2020
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 No. 001-32260
-

Westlake Chemical Corporation

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of incorporation or organization)

76-0346924
(I.R.S. Employer Identification No.)

2801 Post Oak Boulevard, Suite 600
Houston, Texas 77056
(Address of principal executive offices, including zip code)

(713) 960-9111
(Registrant's telephone number, including area code)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, \$0.01 par value	WLK	The New York Stock Exchange
1.625% Senior Notes due 2029	WLK29	The New York Stock Exchange

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

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

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange 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 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 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	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

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 has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

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

The aggregate market value of the registrant's voting stock held by non-affiliates of the registrant on June 30, 2020, the end of the registrant's most recently completed second fiscal quarter, based on a closing price on June 30, 2020 of \$53.65 on the New York Stock Exchange was approximately \$1.8 billion.

There were 127,834,119 shares of the registrant's common stock outstanding as of February 17, 2021.

DOCUMENTS INCORPORATED BY REFERENCE:

Certain information required by Part II and Part III of this Form 10-K is incorporated by reference from the registrant's definitive Proxy Statement to be filed pursuant to Regulation 14A with respect to the registrant's 2021 Annual Meeting of Stockholders to be held on May 13, 2021.

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Explanatory Note

References in this Annual Report on Form 10-K (this "report") to "we," "our," "us" or like terms refer to Westlake Chemical Corporation ("Westlake" or the "Company").

Cautionary Statements about Forward-Looking Statements

The Private Securities Litigation Reform Act of 1995 provides safe harbor provisions for forward-looking information. Certain of the statements contained in this Form 10-K are forward-looking statements. All statements, other than statements of historical facts, included in this Form 10-K that address activities, events or developments that we expect, project, believe or anticipate will or may occur in the future are forward-looking statements. Forward-looking statements can be identified by the use of words such as "believes," "intends," "may," "should," "could," "anticipates," "expected" or comparable terminology, or by discussions of strategies or trends. Although we believe that the expectations reflected in such forward-looking statements are reasonable, we cannot give any assurances that these expectations will prove to be correct. Forward-looking statements relate to matters such as:

- future operating rates, margins, cash flows and demand for our products;
- industry market outlook, including the price of crude oil;
- widespread outbreak of an illness or any other communicable disease, or any other public health crisis, including the coronavirus ("COVID-19") pandemic, and efforts to contain its transmission;
- our plans to respond to the challenges presented by the COVID-19 pandemic, including planned reductions of costs, increases of operating efficiencies and lowering of our capital spending, as well as the timing and deferral of the planned turnaround at our Petro 2 ethylene unit;
- production capacities;
- currency devaluation;
- our ability to borrow additional funds under our credit agreement;
- our ability to meet our liquidity needs;
- our ability to meet debt obligations under our debt instruments;
- our intended quarterly dividends;
- future capacity additions and expansions in the industries in which we compete;
- results of acquisitions;
- timing, funding and results of capital projects;
- pension plan obligations, funding requirements and investment policies;
- compliance with present and future environmental regulations and costs associated with environmentally-related penalties, capital expenditures, remedial actions and proceedings, including any new laws, regulations or treaties that may come into force to limit or control carbon dioxide and other GHG emissions or to address other issues of climate change;
- effects of pending legal proceedings; and
- timing of and amount of capital expenditures.

We have based these statements on assumptions and analyses in light of our experience and perception of historical trends, current conditions, expected future developments and other factors we believe were appropriate in the circumstances when the statements were made. Forward-looking statements by their nature involve substantial risks and uncertainties that could significantly impact expected results, and actual future results could differ materially from those described in such statements. While it is not possible to identify all factors, we continue to face many risks and uncertainties. Among the factors that could cause actual future results to differ materially are the risks and uncertainties discussed under "Risk Factors" and those described from time to time in our other filings with the SEC including, but not limited to, the following:

- general economic and business conditions;
- the cyclical nature of the chemical and building products industries;
- the availability, cost and volatility of raw materials and energy;
- uncertainties associated with the United States, European and worldwide economies, including those due to political tensions and unrest in the Middle East and elsewhere;

- uncertainties associated with pandemic infectious diseases, particularly COVID-19;
- current and potential governmental regulatory actions in the United States and other countries;
- industry production capacity and operating rates;
- the supply/demand balance for our products;
- competitive products and pricing pressures;
- instability in the credit and financial markets;
- access to capital markets;
- terrorist acts;
- operating interruptions (including leaks, explosions, fires, weather-related incidents, mechanical failure, unscheduled downtime, labor difficulties, transportation interruptions, spills and releases and other environmental risks);
- changes in laws or regulations, including trade policies;
- technological developments;
- foreign currency exchange risks;
- our ability to implement our business strategies; and
- creditworthiness of our customers.

Many of such factors are beyond our ability to control or predict. Any of the factors, or a combination of these factors, could materially affect our future results of operations and the ultimate accuracy of the forward-looking statements. These forward-looking statements are not guarantees of our future performance, and our actual results and future developments may differ materially from those projected in the forward-looking statements. Management cautions against putting undue reliance on forward-looking statements or projecting any future results based on such statements or present or prior earnings levels. Every forward-looking statement speaks only as of the date of the particular statement, and we undertake no obligation to publicly update or revise any forward-looking statements.

Industry and Market Data

Industry and market data used throughout this Form 10-K were obtained through internal company research, surveys and studies conducted by unrelated third parties and publicly available industry and general publications, including information from IHS Markit ("IHS"). We have not independently verified market and industry data from external sources. While we believe internal company estimates are reliable and market definitions are appropriate, neither such estimates nor these definitions have been verified by any independent sources.

Production Capacity

Unless we state otherwise, annual production capacity estimates used throughout this Form 10-K represent rated capacity of the facilities at December 31, 2020. We calculated rated capacity by estimating the number of days in a typical year that a production unit of a plant is expected to operate, after allowing for downtime for regular maintenance, and multiplying that number by an amount equal to the unit's optimal daily output based on the design feedstock mix. Because the rated capacity of a production unit is an estimated amount, actual production volumes may be more or less than the rated capacity.

PART I

Item 1. Business

General

We are a vertically integrated global manufacturer and marketer of basic chemicals, vinyls, polymers and building products. Our products include some of the most widely used materials in the world, which are fundamental to many diverse consumer and industrial markets, including flexible and rigid packaging, automotive products, coatings, water treatment, refrigerants, residential and commercial construction as well as other durable and non-durable goods. We operate in two principal operating segments, Vinyls and Olefins. We are highly integrated along our olefins product chain with significant downstream integration into polyethylene and styrene monomer. We are also a highly-integrated global producer of vinyls with substantial downstream integration into polyvinyl chloride ("PVC") building products.

We began operations in 1986 after our first polyethylene plant, an Olefins segment business, near Lake Charles, Louisiana was acquired from Occidental Petroleum Corporation. We began our vinyls operations in 1990 with the acquisition of a vinyl chloride monomer ("VCM") plant in Calvert City, Kentucky from The B.F.Goodrich Company. In 1992, we commenced our Vinyls segment's building products operations after acquiring three PVC pipe plants. Since 1986, we have grown rapidly into an integrated global producer of basic chemicals, vinyls, polymers and building products. We achieved this growth by acquiring existing plants or constructing new plants and completing numerous capacity or production line expansions. We regularly consider acquisitions and other internal and external growth opportunities that would be consistent with, or complementary to, our overall business strategy.

In 2014, we formed Westlake Chemical Partners LP ("Westlake Partners") to operate, acquire and develop ethylene production facilities and related assets. Also in 2014, Westlake Partners completed an initial public offering. As of February 17, 2021, Westlake Partners' assets consisted of a 22.8% limited partner interest in Westlake Chemical OpCo LP ("OpCo"), as well as the general partner interest in OpCo. Prior to the Westlake Partners IPO, OpCo's assets were wholly-owned by us. OpCo's assets include two ethylene production facilities at our olefins facility in Lake Charles, one ethylene production facility at our Calvert City site and a 200-mile common carrier ethylene pipeline that runs from Mont Belvieu, Texas to the Longview, Texas site, which includes our Longview polyethylene production facility. We retain a 77.2% limited partner interest in OpCo, a 40.1% limited partner interest in Westlake Partners (consisting of 14,122,230 common units), a general partner interest in Westlake Partners and incentive distribution rights. The operations of Westlake Partners are consolidated in our financial statements. We are party to certain agreements with Westlake Partners and OpCo whereby, among other things, OpCo sells us 95% of the ethylene it produces on a cost-plus basis that is expected to generate a fixed margin per pound of \$0.10. We use this ethylene in the production processes of both our Vinyls and Olefins segments. For more information, see "—Vinyls Business" and "—Olefins Business" below.

On January 2, 2019, we completed the acquisition of NAKAN™, a global compounding solutions business. NAKAN's products are used in a wide-variety of applications, including in the automotive, building and construction, and medical industries. With this acquisition, our compounding business now has facilities worldwide in China, France, Germany, Italy, Japan, Mexico, Spain, the United States and Vietnam, as well as a world-class research facility in France and several application laboratories.

On November 12, 2019, we, through one of our subsidiaries, Eagle US 2 LLC ("Eagle"), completed the acquisition of an additional 34.8% of the membership interests in LACC, LLC ("LACC") from Lotte Chemical USA Corporation, a subsidiary of Lotte Chemical Corporation ("Lotte"), for approximately \$817 million (the "Transaction"). Prior to the Transaction, Eagle owned approximately 12% of the membership interests in LACC. As of December 31, 2020, we owned an aggregate 46.8% membership interest in LACC. The LACC ethylene plant has 2.2 billion pounds per year of ethylene production capacity and is adjacent to our chlor-alkali facility in Lake Charles. During the third quarter of 2019, the LACC ethylene plant began commercial operations. As a result of the Transaction, we will receive our proportionate share of LACC's ethylene production on a cash-cost basis, which is expected to benefit our integrated downstream operations.

We benefit from highly integrated production facilities that allow us to process raw materials into higher-value-added chemicals and building products. As of February 17, 2021, we (directly and through OpCo, our investment in LACC, and our 95%-and 60%-owned joint ventures in China and Taiwan, respectively) had approximately 44.3 billion pounds per year of aggregate production capacity at numerous manufacturing sites in North America, Europe and Asia.

Vinyls Business

Products

Principal products in our integrated Vinyls segment include PVC, VCM, ethylene dichloride ("EDC"), chlor-alkali (chlorine and caustic soda) and chlorinated derivative products and, through OpCo and LACC, ethylene. We also manufacture and sell PVC compounds and building products fabricated primarily from PVC, including residential siding, trim and moldings; pipe and fittings for various water, sewer, electrical and industrial applications; profiles for windows and doors; decking; films for various inflatables, wallcovering, tape and roofing applications; and composite roof tiles. We manage our integrated Vinyls production chain, from the basic chemicals to finished building products, to optimize product margins and capacity utilization. Our primary North American chemical manufacturing facilities are located in our Calvert City, Kentucky and Lake Charles, Plaquemine and Geismar, Louisiana sites. Our Calvert City site includes an ethylene plant, which is owned by OpCo, a chlor-alkali plant, a VCM plant and a PVC plant. Our Lake Charles site includes three chlor-alkali plants, two VCM plants, a chlorinated derivative products plant and cogeneration assets. Our Plaquemine site includes a chlor-alkali plant, a VCM plant, a PVC plant and cogeneration assets. Our Geismar site includes a chlor-alkali plant, a VCM plant and a PVC plant. We also produce chlorine, caustic soda, hydrogen and chlorinated derivative products at our Natrium, West Virginia; Longview, Washington and Beauharnois, Quebec facilities and PVC resin at our facility in Aberdeen, Mississippi. Our European chemical manufacturing facilities are located in Germany and include two chlor-alkali plants, two VCM plants and four PVC plants. As of February 17, 2021, we had 37 building products and PVC compound plants in North America, Europe and Asia, most of which were owned by us. Our Asian vinyls chemical manufacturing facilities are located near Shanghai, in China, and in Kaohsiung, Taiwan, through our 95%- and 60%-owned joint ventures, respectively, and include a PVC plant, a PVC film and sheet plant, a chlor-alkali plant and a chlorinated derivative products plant.

The following table illustrates our vinyls production capacities at February 17, 2021 by principal product and the end uses of these products:

Product ⁽¹⁾	Annual Capacity ⁽²⁾ (Millions of pounds)	End Uses	Principal Manufacturing Facilities ⁽⁴⁾⁽⁵⁾⁽⁶⁾
Specialty PVC	980	Automotive sealants, cable sheathing, medical applications and other applications	Burghausen, Cologne, and Gendorf, Germany
Commodity PVC	6,820	Construction materials including pipe, siding, profiles for windows and doors, film and sheet for packaging and other applications	Calvert City, Kentucky, Geismar, Louisiana, Plaquemine, Louisiana, Aberdeen, Mississippi, Cologne and Knapsack, Germany
VCM	7,830	PVC, PVC Compounds	Calvert City, Kentucky, Geismar, Louisiana, Lake Charles, Louisiana, Plaquemine, Louisiana, Gendorf and Knapsack, Germany
Chlorine	7,140	VCM, organic/inorganic chemicals, bleach and water treatment	Calvert City, Kentucky, Geismar, Louisiana, Lake Charles, Louisiana, Plaquemine, Louisiana, Natrium, West Virginia, Gendorf and Knapsack, Germany
Caustic Soda	7,860	Pulp and paper, organic/inorganic chemicals, neutralization and alumina	Calvert City, Kentucky, Geismar, Louisiana, Lake Charles, Louisiana, Plaquemine, Louisiana, Natrium, West Virginia, Gendorf and Knapsack, Germany
Chlorinated Derivative Products	2,290	Coatings, flavorants, films, refrigerants, water treatment applications, chemicals and pharmaceutical production	Lake Charles, Louisiana, Plaquemine, Louisiana, Natrium, West Virginia
Ethylene ⁽³⁾	1,760	VCM	Calvert City, Kentucky
Building Products and PVC Compounds	3,470	Pipe: water and sewer, plumbing, irrigation, conduit; fittings; profiles and foundation building products Exteriors: window and door components; deck components; siding, trim and mouldings; film and sheet and composite roof tiles Compounds: automotive interior, automotive exterior, stabilizers, medical applications, profiles, moldings, electrical products, casing and packaging	

(1) EDC, a VCM intermediate product, is not included in the table.

(2) Includes capacity related to our 95%- and 60%-owned Asian joint ventures.

(3) Includes production capacity in Calvert City owned by OpCo and our portion of LACC's production capacity in Lake Charles. For additional information on OpCo, see "Olefins Business—Products—Ethylene" below.

(4) Except as noted in notes (5) and (6) below, we own each of these facilities.

(5) We lease the land on which our Gendorf, Burghausen, Knapsack and Cologne, Germany facilities are located.

(6) We lease a portion of the land on which our Aberdeen and Calvert City facilities are located.

PVC. PVC, the world's third most widely used plastic, is an attractive alternative to traditional materials such as glass, metal, wood, concrete and other plastic materials because of its versatility, durability and cost-competitiveness. PVC is produced from VCM, which is, in turn, made from chlorine and ethylene. PVC compounds are highly customized formulations that offer specific end-use properties based on customer-determined manufacturing specifications. PVC compounds are made by combining PVC resin with various additives in order to make either rigid and impact-resistant or soft and flexible compounds. The various compounds are then fabricated into end-products through extrusion, calendering, injection-molding or blow-molding.

We are the second-largest PVC producer in the world. With the completion of our previously announced expansion projects at our Geismar and Burghausen plants in 2019, we have the capacity to produce approximately 6.8 billion pounds and 1.0 billion pounds of commodity and specialty PVC per year, respectively, at our various facilities globally. We use some of our PVC internally in the production of our building products and PVC compounds. The remainder of our PVC is sold to downstream fabricators and the international markets.

VCM. VCM is used to produce PVC, solvents and PVC-related products. We use ethylene and chlorine to produce EDC, which is used in turn, to produce VCM. We have the capacity to produce approximately 6.3 billion pounds and 1.5 billion pounds of VCM per year at our North American and European facilities, respectively. The majority of our VCM is used internally in our PVC operations. VCM and EDC not used internally are sold externally.

Chlorine and Caustic Soda. We are the second-largest chlor-alkali producer in the world. We combine salt and electricity to produce chlorine and caustic soda, commonly referred to as chlor-alkali, at our Lake Charles, Plaquemine, Natrium, Calvert City, Geismar, Beauharnois, Longview (WA), Gendorf, Knapsack and Kaohsiung facilities. We use our chlorine production in our VCM and chlorinated derivative products plants. We currently have the capacity to supply all of our chlorine requirements internally. Any remaining chlorine is sold into the merchant chlorine market. Our caustic soda is sold to external customers who use it for, among other things, the production of pulp and paper, organic and inorganic chemicals and alumina.

Chlorinated Derivative Products. Our chlorinated derivative products include ethyl chloride, perchloroethylene, trichloroethylene, tri-ethane® solvents, VersaTRANS® solvents, calcium hypochlorite, hydrochloric acid ("HCL") and pelletized caustic soda ("PELS"). We have the capacity to produce approximately 2.3 billion pounds of chlorinated derivative products per year, primarily at our Lake Charles, Natrium, Beauharnois and Longview (WA) facilities. The majority of our chlorinated derivative products are sold to external customers who use these products for, among other things, refrigerants, water treatment applications, chemicals and pharmaceutical production, food processing, steel pickling, solvent and cleaning chemicals and natural gas and oil production.

Ethylene. We utilize ethylene from OpCo's facility in Calvert City and LACC to produce VCM at our facilities. We obtain the remainder of the ethylene we need for our Vinyls business from third party purchases. The use of ethane feedstock by our ethylene plants enables us to enhance our low-cost vinyl chain integration.

Building Products and PVC Compounds. Products made from PVC are used in materials ranging from water and sewer systems to home and commercial applications for siding, trim, mouldings, deck, window and door profiles. Our building products consist of two primary product groups: (i) exterior products, which includes siding, trim, mouldings, window profiles, decking products and roofing applications; and (ii) PVC pipe, specialty PVC pipe and fittings. We are the second-largest manufacturer of PVC pipe by capacity in North America. We manufacture and market exterior products under the Royal Building Products®, Celect Cellular Exteriors by Royal®, Zuri Premium Decking by Royal®, Royal S4S Trim Board®, Exterior Portfolio® and DaVinci® brand names. We manufacture and market specialty pipe and fittings, water, sewer, irrigation and conduit pipe products under the NAPCO™ brand name. We manufacture film and sheet at our Shanghai facility for both Asian and global markets. Flexible PVC compounds are used for wire and cable insulation, medical applications and packaging, flooring, wall coverings, automotive interior and exterior trims and packaging. Rigid extrusion PVC compounds are commonly used in window and door profiles, vertical blinds and construction products, including pipe and siding. Injection-molding PVC compounds are used in specialty products such as computer housings and keyboards, appliance parts and containers. Powder compounds are primarily used in window and door profiles and pipe and fittings. The combined capacity of our 37 building products and PVC compounds plants is approximately 3.5 billion pounds per year.

Electricity. Our Lake Charles, Plaquemine and Natrium cogeneration assets have the capacity to generate electricity of approximately 420, 240 and 100 megawatts, respectively, per year. Our North American joint ventures include a 50% interest in RS Cogen L.L.C. ("RS Cogen") that generates electricity, of which our share is approximately 212 megawatts.

Feedstocks

We are highly integrated along our vinyls production chain. We (through OpCo) produce most of the ethylene required at our Calvert City and Lake Charles facilities utilizing ethane feedstock. The LACC ethylene facility is located adjacent to our vinyls facility in Lake Charles and has an ethylene production capacity of 2.2 billion pounds per year. During the third quarter of 2019, the LACC ethylene plant began its commercial operations. At December 31, 2020, we, through one of our subsidiaries, own 46.8% of the membership interests in LACC. We receive our proportionate share in ethylene production on a cash-cost basis and primarily use it to produce VCM. In Germany, we have access to, and partially own, an ethylene pipeline. The salt requirements for several of our larger chlor-alkali plants are supplied internally from salt domes we either own or lease and is transported by pipelines we own. We purchase the salt required for our other chlor-alkali plants pursuant to long-term contracts. Electricity and steam for one of our Lake Charles facilities are produced by both on-site cogeneration units and through a toll arrangement with RS Cogen, a joint venture in which we own a 50% interest. RS Cogen operates a process steam, natural gas-fired cogeneration facility adjacent to the site. Electricity and steam for the Plaquemine facility is supplied internally by our on-site cogeneration unit. A portion of our Natrium facility's electricity requirements is produced by our on-site generation unit, and the remainder is purchased. We purchase electricity for our remaining facilities under long-term contracts. We purchase VCM for our Asian PVC plant on a contract and spot basis.

Our North American and Asian PVC facilities supply predominantly all of the PVC required for our building products plants. PVC required for the PVC compounds plants is either internally sourced or externally purchased at market prices based on the location of the plants. The remaining feedstocks include pigments, fillers, stabilizers and other ingredients, which we purchase under short-term contracts based on prevailing market prices.

Marketing, Sales and Distribution

We have a dedicated sales force for our business, organized by product line and region. In addition, we rely on distributors to market products to smaller customers. We use some of our PVC internally in the production of our building products and PVC compounds. The remainder of our PVC is sold to downstream fabricators and the international markets. We have the capacity to use a majority of our chlorine internally to produce VCM and EDC, most of which, in turn, is used to produce PVC. We also use our chlorine internally to produce chlorinated derivative products. We sell the remainder of our chlorine and substantially all of our caustic soda production to external customers. The majority of our products are shipped from production facilities directly to the customer via pipeline, truck, rail, barge and/or ship. The remaining products are shipped from production facilities to third party chemical terminals and warehouses until being sold to customers.

We sell a majority of our siding, trim and mouldings products, PVC pipe, specialty PVC pipe and fittings, and film and sheet products through a combination of our internal sales force and manufacturer's representatives. In Canada, we operate 18 company-owned distribution branches that sell our vinyl siding and accessories and trim and mouldings products, as well as pipe and fittings. We also engage in advertising programs primarily directed at trade professionals that are intended to develop awareness and interest in our products. In addition, we display our building products at trade shows.

No single customer accounted for 10% or more of net sales for the Vinyls segment in 2020.

Competition

The markets in which our Vinyls business operates are highly competitive. Competition in the vinyls market is based on product availability, product performance, customer service and price. We compete in the vinyls market with other producers including Formosa Plastics Corporation, Oxy Chem, LP, Shintech, Inc., Olin Corporation, GEON Performance Solutions, Teknor Apex Company, Inc., Orbia Advanced Corporation, S.A.B. de C.V., INOVYN ChlorVinyls Limited, VYNOVA Group and KEM ONE Group SAS.

Competition in the building products market is based on on-time delivery, product quality, product innovation, customer service, product consistency and price. We compete in the building products market with other producers and fabricators including Diamond Plastics Corporation, JM Eagle Inc., Cornerstone Building Brands, Inc., CertainTeed Corporation, IPEX Inc., Associated Materials LLC and The Azek Company.

Olefins Business

Products

Olefins are the basic building blocks used to create a wide variety of petrochemical products. We manufacture ethylene (through OpCo), polyethylene, styrene and associated co-products at our manufacturing facility in Lake Charles and polyethylene at our Longview facility. We have two ethylene plants, which are owned by OpCo, two polyethylene plants and one styrene monomer plant at our olefins facility in Lake Charles. We have three polyethylene plants and a specialty polyethylene wax plant at our Longview site.

The following table illustrates our olefins production capacities at February 17, 2021 by principal product and the primary end uses of these materials:

Product	Annual Capacity (Millions of pounds)	End Uses	Principal Manufacturing Facilities ⁽²⁾⁽³⁾
Ethylene ⁽¹⁾	2,990	Polyethylene, EDC, styrene, ethylene oxide/ethylene glycol	Lake Charles, Louisiana
Low-Density Polyethylene ("LDPE")	1,500	High clarity packaging and bags, shrink films, food packaging, coated paper board, cup stock, paper folding cartons, lids, closures and general purpose molding	Lake Charles, Louisiana, Longview, Texas
Linear Low-Density Polyethylene ("LLDPE")	1,070	Heavy-duty films and bags, general purpose liners	Lake Charles, Louisiana, Longview, Texas
Styrene	570	Consumer disposables, packaging material, appliances, paints and coatings, resins and building materials	Lake Charles, Louisiana

(1) Production capacity owned by OpCo.

(2) We lease the land on which our Longview, Texas facility is located.

(3) We own the Lake Charles, Louisiana facility.

Ethylene. Ethylene is the world's most widely used petrochemical in terms of volume. It is the key building block used to produce a large number of higher value-added chemicals including polyethylene, EDC, VCM and styrene. OpCo has the capacity to produce approximately 3.0 billion pounds of ethylene per year at our olefins facility at our Lake Charles site, and we have the capability to consume all of OpCo's production that we purchase at Lake Charles to produce polyethylene and styrene monomer in our Olefins business. In addition, we (through OpCo) produce ethylene co-products including chemical grade propylene, crude butadiene, pyrolysis gasoline and hydrogen. We (through OpCo) sell our entire output of these co-products to external customers.

Polyethylene. Polyethylene, the world's most widely consumed polymer, is used in the manufacture of a wide variety of film, coatings and molded product applications primarily used in packaging. Polyethylene is generally classified as either LDPE, LLDPE or high-density polyethylene ("HDPE"). The density correlates to the relative stiffness of the end-use products. The difference between LDPE and LLDPE is molecular, and products produced from LLDPE, in general, have higher strength properties than products produced from LDPE. LDPE exhibits better clarity and other physical properties and is used in end products such as bread bags, food wraps, milk carton coatings and food packaging. LLDPE is used for higher film strength applications such as stretch film and heavy-duty sacks. HDPE is used to manufacture products such as grocery, merchandise and trash bags, rigid plastic containers, plastic closures and pipe.

We are the second-largest producer of LDPE by capacity in North America and predominantly use the autoclave technology (versus tubular technology), which is capable of producing higher-margin specialty polyethylene products. In 2020, our annual capacity of approximately 1.5 billion pounds was available in numerous formulations to meet the needs of our diverse customer base. We also have the capacity to produce approximately 1.1 billion pounds of LLDPE per year in various formulations. We produce LDPE and LLDPE at both the Lake Charles and Longview facilities. Our Lake Charles and Longview facilities also have the capability to produce HDPE. We sell polyethylene to external customers as a final product in pellet form.

Styrene. Styrene is used to produce derivatives such as polystyrene, acrylonitrile butadiene styrene, unsaturated polyester and synthetic rubber. These derivatives are used in a number of applications including consumer disposables, food packaging, housewares, paints and coatings, building materials, tires and toys. We produce styrene at our Lake Charles plant, where we have the capacity to produce approximately 570 million pounds of styrene per year, all of which is sold to external customers.

Feedstocks

We are highly integrated along our olefins product chain. We (through OpCo) produce most of the ethylene required to produce our polyethylene and styrene. Ethylene can be produced from either petroleum liquid feedstocks, such as naphtha, condensates and gas oils, or from natural gas liquid feedstocks, such as ethane, propane and butane. Both of OpCo's Lake Charles ethylene plants use ethane as the primary feedstock. Pursuant to a feedstock supply agreement between us and OpCo, OpCo receives ethane feedstock at the olefins facility at our Lake Charles site through several pipelines from a variety of suppliers in Texas and Louisiana. We own a 50% interest in a 104-mile natural gas liquids pipeline from Mont Belvieu to our Lake Charles site. OpCo owns a 200-mile ethylene pipeline that runs from Mont Belvieu to our Longview site.

In addition to ethylene supplied by OpCo and LACC, we also acquire ethylene from third parties in order to supply a portion of our Vinyls segment ethylene requirements. We acquire butene and hexene to manufacture polyethylene and benzene to manufacture styrene. We receive butene and hexene at the Lake Charles site and hexene at the Longview site via rail car from several suppliers. We receive benzene via barges, ships and pipeline pursuant to short-term arrangements. We purchase butene and hexene pursuant to multi-year contracts, some of which are renewable for an additional term subject to either party to the contract notifying the other party that it does not wish to renew the contract. We purchase electricity for our Lake Charles facility under long-term industrial contracts.

Marketing, Sales and Distribution

We have an internal sales force that sells our products directly to our customers. Our polyethylene customers are some of the nation's largest producers of film and flexible packaging.

We and OpCo sell ethylene and ethylene co-products to external customers. OpCo's primary ethylene co-products are chemical grade propylene, crude butadiene, pyrolysis gasoline and hydrogen. We have storage agreements and exchange agreements that allow us and OpCo access to customers who are not directly connected to the pipeline system that we own. OpCo ships crude butadiene and pyrolysis gasoline by rail or truck. Additionally, we transport our polyethylene and styrene by rail or truck. Further, styrene can be transported by barge or ship.

No single customer accounted for 10% or more of net sales for the Olefins segment in 2020.

Competition

The markets in which our Olefins business operates are highly competitive. We compete on the basis of customer service, product deliverability, quality, consistency, performance and price. Our competitors in the ethylene, polyethylene and styrene markets are some of the world's largest chemical companies, including Chevron Phillips Chemical Company, Dow Inc., ExxonMobil Chemical Company, Formosa Plastics Corporation, LyondellBasell Industries, N.V., NOVA Chemicals Corporation and Sasol Limited.

Environmental

As is common in our industry, we are subject to environmental laws and regulations related to the use, storage, handling, generation, transportation, emission, discharge, disposal and remediation of, and exposure to, hazardous and non-hazardous substances and wastes in all of the countries in which we do business. National, state or provincial and local standards regulating air, water and land quality affect substantially all of our manufacturing locations around the world. Compliance with such laws and regulations has required and will continue to require capital expenditures and increase operating costs.

It is our policy to comply with all environmental, health and safety requirements and to provide safe and environmentally sound workplaces for our employees. In some cases, compliance can be achieved only by incurring capital expenditures. In 2020, we made capital expenditures of \$31 million related to environmental compliance. We estimate that we will make capital expenditures of approximately \$41 million in 2021 and \$45 million in 2022, respectively, related to environmental compliance. The expected 2021 and 2022 capital expenditures are relatively higher than the amounts we have spent related to environmental compliance in recent years in large part due to capital expenditures related to previously existing and new Environmental Protection Agency (the "EPA") regulations and corrective actions required by the EPA to resolve the flare enforcement matter discussed below. The remainder of the 2021 and 2022 estimated expenditures are related to equipment replacement and upgrades. We anticipate that stringent environmental regulations will continue to be imposed on us and the industry in general. Although we cannot predict with certainty future expenditures, management believes that our current spending trends will continue.

From time to time, we receive notices or inquiries from government entities regarding alleged violations of environmental laws and regulations pertaining to, among other things, the disposal, emission and storage of chemical substances, including hazardous wastes. Pursuant to Item 103 of the SEC's Regulation S-K, the following environmental matters involve a governmental authority as a party to the proceedings and potential monetary sanctions that we believe could exceed \$1 million (which is less than one percent of our current assets on a consolidated basis as of December 31, 2020):

- For several years, the EPA has been conducting an enforcement initiative against petroleum refineries and petrochemical plants with respect to emissions from flares. On April 21, 2014, we received a Clean Air Act Section 114 Information Request from the EPA which sought information regarding flares at the Calvert City facility and certain Lake Charles facilities. The EPA has informed us that the information provided leads the EPA to believe that some of the flares are out of compliance with applicable standards. The EPA has indicated that it is seeking a consent decree that would obligate us to take corrective actions relating to the alleged noncompliance. We believe the resolution of these matters may require the payment of a monetary sanction in excess of \$1 million.

We do not believe that the resolution of these flare matters will have a material adverse effect on our financial condition, results of operations or cash flows.

Also see our discussion of our environmental matters contained in Item 1A, "Risk Factors" below, Item 3, "Legal Proceedings" below and Note 22 to our consolidated financial statements included in Item 8 of this Form 10-K.

Human Capital

Headcount

As of December 31, 2020, we had approximately 9,220 employees in the following areas:

Category	Number
Vinyls segment	8,060
Olefins segment	820
Corporate and other	340

Our employees are distributed across 16 countries. Approximately 38% of our employees are represented by labor unions, and all of these union employees are working under collective bargaining agreements that expire at various times through 2024. We have multiple collective bargaining agreements in Europe, North America and Asia, covering different groups of our work force. There were no strikes, lockouts or work stoppages in 2020, and we believe that our relationship with our employees and unions is open and positive.

Attracting, developing and retaining talented people in manufacturing, marketing, sales, and other positions is crucial to executing our strategy. Our ability to recruit and retain such talent depends on a number of factors, including compensation and benefits, career opportunities and work environment.

Health and Safety

The health and safety of our employees is our highest priority. Our health and safety programs are designed around global standards with appropriate variations addressing the multiple jurisdictions and regulations, specific hazards and unique working environments of our manufacturing and administrative office locations. We require each of our locations to perform regular safety audits to ensure proper safety policies, program procedures, analyses and training are in place.

Several of our U.S. manufacturing sites have been recognized by the U.S. Occupational Safety & Health Administration's ("OSHA") Voluntary Protection Program ("VPP") for their low injury rates, employee engagement and safety programs. All of our chemical sites in Germany satisfy the Deutsche Industrie Norm ISO 45001 certification program, which is comparable to VPP. We strive to be in the top quartile of relevant rankings of recordable incident rates in all countries in which we operate.

Technology

Historically, our technology strategy has been to selectively acquire licenses from third-parties, as well as develop our own proprietary technology. Our selection process incorporates many factors, including the cost of the technology, the ability to meet our customers' requirements, raw material and energy consumption rates, product quality, capital costs, maintenance requirements and reliability. Most of the technology licensed from third-party providers is perpetual and has been paid in full. We own an intellectual property portfolio developed from focused research in both process and product technology. After acquiring or developing a technology, we devote considerable effort to effectively employ the technology and further its development, with a focus towards continuous improvement of our competitive positions.

Conversely, we have selectively granted licenses to our patented Energx® technology for LLDPE production and for proprietary LDPE reactor mixing technology. We have also granted several licenses for EDC/VCM technology, including the direct chlorination process and catalyst, and S-PVC (Suspension PVC for thermoplastic process) process and technology.

Available Information

Our website address is www.westlake.com. Our website content is available for information purposes only. It should not be relied upon for investment purposes, nor is it incorporated by reference in this Form 10-K. We make available on this website under "Investor Relations/Financials," free of charge, our proxy statements, annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those materials as soon as reasonably practicable after we electronically file those materials with, or furnish those materials to, the SEC. The SEC also maintains a website at www.sec.gov that contains reports, proxy statements and other information regarding SEC registrants, including us.

We intend to satisfy the requirement under Item 5.05 of Form 8-K to disclose any amendments to our Code of Ethics and any waiver from a provision of our Code of Ethics by posting such information on our website at www.westlake.com under "Investor Relations/Governance."

Item 1A. Risk Factors

Risk Factors Relating to Our Operations

The ongoing coronavirus ("COVID-19") pandemic could materially adversely affect our business, financial condition and results of operations.

The ongoing COVID-19 outbreak, which the World Health Organization declared as a pandemic on March 11, 2020, has continued to be a rapidly evolving situation. It has resulted in authorities implementing numerous measures to try to contain the disease, such as travel bans and restrictions, quarantines, shelter-in-place orders and shutdowns, among others. There have been widespread adverse impacts on the global economy, many of our facilities and on our employees, customers and suppliers.

We have modified certain business practices (including those related to employee travel, employee work locations and employee work practices) to conform to government restrictions and best practices encouraged by governmental and regulatory authorities. We may take further actions as required by government authorities or that we determine are in the best interests of our employees, customers, partners, and suppliers. However, the inability to operate our facilities or the reduced demand for our products could adversely affect our business. There is no certainty that such measures will be sufficient to mitigate the risks posed by the disease, and our ability to perform certain functions could be harmed. The COVID-19 pandemic and the response thereto could materially adversely affect our business, financial condition and results of operations.

Cyclical nature in the petrochemical industry has in the past, and may in the future, result in reduced operating margins or operating losses.

Our historical operating results reflect the cyclical and volatile nature of the petrochemical industry. The industry is mature and capital intensive. Margins in this industry are sensitive to supply and demand balances both domestically and internationally, which historically have been cyclical. The cycles are generally characterized by periods of tight supply, leading to high operating rates and margins, followed by periods of oversupply primarily resulting from excess new capacity additions, leading to reduced operating rates and lower margins.

Moreover, profitability in the petrochemical industry is affected by the worldwide level of demand along with vigorous price competition which may intensify due to, among other things, new industry capacity. In general, weak economic conditions reduce demand and put pressure on margins. It is not possible to predict accurately the supply and demand balances, market conditions and other factors that will affect industry operating margins in the future.

New capacity additions, principally of olefins in North America, Asia and the Middle East, a number of which have been recently completed, may lead to periods of over-supply and lower profitability. As a result, our Olefins segment operating margins may be negatively impacted.

We sell commodity products in highly competitive markets and face significant competition and price pressure.

We sell our products in highly competitive markets. Due to the commodity nature of many of our products, competition in these markets is based primarily on price and to a lesser extent on performance, product quality, product deliverability and customer service. As a result, we generally are not able to protect our market position for these products by product differentiation and may not be able to pass on cost increases to our customers. Accordingly, increases in raw material and other costs may not necessarily correlate with changes in prices for these products, either in the direction of the price change or in magnitude. Specifically, timing differences in pricing between raw material prices, which may change daily, and contract product prices, which in many cases are negotiated monthly or less often, sometimes with an additional lag in effective dates for increases, have had and may continue to have a negative effect on profitability. Significant volatility in raw material costs tends to place pressure on product margins as sales price increases could lag behind raw material cost increases. Conversely, when raw material costs decrease, customers could seek relief in the form of lower sales prices.

Volatility in costs of raw materials and energy may result in increased operating expenses and adversely affect our results of operations and cash flows.

Significant variations in the costs and availability of raw materials and energy may negatively affect our results of operations. These costs have risen significantly in the past due primarily to oil and natural gas cost increases. We purchase significant amounts of ethane feedstock, natural gas, ethylene and salt to produce several basic chemicals. We also purchase significant amounts of electricity to supply the energy required in our production processes. The cost of these raw materials and energy, in the aggregate, represents a substantial portion of our operating expenses. The prices of raw materials and energy generally follow price trends of, and vary with market conditions for, crude oil and natural gas, which are highly volatile and cyclical, as well as the ability of domestic producers to export natural gas liquids, ethane and ethylene. Changes to regulatory policies applicable to the German energy sector for industrial users have contributed to higher prices for industrial users of energy in the past and may continue to do so in the future. Our results of operations have been and could in the future be significantly affected by increases in these costs.

Price increases increase our working capital needs and, accordingly, can adversely affect our liquidity and cash flows. In addition, because we utilize the first-in, first-out ("FIFO") method of inventory accounting, during periods of falling raw material prices and declining sales prices, our results of operations for a particular reporting period could be negatively impacted as the lower sales prices would be reflected in operating income more quickly than the corresponding drop in feedstock costs. We use derivative instruments in an attempt to reduce price volatility risk on some feedstock commodities. In the future, we may decide not to hedge any of our raw material costs or any hedges we enter into may not have successful results. Also, our hedging activities involve credit risk associated with our hedging counterparties, and a deterioration in the financial markets could adversely affect our hedging counterparties and their abilities to fulfill their obligations to us.

Lower prices of crude oil, such as those experienced from the third quarter of 2014 through 2020 (at December 31, 2020, approximately 55% lower than their 2014 peak levels), led to a reduction in the cost advantage for natural gas liquids-based ethylene crackers in North America, such as ours, as compared to naphtha-based ethylene crackers. As a result, our margins and cash flows were negatively impacted. Lower crude oil and natural gas prices could lead to a reduction in hydraulic fracturing in the United States, which could reduce the availability of feedstock and increase prices of feedstock for our operations. Higher natural gas prices could also adversely affect our ability to export products that we produce in the United States outside of the United States. In addition to the impact that this has on our exports from the United States, reduced competitiveness of U.S. producers also has in the past increased the availability of chemicals in North America, as U.S. production that would otherwise have been sold overseas was instead offered for sale domestically, resulting in excess supply and lower prices in North America. We could also face the threat of imported products from countries that have a cost advantage. Additionally, additional export storage facilities for natural gas liquids, ethane and ethylene may lead to higher exports of such products from the United States or greater restrictions on hydraulic fracturing could restrict the availability of our raw materials in the United States, thereby increasing our costs.

External factors beyond our control can cause fluctuations in demand for our products and in our prices and margins, which may negatively affect our results of operations and cash flows.

External factors beyond our control can cause volatility in raw material prices, demand for our products, product prices and volumes and deterioration in operating margins. These factors can also magnify the impact of economic cycles on our business and results of operations. Examples of external factors include:

- general economic conditions, including in the United States, Europe and Asia;
- new capacity additions in North America, Europe, Asia and the Middle East;
- the level of business activity in the industries that use our products;
- competitor action;
- technological innovations;
- currency fluctuations;
- increases in interest rates;
- international events and circumstances;
- pandemics and other public health threats and efforts to contain their transmission;
- war, sabotage, terrorism and civil unrest;
- governmental regulation, including in the United States, Europe and Asia;
- public attitude towards climate change and safety, health and the environment;
- perceptions of our products by potential buyers of our products, as well as the public generally, and related changes in behavior, including with respect to recycling;
- severe weather and natural disasters; and
- credit worthiness of customers and vendors.

A number of our products are highly dependent on durable goods markets, such as housing and construction, which are themselves particularly cyclical. Weakness in the U.S. residential housing market and economic weakness in Europe could have an adverse effect on demand and margins for our products.

We may reduce production at or idle a facility for an extended period of time or exit a business because of high raw material prices, an oversupply of a particular product and/or a lack of demand for that particular product, which makes production uneconomical. Temporary outages sometimes last for several quarters or, in certain cases, longer and cause us to incur costs, including the expenses of maintaining and restarting these facilities. Factors such as increases in raw material costs or lower demand in the future may cause us to further reduce operating rates, idle facilities or exit uncompetitive businesses.

A lower level of economic activity in the United States, Europe or globally could result in a decline in demand for our products, which could adversely affect our net sales and margins and limit our future growth prospects. Furthermore, sustained lower prices of crude oil, such as the prices experienced from the third quarter of 2014 through 2020, have led and may lead to lower margins in the United States. In addition, these risks could cause increased instability in the financial and insurance markets and could adversely affect our ability to access capital and to obtain insurance coverage that we consider adequate or is otherwise required by our contracts with third parties.

We operate internationally and are subject to related risks, including exchange rate fluctuations, exchange controls, political risk and other risks relating to international operations.

We operate internationally and are subject to the risks of doing business on a global basis. These risks include, but are not limited to, fluctuations in currency exchange rates, currency devaluations, imposition or the threat of trade barriers (which could, among other things, negatively impact our ability to export our products outside of the U.S.), imposition or the threat of tariffs and duties (which could, among other things, lead to lower demand for our products outside of the U.S.), restrictions on the transfer of funds, changes in law and regulatory requirements, involvement in judicial proceedings in unfavorable jurisdictions, economic instability and disruptions, political unrest and epidemics. U.S. foreign trade policies could lead to the imposition of additional trade barriers and tariffs on us in foreign jurisdictions. Our operating results could be negatively affected by any of these risks.

Our inability to compete successfully may reduce our operating profits.

The petrochemical industry is highly competitive. Historically, there have been a number of mergers, acquisitions, spin-offs and joint ventures in the industry. This restructuring activity has resulted in fewer but more competitive producers, many of which are larger than we are and have greater financial resources than we do. Among our competitors are some of the world's largest chemical companies and chemical industry joint ventures. Competition within the petrochemical industry and in the manufacturing of building products is affected by a variety of factors, including:

- product price;
- balance of product supply/demand;
- material, technology and process innovation;
- technical support and customer service;
- quality;
- reliability of raw material and utility supply;
- availability of potential substitute materials; and
- product performance.

Changes in the competitive environment could have a material adverse effect on our business and our operations. These changes could include:

- the emergence of new domestic and international competitors;
- the rate of capacity additions by competitors;
- the additions of export storage facilities for natural gas liquids, ethane and ethylene;
- changes in customer base due to mergers;
- the intensification of price competition in our markets;
- the introduction of new or substitute products by competitors; and
- the technological innovations of competitors.

Our production facilities process some volatile and hazardous materials that subject us to operating risks that could adversely affect our operating results.

We have manufacturing sites in North America, Europe and Asia. Our operations are subject to the usual hazards associated with chemical, plastics and building products manufacturing and the related use, storage, transportation and disposal of feedstocks, products and wastes, including:

- pipeline leaks and ruptures;
- explosions;
- fires;
- severe weather and natural disasters;
- mechanical failure;
- unscheduled downtime;
- labor difficulties;
- transportation interruptions;
- transportation accidents involving our products;
- remediation complications;
- chemical spills, discharges or releases of toxic or hazardous substances or gases;
- other environmental risks;
- sabotage;
- terrorist attacks; and
- political unrest.



According to some experts, global climate change could result in heightened hurricane activity in the Gulf of Mexico and other weather and natural disaster hazards worldwide. If this materializes, severe weather and natural disaster hazards could pose an even greater risk for our facilities, particularly those in Louisiana.

All these hazards can cause personal injury and loss of life, catastrophic damage to or destruction of property and equipment and environmental damage, and may result in a suspension of operations and the imposition of civil or criminal penalties. We are from time to time subject to environmental claims brought by governmental entities or third parties. A loss or shutdown over an extended period of operations at any one of our chemical manufacturing facilities would have a material adverse effect on us. We maintain property, business interruption and casualty insurance that we believe is in accordance with customary industry practices, but we cannot be fully insured against all potential hazards incident to our business, including losses resulting from war risks or terrorist acts. As a result of market conditions, premiums and deductibles for certain insurance policies can increase substantially and, in some instances, certain insurance may become unavailable or available only for reduced amounts of coverage. If we were to incur a significant liability for which we were not fully insured, it could have a material adverse effect on our financial condition, results of operations or cash flows.

We are exposed to significant losses from products liability, personal injury and other claims relating to the products we manufacture. Additionally, individuals currently seek, and likely will continue to seek, damages for alleged personal injury or property damage due to alleged exposure to chemicals at our facilities or to chemicals otherwise owned, controlled or manufactured by us. We are also subject to present and future claims with respect to workplace exposure, workers' compensation and other matters. Any such claims, whether with or without merit, could be time consuming, expensive to defend and could divert management's attention and resources. We maintain and expect to continue to maintain insurance for products liability, workplace exposure, workers' compensation and other claims, but the amount and scope of such insurance may not be adequate or available to cover a claim that is successfully asserted against us. In addition, such insurance could become more expensive and difficult to maintain and may not be available to us on commercially reasonable terms or at all. The results of any future litigation or claims are inherently unpredictable, but such outcomes could have a material adverse effect on our financial condition, results of operations or cash flows.

We rely on a limited number of outside suppliers for specified feedstocks and services.

We obtain a significant portion of our raw materials from a few key suppliers. If any of these suppliers is unable to meet its obligations under any present or future supply agreements, we may be forced to pay higher prices to obtain the necessary raw materials. Any interruption of supply or any price increase of raw materials could have a material adverse effect on our business and results of operations. A vendor may choose, subject to existing contracts, to modify its relationship due to general economic concerns or concerns relating to the vendor or us, at any time. Any significant change in the terms that we have with our key suppliers, or any significant additional requirements from our suppliers that we provide them additional security in the form of prepayments or with letters of credits, could materially adversely affect our financial condition, results of operations or cash flows.

We rely heavily on third party transportation, which subjects us to risks and costs that we cannot control. Such risks and costs may materially adversely affect our operations.

We rely heavily on railroads, barges, pipelines, ships, trucks and other shipping companies to transport raw materials to the manufacturing facilities used by our businesses and to ship finished products to customers. These transport operations are subject to various hazards and risks, including extreme weather conditions, work stoppages and operating hazards (including pipeline leaks and ruptures and storage tank leaks), as well as interstate transportation regulations. In addition, the methods of transportation we utilize, including shipping chlorine and other chemicals by railroad, may be subject to additional, more stringent and more costly regulations in the future. If we are delayed or unable to ship finished products or unable to obtain raw materials as a result of any such new regulations or public policy changes related to transportation safety, or these transportation companies fail to operate properly, or if there were significant changes in the cost of these services due to new or additional regulations, or otherwise, we may not be able to arrange efficient alternatives and timely means to obtain raw materials or ship goods, which could result in a material adverse effect on our business and results of operations.

We may pursue acquisitions, dispositions and joint ventures and/or other transactions that may impact our results of operations and financial condition. We may have difficulties integrating the operations of future acquired businesses.

We seek opportunities to maximize efficiency and create stockholder value through various transactions. These transactions may include domestic and international business combinations, purchases or sales of assets or contractual arrangements or joint ventures that are intended to result in the realization of synergies, the creation of efficiencies or the generation of cash to reduce debt. In this regard, we regularly consider acquisition opportunities that would be consistent or complementary to our existing business strategies. To the extent permitted under our credit facility, the indenture governing our senior notes and other debt agreements, some of these transactions may be financed by additional borrowings by us. Although we would pursue these transactions because we expect them to yield longer-term benefits if the efficiencies and synergies we expect are realized, they could adversely affect our results of operations in the short term because of the costs associated with such transactions and because they may divert management's attention from existing business operations. Other transactions may advance future cash flows from some of our businesses, thereby yielding increased short-term liquidity, but consequently resulting in lower cash flows from these operations over the longer term. These transactions may not yield the business benefits, synergies or financial benefits anticipated by management. Integration of acquired operations could lead to restructuring charges or other costs.

If we are unable to integrate or to successfully manage businesses that we may acquire in the future, our business, financial condition and results of operations could be adversely affected. We may not be able to realize the operating efficiencies, synergies, cost savings or other benefits expected from acquisitions for a number of reasons, including the following:

- we may fail to integrate the businesses we acquire into a cohesive, efficient enterprise;
- our resources, including management resources, are limited and may be strained if we engage in a large acquisition or significant number of acquisitions, and acquisitions may divert our management's attention from initiating or carrying out programs to save costs or enhance revenues; and
- our failure to retain key employees and contracts of the businesses we acquire.

Future acquisitions could lead to significant restructuring or other changes.

Our operations and assets are subject to extensive environmental, health and safety laws and regulations.

We use large quantities of hazardous substances and generate hazardous wastes and emissions in our manufacturing operations. Due to the associated quantities of hazardous substances and wastes, our industry is highly regulated and monitored by various environmental regulatory authorities such as the EPA, federal or state analogs in other countries and the European Union, which promulgated the Industrial Emission Directive ("IED"). As such, we are subject to extensive international, national, state and local laws, regulations and directives pertaining to pollution and protection of the environment, health and safety, which govern, among other things, emissions to the air, discharges onto land or waters, the maintenance of safe conditions in the workplace, the remediation of contaminated sites, and the generation, handling, storage, transportation, treatment and disposal of waste materials. Some of these laws, regulations and directives are subject to varying and conflicting interpretations. Many of these laws, regulations and directives provide for substantial fines and potential criminal sanctions for violations and require the installation of costly pollution control equipment or operational changes to limit pollution emissions or reduce the likelihood or impact of hazardous substance releases, whether permitted or not. For example, all of our petrochemical facilities in the United States and Europe may require improvements to comply with certain changes in process safety management requirements.

New laws, rules and regulations as well as changes to laws, rules and regulations may also affect us. For example, on April 17, 2012, the EPA promulgated maximum achievable control technology ("MACT") standards for major sources and generally available control technology ("GACT") standards for area sources of PVC production. The rule sets emission limits and work practice standards for total organic air toxics and for three specific air toxics: vinyl chloride, chlorinated di-benzo dioxins and furans ("CD/DF") and hydrogen chloride and includes requirements to demonstrate initial and continuous compliance with the emission standards. In June 2012, the EPA received petitions for reconsideration of the rule. On November 9, 2020, the EPA proposed rule amendments to address issues raised in the petitions for reconsideration. While this rule is the subject of legal challenge and EPA reconsideration, the rule has not been stayed. Although we cannot predict the outcome or timing of the legal challenges or EPA reconsideration, the EPA's proposed rule amendments could require us to incur further capital expenditures, or increase our operating costs, to levels higher than what we have previously estimated.

In March 2011, the EPA proposed amendments to the emission standards for hazardous air pollutants for mercury emissions from mercury cell chlor-alkali plants. These proposed amendments would require improvements in work practices to reduce fugitive mercury emissions. We operate a mercury cell production unit at our Natrium facility. We cannot predict the timing or content of the final regulation, or its ultimate cost to, or impact on us.

Our operations produce greenhouse gas ("GHG") emissions, which have been the subject of increased scrutiny and regulation. In December 2015, the United States joined the international community at the 21st Conference of the Parties of the United Nations Framework Convention on Climate Change in Paris, France. The resulting Paris Agreement calls for the parties to undertake "ambitious efforts" to limit the average global temperature and to conserve and enhance sinks and reservoirs of greenhouse gases. The United States signed the Paris Agreement in April 2016, and the Paris Agreement went into effect in November 2016. In November 2019, the United States submitted formal notification to the United Nations that it intended to withdraw from the Paris Agreement. The withdrawal took effect in November 2020. However, President Joseph Biden signed an executive order on January 20, 2021 for reentry of the United States into the Paris Agreement. The terms and the timeline under which the United States may reenter the Paris Agreement, or a separately negotiated agreement, are unclear at this time. Legislation to regulate GHG emissions has periodically been introduced in the United States Congress, and such legislation may be proposed or adopted in the future. There has been a wide-ranging policy debate regarding the impact of these gases and possible means for their regulation. Some of the proposals would require industries to meet stringent new standards that would require substantial reductions in carbon emissions. Those reductions could be costly and difficult to implement.

Various jurisdictions have considered or adopted laws and regulations on GHG emissions, with the general aim of reducing such emissions. The EPA currently requires certain industrial facilities to report their GHG emissions, and to obtain permits with stringent control requirements before constructing or modifying new facilities with significant GHG emissions. In the European Union, the Emissions Trading Scheme obligates certain emitters to obtain GHG emission allowances to comply with a cap and trade system for GHG emissions. In addition, the European Union has committed to reduce domestic GHG emissions by at least 55% below the 1990 level by 2030. As our chemical manufacturing processes result in GHG emissions, these and other GHG laws and regulations could affect our costs of doing business.

Similarly, the Toxic Substances Control Act ("TSCA") imposes reporting, record-keeping and testing requirements, and restrictions relating to the production, handling, and use of chemical substances. The TSCA reform legislation enacted in June 2016 expanded the EPA's authority to review and regulate new and existing chemicals. Under the reform legislation, the EPA is required to, among other things, undertake rule making within statutory time frames related to: (1) chemical risk evaluation, designation and management; (2) reporting of mercury supply, use and trade; and (3) management of persistent, bioaccumulative, and toxic chemical substances ("PBTs"). In response to this mandate, the EPA issued rules establishing the EPA's process and criteria for identifying high priority chemicals for risk evaluation and setting the EPA's approach for determining whether these high priority chemicals present an unreasonable risk to health or the environment. Pursuant to its rules, the EPA designated certain chemical substances as high priority for risk evaluation. We manufacture several of these chemical substances. Although we cannot predict with certainty the extent of our future liabilities and costs at this time, we do not anticipate that the evaluation of these chemical substances will have a material adverse effect on our business, financial condition, operating results or cash flows. In addition, the TSCA inventory reset rule required industry reporting of chemicals manufactured or processed in the United States over a 10-year period ending in 2016. This reporting is used by the EPA to identify which chemicals are active or inactive on the TSCA Inventory. Beginning in 2019, chemical manufacturers and processors are required to notify and obtain approval by the EPA before reintroducing inactive chemicals into commerce. A final mercury reporting rule published in June 2018 requires manufacturers, including manufacturers who use mercury in a manufacturing process, to report information about their mercury supply, use and trade. The first periodic reporting deadline under the mercury reporting rule was July 1, 2019. The EPA used the information collected to develop an inventory of mercury and mercury-added products as well as mercury-use manufacturing processes. The EPA also recommended actions and rule amendments based on the collected information. We cannot predict the timing or content of these actions or amendments, or their ultimate cost to, or impact on us.

Under the IED, European Union member state governments are expected to adopt rules and implement environmental permitting programs relating to air, water and waste for industrial facilities. In this context, concepts such as the "best available technique" are being explored. Future implementation of these concepts may result in technical modifications in our European facilities. In addition, under the Environmental Liability Directive, European Union member states can require the remediation of soil and groundwater contamination in certain circumstances, under the "polluter pays principle." We are unable to predict the impact these requirements and concepts may have on our future costs of compliance.

Local, state, federal and foreign governments have increasingly proposed or implemented restrictions on certain plastic-based products, including single-use plastics and plastic food packaging. Plastics have also faced increased public scrutiny due to negative coverage of plastic waste in the environment. Increased regulation on the use of plastics could cause reduced demand for our polyethylene products, which could adversely affect our business, operating results and financial condition.

These rules or future new, amended or proposed laws or rules could increase our costs or reduce our production, which could have a material adverse effect on our business, financial condition, operating results or cash flows. In addition, we cannot accurately predict future developments, such as increasingly strict environmental and safety laws or regulations, and inspection and enforcement policies, as well as resulting higher compliance costs, which might affect the handling, manufacture, use, emission, disposal or remediation of products, other materials or hazardous and non-hazardous waste, and we cannot predict with certainty the extent of our future liabilities and costs under environmental, health and safety laws and regulations. These liabilities and costs may be material.

We also may face liability for alleged personal injury or property damage due to exposure to chemicals or other hazardous substances at our facilities or to chemicals that we otherwise manufacture, handle or own. Although these types of claims have not historically had a material impact on our operations, a significant increase in the success of these types of claims could have a material adverse effect on our business, financial condition, operating results or cash flows.

Environmental laws may have a significant effect on the nature and scope of, and responsibility for, cleanup of contamination at our current and former operating facilities, the costs of transportation and storage of raw materials and finished products, the costs of reducing emissions and the costs of the storage and disposal of wastewater. The U.S. Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), similar state laws and certain European directives impose joint and several liability for the costs of remedial investigations and actions on the entities that generated waste, arranged for disposal of the wastes, transported to or selected the disposal sites and the past and present owners and operators of such sites. All such potentially responsible parties (or any one of them, including us) may be required to bear all of such costs regardless of fault, legality of the original disposal or ownership of the disposal site. In addition, CERCLA, similar state laws and certain European directives could impose liability for damages to natural resources caused by contamination.

Although we seek to take preventive action, our operations are inherently subject to accidental spills, discharges or other releases of hazardous substances that may make us liable to governmental entities or private parties. This may involve contamination associated with our current and former facilities, facilities to which we sent wastes or by-products for treatment or disposal and other contamination. Accidental discharges may occur in the future, future action may be taken in connection with past discharges, governmental agencies may assess damages or penalties against us in connection with any past or future contamination, or third parties may assert claims against us for damages allegedly arising out of any past or future contamination. In addition, we may be liable for existing contamination related to certain of our facilities for which, in some cases, we believe third parties are liable in the event such third parties fail to perform their obligations.

Capital projects are subject to risks, including delays and cost overruns, which could have an adverse impact on our financial condition and results of operations.

We have capital expansion plans for our facilities. Expansion projects may be subject to delays or cost overruns, including delays or cost overruns resulting from any one or more of the following:

- unexpectedly long delivery times for, or shortages of, key equipment, parts or materials;
- shortages of skilled labor and other personnel necessary to perform the work;
- delays and performance issues;
- failures or delays of third-party equipment vendors or service providers;
- unforeseen increases in the cost of equipment, labor and raw materials;
- work stoppages and other labor disputes;
- unanticipated actual or purported change orders;
- disputes with contractors and suppliers;
- design and engineering problems;
- latent damages or deterioration to equipment and machinery in excess of engineering estimates and assumptions;
- financial or other difficulties of our contractors and suppliers;
- sabotage;
- terrorist attacks;
- interference from adverse weather conditions; and
- difficulties in obtaining necessary permits or in meeting permit conditions.

Significant cost overruns or delays could materially affect our financial condition and results of operations. Additionally, actual capital expenditures could materially exceed our planned capital expenditures.

Our level of debt could adversely affect our ability to operate our business.

As of December 31, 2020, our indebtedness, including the current portion, totaled \$3.6 billion, and our debt represented approximately 35% of our total capitalization. Our annual interest expense for 2020 was \$142 million, net of interest capitalized of \$4 million. Our level of debt and the limitations imposed on us by our existing or future debt agreements could have significant consequences on our business and future prospects, including the following:

- a portion of our cash flows from operations will be dedicated to the payment of interest and principal on our debt and will not be available for other purposes;
- we may not be able to obtain necessary financing in the future for working capital, capital expenditures, acquisitions, debt service requirements or other purposes;
- our less leveraged competitors could have a competitive advantage because they have greater flexibility to utilize their cash flows to improve their operations;
- we may be exposed to risks inherent in interest rate fluctuations because some of our borrowings are at variable rates of interest, which would result in higher interest expense in the event of increases in interest rates;
- we could be vulnerable in the event of a downturn in our business that would leave us less able to take advantage of significant business opportunities and to react to changes in our business and in market or industry conditions; and
- should we pursue additional expansions of existing assets or acquisition of third-party assets, we may not be able to obtain additional liquidity at cost effective interest rates.

These factors could be magnified or accelerated to the extent we were to finance future acquisitions with significant amounts of debt.

To service our indebtedness and fund our capital requirements, we will require a significant amount of cash. Our ability to generate cash depends on many factors beyond our control.

Our ability to make payments on and to refinance our indebtedness and to fund planned capital expenditures and pay cash dividends will depend on our ability to generate cash in the future, including any distributions that we may receive from Westlake Partners. This is subject to general economic, financial, currency, competitive, legislative, regulatory and other factors that are beyond our control.

Our business may not generate sufficient cash flows from operations, we may not receive sufficient distributions from Westlake Partners, and currently anticipated cost savings and operating improvements may not be realized on schedule. We also generate revenues denominated in currencies other than that of our indebtedness and may have difficulty converting those revenues into the currency of our indebtedness. We may need to refinance all or a portion of our indebtedness on or before maturity. In addition, we may not be able to refinance any of our indebtedness, including our credit facility and our senior notes, on commercially reasonable terms or at all. All of these factors could be magnified if we were to finance any future acquisitions with significant amounts of debt.

The Credit Agreement and the indenture governing certain of our senior notes impose significant operating and financial restrictions, which may prevent us from capitalizing on business opportunities and taking some actions.

The Credit Agreement and the indenture governing certain of our senior notes impose significant operating and financial restrictions on us. These restrictions limit our ability to:

- incur additional indebtedness;
- create liens;
- sell all or substantially all of our assets or consolidate or merge with or into other companies; and
- engage in sale-leaseback transactions.

These limitations are subject to a number of important qualifications and exceptions. The Credit Agreement also requires us to maintain a quarterly total leverage ratio.

These covenants may adversely affect our ability to finance future business opportunities or acquisitions. A breach of any of these covenants could result in a default in respect of the related debt. If a default occurred, the relevant lenders could elect to declare the debt, together with accrued interest and other fees, to be immediately due and payable. In addition, any acceleration of debt under the Credit Agreement will constitute a default under some of our other debt, including the indentures governing our senior notes.

Our participation in joint ventures and similar arrangements exposes us to a number of risks, including risks of shared control.

We are party to several joint ventures and similar arrangements, including an investment, together with Lotte Chemical USA Corporation ("Lotte"), in a joint venture, LACC, LLC ("LACC"), to build and operate an ethylene facility. Our participation in joint ventures and similar arrangements, by their nature, requires us to share control with unaffiliated third parties. If there are differences in views among joint venture participants in how to operate a joint venture that result in delayed decisions or the failure to make decisions, or our joint venture partners do not fulfill their obligations, the affected joint venture may not be able to operate according to its business plan and fulfill its obligations. In that case, we may be required to write down the value of our investment in a joint venture, increase the level of financial or other commitments to the joint venture or, if we have contractual agreements with the joint venture, our operations may be materially adversely affected. Any of the foregoing could have a material adverse effect on our financial condition, results of operations or cash flows.

Our operations could be adversely affected by labor relations.

The vast majority of our employees in Europe and Asia, and some of our employees in North America, are represented by labor unions and works councils. Our operations may be adversely affected by strikes, work stoppages and other labor disputes.

We have certain material pension and other post-retirement employment benefit ("OPEB") obligations. Future funding obligations related to these obligations could restrict cash available for our operations, capital expenditures or other requirements or require us to borrow additional funds.

We have U.S. and non-U.S. defined benefit pension plans covering certain current and former employees. Certain non-U.S. defined benefit plans associated with our European operations have not been funded and we are not obligated to fund those plans under applicable law. As of December 31, 2020, the projected benefit obligations for our pension and OPEB plans were \$921 million and \$67 million, respectively. The fair value of pension investment assets was \$584 million as of December 31, 2020. The total underfunded status of the pension obligations calculated on a projected benefit obligation basis as of December 31, 2020 was \$337 million, including the Westlake Defined Benefit Plan, which was underfunded by \$154 million on an individual plan basis.

The unfunded OPEB obligations as of December 31, 2020 were \$67 million. We will require future operating cash flows to fund our pension and OPEB obligations, which could restrict available cash for our operations, capital expenditures and other requirements. We may also not generate sufficient cash to satisfy these obligations, which could require us to seek funding from other sources, including through additional borrowings, which could materially increase our outstanding debt or debt service requirements.

If our goodwill, indefinite-lived intangible assets or other intangible assets become impaired in the future, we may be required to record non-cash charges to earnings, which could be significant.

Under GAAP, we review goodwill and indefinite-lived intangible assets for impairment on an annual basis or more frequently if events or circumstances indicate that their carrying value may not be recoverable. Other intangible assets are reviewed if events or circumstances indicate that their carrying value may not be recoverable. The process of impairment testing for our goodwill and intangible assets involves a number of judgments and estimates made by management including the fair values of assets and liabilities, future cash flows, our interpretation of current economic indicators and market conditions, overall economic conditions and our strategic operational plans with regards to our business units. If the judgments and estimates used in our analysis are not realized or change due to external factors, then actual results may not be consistent with these judgments and estimates, and our goodwill and intangible assets may become impaired in future periods. If our goodwill, indefinite-lived intangible assets or other intangible assets are determined to be impaired in the future, we may be required to record non-cash charges to earnings during the period in which the impairment is determined, which could be significant and have an adverse effect on our financial condition and results of operations.

Failure to adequately protect critical data and technology systems could materially affect our operations.

Information technology system failures, network disruptions and breaches of data security due to internal or external factors including cyber-attacks could disrupt our operations by causing delays or cancellation of customer orders, impede the manufacture or shipment of products or cause standard business processes to become ineffective, resulting in the unintentional disclosure of information or damage to our reputation. While we have taken steps to address these concerns by implementing network security and internal control measures, including employee training, comprehensive monitoring of our networks and systems, maintenance of backup and protective systems and disaster recovery and incident response plans, our employees, systems, networks, products, facilities and services remain potentially vulnerable to sophisticated cyber-assault, especially while certain employees are working remotely during the COVID-19 pandemic, and, as such, there can be no assurance that a system failure, network disruption or data security breach will not have a material adverse effect on our business, financial condition, operating results or cash flows.

Fluctuations in foreign currency exchange and interest rates could affect our consolidated financial results.

We earn revenues, pay expenses, own assets and incur liabilities in countries using currencies other than the U.S. dollar. Because our consolidated financial statements are presented in U.S. dollars, we must translate revenues and expenses into U.S. dollars at the average exchange rate during each reporting period, as well as assets and liabilities into U.S. dollars at exchange rates in effect at the end of each reporting period. Therefore, increases or decreases in the value of the U.S. dollar against other major currencies will affect our net sales, operating income and the value of balance sheet items denominated in foreign currencies. Because of the geographic diversity of our operations, weaknesses in various currencies might occur in one or many of such currencies over time. From time to time, we may use derivative financial instruments to further reduce our net exposure to currency exchange rate fluctuations. However, fluctuations in foreign currency exchange rates, such as the strengthening of the U.S. dollar against major currencies, including, in particular, the Euro and the Canadian dollar, could nevertheless materially adversely affect our financial results.

In addition, we are exposed to volatility in interest rates. When appropriate, we may use derivative financial instruments to reduce our exposure to interest rate risks. However, our financial risk management program may not be successful in reducing the risks inherent in exposures to interest rate fluctuations.

Our property insurance has only partial coverage for acts of terrorism and, in the event of terrorist attack, we could lose net sales and our facilities.

Our insurance carriers maintain certain exclusions for losses from terrorism from our property insurance policies. While separate terrorism insurance coverage is available, premiums for full coverage are very expensive, especially for chemical facilities, and the policies are subject to high deductibles. Available terrorism coverage typically excludes coverage for losses from acts of war and from acts of foreign governments as well as nuclear, biological and chemical attacks. We have determined that it is not economically prudent to obtain full terrorism insurance, especially given the significant risks that are not covered by such insurance. Where feasible we have secured some limited terrorism insurance coverage on our property where insurers have included it in their overall programs. In the event of a terrorist attack impacting one or more of our facilities, we could lose the net sales from the facilities and the facilities themselves, and could become liable for any contamination or for personal or property damage due to exposure to hazardous materials caused by any catastrophic release that may result from a terrorist attack.

Risks Related to Taxes

A change in tax laws, treaties or regulations, or their interpretation or application, could have a negative impact on our business and results of operations.

We operate in many different countries and in many states within the United States, and we are subject to changes in applicable tax laws, treaties or regulations in the jurisdictions in which we operate. A material change in these tax laws, treaties or regulations, or their interpretation or application, could have a negative impact on our business and results of operations.

Westlake Partners' tax treatment depends on its status as a partnership for federal income tax purposes, and it not being subject to a material amount of entity-level taxation. We depend in part on distributions from Westlake Partners to generate cash for our operations, capital expenditures, debt service and other uses. If the Internal Revenue Service ("IRS") were to treat Westlake Partners as a corporation for federal income tax purposes, or if Westlake Partners became subject to entity-level taxation for state tax purposes, its cash available for distribution would be substantially reduced, which would also likely cause a substantial reduction in the value of its common units that we hold.

The anticipated after-tax economic benefit of an investment in the common units of Westlake Partners depends largely on Westlake Partners being treated as a partnership for U.S. federal income tax purposes. Despite the fact that Westlake Partners is organized as a limited partnership under Delaware law, it would be treated as a corporation for U.S. federal income tax purposes unless it satisfies a "qualifying income" requirement. Based on Westlake Partners' current operations and current Treasury Regulations, Westlake Partners believes it satisfies the qualifying income requirement.

Prior to its initial public offering, Westlake Partners requested and obtained a favorable private letter ruling from the IRS to the effect that, based on facts presented in the private letter ruling request, income from the production, transportation, storage and marketing of ethylene and its co-products constitutes "qualifying income" within the meaning of Section 7704 of the Internal Revenue Code of 1986, as amended. However, no ruling has been or will be required regarding Westlake Partners' treatment as a partnership for U.S. federal income tax purposes. Failing to meet the qualifying income requirement or a change in current law could cause Westlake Partners to be treated as a corporation for U.S. federal income tax purposes or otherwise subject Westlake Partners to taxation as an entity.

Risks Related to the Ownership of Our Securities

We will be controlled by our principal stockholder and its affiliates as long as they own a majority of our common stock, and our other stockholders will be unable to affect the outcome of stockholder voting during that time. Our interests may conflict with those of the principal stockholder and its affiliates, and we may not be able to resolve these conflicts on terms possible in arms-length transactions.

As long as TTWF LP (the "principal stockholder") and its affiliates (the "principal stockholder affiliates") own a majority of our outstanding common stock, they will be able to exert significant control over us, and our other stockholders, by themselves, will not be able to affect the outcome of any stockholder vote. As a result, the principal stockholder, subject to any fiduciary duty owed to our minority stockholders under Delaware law, will be able to control all matters affecting us (some of which may present conflicts of interest), including:

- the composition of our Board of Directors and, through the Board, any determination with respect to our business direction and policies, including the appointment and removal of officers and the determination of compensation;
- any determinations with respect to mergers or other business combinations or the acquisition or disposition of assets;
- our financing decisions, capital raising activities and the payment of dividends; and
- amendments to our amended and restated certificate of incorporation or amended and restated bylaws.

The principal stockholder will be permitted to transfer a controlling interest in us without being required to offer our other stockholders the ability to participate or realize a premium for their shares of common stock. A sale of a controlling interest to a third party may adversely affect the market price of our common stock and our business and results of operations because the change in control may result in a change of management decisions and business policy. Because we have elected not to be subject to Section 203 of the General Corporation Law of the State of Delaware, the principal stockholder may find it easier to sell its controlling interest to a third party than if we had not so elected.

In addition to any conflicts of interest that arise in the foregoing areas, our interests may conflict with those of the principal stockholder affiliates in a number of other areas, including:

- business opportunities that may be presented to the principal stockholder affiliates and to our officers and directors associated with the principal stockholder affiliates, and competition between the principal stockholder affiliates and us within the same lines of business;
- the solicitation and hiring of employees from each other; and
- agreements with the principal stockholder affiliates relating to corporate services that may be material to our business.

We may not be able to resolve any potential conflicts with the principal stockholder affiliates, and even if we do, the resolution may be less favorable than if we were dealing with an unaffiliated party, particularly if the conflicts are resolved while we are controlled by the principal stockholder affiliates. Our amended and restated certificate of incorporation provides that the principal stockholder affiliates have no duty to refrain from engaging in activities or lines of business similar to ours and that the principal stockholder affiliates will not be liable to us or our stockholders for failing to present specified corporate opportunities to us.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Information concerning the principal locations from which our products are manufactured are included in the tables set forth under the captions "Vinyls Business—*Products*" and "Olefins Business—*Products*" contained in Item 1—"Business."

Headquarters

Our principal executive offices are located in Houston, Texas. Some of our office space is leased, at market rates, from an affiliate of our principal stockholder. See Note 20 to the consolidated financial statements appearing elsewhere in this Form 10-K and "Certain Relationships and Related Party Transactions" in our proxy statement to be filed with the SEC pursuant to Regulation 14A with respect to our 2021 annual meeting of stockholders (the "Proxy Statement").

Item 3. Legal Proceedings

In addition to the matters described under Item 1. Business—Environmental and Note 22 to our consolidated financial statements included in Item 8 of this Form 10-K, we are involved in various legal proceedings incidental to the conduct of our business. We do not believe that any of these legal proceedings will have a material adverse effect on our financial condition, results of operations or cash flows.

Item 4. Mine Safety Disclosure

Not Applicable.

Information about our Executive Officers

James Y. Chao (age 73). Mr. Chao has been our Chairman of the Board of Directors since July 2004 and became a director in June 2003. From May 1996 to July 2004, he served as our Vice Chairman. Mr. Chao has over 45 years of global experience in the chemical industry. In addition, Mr. Chao has been the Chairman of the Board of Westlake Partners' general partner since its formation in March 2014. From June 2003 until November 2010, Mr. Chao was the executive chairman of Titan Chemicals Corp. Bhd. He has served as a Special Assistant to the Chairman of China General Plastics Group and worked in various financial, managerial and technical positions at Mattel Incorporated, Developmental Bank of Singapore, Singapore Gulf Plastics Pte. Ltd. and Gulf Oil Corporation. Mr. Chao, along with his brother Albert Chao, assisted their father T.T. Chao in founding Westlake Chemical Corporation. He is the brother of Albert Y. Chao and Dorothy C. Jenkins, father of David T. Chao and uncle of John T. Chao. Mr. Chao received his B.S. degree from Massachusetts Institute of Technology and an M.B.A. from Columbia University.

Albert Y. Chao (age 71). Mr. Chao has been our President since May 1996 and a director since June 2003. Mr. Chao became our Chief Executive Officer in July 2004. Mr. Chao has over 40 years of global experience in the chemical industry. In 1985, Mr. Chao assisted his father T.T. Chao and his brother James Chao in founding Westlake Chemical Corporation, where he served as Executive Vice President until he succeeded James Chao as President. In addition, Mr. Chao has been the President, Chief Executive Officer and a director of Westlake Partners' general partner since its formation in March 2014. He has held positions in the Controller's Group of Mobil Oil Corporation, in the Technical Department of Hercules Incorporated, in the Plastics Group of Gulf Oil Corporation and has served as Assistant to the Chairman of China General Plastics Group and Deputy Managing Director of a plastics fabrication business in Singapore. He is the brother of James Y. Chao and Dorothy C. Jenkins, father of John T. Chao and uncle of David T. Chao. Mr. Chao is a trustee emeritus of Rice University. Mr. Chao received a bachelor's degree from Brandeis University and an M.B.A. from Columbia University.

M. Steven Bender (age 64). Mr. Bender has been our Executive Vice President and Chief Financial Officer since July 2017. From February 2008 to July 2017, Mr. Bender served as our Senior Vice President and Chief Financial Officer. In addition, Mr. Bender served as our Treasurer from July 2011 to April 2017, a position he also held from February 2008 until December 2010. From February 2007 to February 2008, Mr. Bender served as our Vice President, Chief Financial Officer and Treasurer and from June 2005 to February 2007, he served as our Vice President and Treasurer. In addition, Mr. Bender has been a director of Westlake Partners' general partner since its formation in March 2014, its Executive Vice President and Chief Financial Officer since February 2021, and its Senior Vice President and Chief Financial Officer from March 2014 to February 2021. Prior to joining Westlake, from June 2002 until June 2005, Mr. Bender served as Vice President and Treasurer of KBR, Inc., and from 1996 to 2002 he held the position of Assistant Treasurer for Halliburton Company. Prior to that, he held various financial positions within that company. Additionally, he was employed by Texas Eastern Corporation for over a decade in a variety of increasingly responsible audit, finance and treasury positions. Mr. Bender received a Bachelor of Business Administration from Texas A&M University and an M.B.A. from Southern Methodist University. Mr. Bender is also a Certified Public Accountant.

Robert F. Buesinger (age 64). Mr. Buesinger has been our Executive Vice President, Vinyl Products since July 2017. From April 2010 to July 2017, Mr. Buesinger served as our Senior Vice President, Vinyls. Prior to joining us, Mr. Buesinger served as the General Manager and President of Chevron Phillips Chemical Company L.P.'s Performance Pipe Division from February 2010 to March 2010. From June 2008 to January 2010, Mr. Buesinger held the position of General Manager in the Alpha Olefins and Poly Alpha Olefins business of Chevron Phillips Chemical Company L.P. From April 2005 to May 2008, he served as the President and Managing Director of Chevron Phillips Singapore Chemicals Pte. Ltd. and Asia Region General Manager for Chevron Phillips Chemical Company L.P. Prior to that, he held various technical and sales management positions within that company. Mr. Buesinger holds a B.S. in Chemical Engineering from Tulane University.

L. Benjamin Ederington (age 50). Mr. Ederington has been our Senior Vice President, General Counsel, Chief Administrative Officer and Corporate Secretary since July 2017. From December 2015 to July 2017, Mr. Ederington served as our Vice President, General Counsel, Chief Administrative Officer and Corporate Secretary and, from October 2013 to December 2015, he served as our Vice President, General Counsel and Corporate Secretary. In addition, Mr. Ederington has been a director of Westlake Partners' general partner since its formation in March 2014, its Senior Vice President, General Counsel, Chief Administrative Officer and Corporate Secretary since February 2021, and its Vice President, General Counsel and Secretary from March 2014 to February 2021. Prior to joining Westlake, he held a variety of senior legal positions at LyondellBasell Industries, N.V. and its predecessor companies, LyondellBasell Industries AF SCA and Lyondell Chemical Company, including most recently as Associate General Counsel, Commercial & Strategic Transactions. He began his legal career more than 20 years ago at the law firm of Steptoe & Johnson, LLP. Mr. Ederington holds a B.A. from Yale University and received his J.D. from Harvard University.

Roger L. Kearns (age 57). Mr. Kearns has been our Executive Vice President and Chief Operating Officer since January 2021. From April 2018 to December 2020, Mr. Kearns served as our Executive Vice President, Vinyls Chemicals. Prior to joining Westlake, from 2008 to April 2018, he was a member of the Executive Committee at Solvay S.A. in Belgium. From 2013 to 2018, he had responsibility for Solvay's advanced materials business cluster, as well as its corporate research organization and its North America region. From 2008 to 2012 he was responsible for overseeing Solvay's Asia-Pacific businesses, including its vinyls operations in the region. Prior to that, from 2004 through 2007, he was President of Solvay Advanced Polymers in the United States and earlier, from 2001 through 2003, he led Solvay's performance compounds business unit. Since beginning his career with Solvay in 1986, he has held a series of manufacturing, technical, corporate development, marketing and business management positions in the United States, Europe and Asia. Mr. Kearns holds a bachelor's degree in Chemical Engineering from the Georgia Institute of Technology and an MBA from Stanford University.

Andrew Kenner (age 56). Mr. Kenner has been our Senior Vice President, Operations since January 2021. From July 2017 to December 2020, Mr. Kenner served as our Senior Vice President, Chemical Manufacturing and, from July 2008 to July 2017, he served as our Vice President, Manufacturing. Mr. Kenner joined us after a 19-year career at Valero Energy Corporation where he served as Vice President and General Manager of Valero's Delaware City Refinery and its Houston Refinery, as well as other leadership positions in Valero's refining system. Mr. Kenner received a B.S. in Aerospace Engineering from Texas A&M University and a M.S. in Chemical Engineering from the University of Texas at Austin.

Lawrence E. (Skip) Teel (age 62). Mr. Teel has been our Executive Vice President and Special Advisor to the CEO since January 2021. From July 2017 to December 2020, Mr. Teel served as our Executive Vice President, Olefins, from July 2014 to July 2017, he served as our Senior Vice President, Olefins and, from July 2012 to July 2014, he served as our Vice President, Olefins. In addition, Mr. Teel has been the Executive Vice President and Special Advisor to the CEO of Westlake Partners' general partner since February 2021. He previously served as the Senior Vice President, Olefins of Westlake Partners' general partner from July 2014 to February 2021. Mr. Teel joined us in September 2009 as Director, Olefins and Feedstock after a 23-year career with Lyondell Chemical Company where he served as the Vice President, Refining from August 2006 to May 2008. From 2001 to 2006, Mr. Teel held the position of Director, Corporate Planning and Business Development at Lyondell Chemical Company. During his career, he has held a variety of marketing, operations and general management assignments. Mr. Teel received a B.S. in Chemical Engineering from New Mexico State University and an M.S. in Finance from the University of Houston.

Johnathan S. Zoeller (age 45). Mr. Zoeller has been our Vice President and Chief Accounting Officer since March 2020. From August 2018 to March 2020, Mr. Zoeller served as our Vice President and Corporate Controller. In addition, Mr. Zoeller has been the Vice President and Chief Accounting Officer of Westlake Partners' general partner since March 2020. Mr. Zoeller joined us with over 19 years of public accounting experience, the majority of which was spent at KPMG LLP, where he was responsible for clients in the chemicals, oilfield services and oil/gas exploration and production industries. Mr. Zoeller held a variety of senior accounting positions at KPMG, including most recently as Partner, Audit from October 2011 to August 2018. He began his career with Arthur Andersen LLP in 1998. Mr. Zoeller holds a Bachelor of Accounting degree and a Master of Accounting degree from the University of Mississippi. He is a Certified Public Accountant.

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

As of February 17, 2021, there were 36 holders of record of our common stock. Our common stock is listed on the New York Stock Exchange under the symbol "WLK."

Issuer Purchases of Equity Securities

The following table provides information on our purchase of equity securities during the quarter ended December 31, 2020:

Period	Total Number of Shares Purchased ⁽¹⁾	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs ⁽²⁾	Maximum Number (or Approximate Dollar Value) of Shares that May Yet Be Purchased Under the Plans or Programs ⁽²⁾
October 2020	1,080	\$ 66.92	—	\$ 131,155,000
November 2020	—	—	—	131,155,000
December 2020	128	78.26	—	131,155,000
Total	<u>1,208</u>	<u>\$ 68.12</u>	<u>—</u>	<u>131,155,000</u>

- (1) Represents 1,080 and 128 shares withheld in October 2020 and December 2020, respectively, in satisfaction of withholding taxes due upon the vesting of restricted stock units granted to our employees under the 2013 Plan.
- (2) In November 2014, our Board of Directors authorized a \$250 million stock repurchase program (the "2014 Program"). In November 2015, our Board of Directors approved the expansion of the 2014 Program by an additional \$150 million. In August 2018, our Board of Directors approved the further expansion of the existing 2014 Program by an additional \$150 million. As of December 31, 2020, 7,075,720 shares of our common stock had been acquired at an aggregate purchase price of approximately \$419 million under the 2014 Program. Transaction fees and commissions are not reported in the average price paid per share in the table above. Decisions regarding the amount and the timing of purchases under the 2014 Program will be influenced by our cash on hand, our cash flows from operations, general market conditions and other factors. The 2014 Program may be discontinued by our Board of Directors at any time.

Equity Compensation Plan Information

Securities authorized for issuance under equity compensation plans are as follows:

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted-average exercise price of outstanding options, warrants and rights (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
Equity compensation plans approved by security holders	2,382,316 ⁽¹⁾	\$ 67.39 ⁽²⁾	3,112,855
Equity compensation plans not approved by security holders	N/A	N/A	N/A
Total	<u>2,382,316</u>	<u>\$ 67.39</u> ⁽²⁾	<u>3,112,855</u>

(1) Includes shares reserved for issuance pursuant to restricted stock units, stock options and performance stock units.

(2) Price applies only to the stock options included in column (a). Exercise price is not applicable to the other awards included in column (a).

Other information regarding our equity compensation plans is set forth in the section entitled "Executive Compensation" in our Proxy Statement, which information is incorporated herein by reference.

Item 6. Selected Financial and Operational Data ⁽¹⁾

	Year Ended December 31,				
	2020	2019	2018	2017	2016
	(dollars in millions, except share amounts, per share data and volume data)				
Statement of Operations Data:					
Net sales	\$ 7,504	\$ 8,118	\$ 8,635	\$ 8,041	\$ 5,076
Gross profit	1,023	1,260	1,987	1,761	983
Selling, general and administrative expenses	449	458	445	399	258
Amortization of intangibles	109	109	101	108	38
Restructuring, transaction and integration-related costs	36	37	33	29	104
Income from operations	429	656	1,408	1,225	583
Interest expense	(142)	(124)	(126)	(159)	(79)
Other income, net	44	38	52	15	54
Income before income taxes	331	570	1,334	1,081	558
Provision for (benefit from) income taxes	(42)	108	300	(258)	138
Net income	373	462	1,034	1,339	420
Net income attributable to noncontrolling interests	43	41	38	35	21
Net income attributable to Westlake Chemical Corporation	\$ 330	\$ 421	\$ 996	\$ 1,304	\$ 399
Earnings Per Share Attributable to Westlake Chemical Corporation:					
Basic	\$ 2.57	\$ 3.26	\$ 7.66	\$ 10.05	\$ 3.07
Diluted	\$ 2.56	\$ 3.25	\$ 7.62	\$ 10.00	\$ 3.06
Weighted average shares outstanding:					
Basic	127,850,592	128,395,184	129,401,823	129,087,043	129,367,712
Diluted	128,089,058	128,757,293	129,985,753	129,540,013	129,974,822
Balance Sheet Data (end of period):					
Cash and cash equivalents	\$ 1,313	\$ 728	\$ 753	\$ 1,531	\$ 459
Working capital ⁽²⁾	2,120	1,501	1,659	1,496	1,225
Total assets	13,835	13,261	11,602	12,076	10,890
Total long-term debt, net	3,566	3,445	2,668	3,127	3,679
Total Westlake Chemical Corporation stockholders' equity	6,043	5,860	5,590	4,874	3,524
Cash dividends declared per share	\$ 1.0650	\$ 1.0250	\$ 0.9200	\$ 0.8012	\$ 0.7442
Other Operating Data:					
Cash flows from:					
Operating activities	\$ 1,297	\$ 1,301	\$ 1,409	\$ 1,528	\$ 867
Investing activities	(509)	(1,954)	(754)	(652)	(2,563)
Financing activities	(216)	630	(1,427)	6	1,687
Depreciation and amortization	773	713	641	601	378
Capital expenditures	525	787	702	577	629
EBITDA ⁽³⁾	1,246	1,407	2,101	1,841	1,015

	Year Ended December 31,				
	2020	2019	2018	2017	2016
External Sales Volume (millions of pounds):					
Vinyls Segment					
PVC, caustic soda and other	15,634	16,712	16,629	15,997	8,118
Building products	1,282	1,178	1,180	1,193	770
Olefins Segment					
Polyethylene	2,487	2,565	2,438	2,363	2,392
Styrene, feedstock and other	703	880	671	828	794

- (1) The historical selected financial and operational data should be read together with Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations, and Item 8, Financial Statements and Supplementary Data included in this Form 10-K.
- (2) Working capital equals current assets less current liabilities.
- (3) EBITDA (a non-GAAP financial measure) is calculated as net income before interest expense, income taxes, depreciation and amortization. The body of accounting principles generally accepted in the United States is commonly referred to as "GAAP." For this purpose, a non-GAAP financial measure is generally defined by the Securities and Exchange Commission ("SEC") as one that purports to measure historical or future financial performance, financial position or cash flows that (1) excludes amounts, or is subject to adjustments that have the effect of excluding amounts, that are included in the most directly comparable measure calculated and presented in accordance with GAAP in the statement of income, balance sheet or statement of cash flows (or equivalent statements) of the registrant; or (2) includes amounts, or is subject to adjustments that have the effect of including amounts, that are excluded from the most directly comparable measure so calculated and presented. In this report, we disclose non-GAAP financial measures, primarily earnings before interest, taxes, depreciation and amortization ("EBITDA"). The non-GAAP financial measures described in this Form 10-K are not substitutes for the GAAP measures of earnings and cash flows. EBITDA is included in this Form 10-K because our management considers it an important supplemental measure of our performance and believes that it is frequently used by securities analysts, investors and other interested parties in the evaluation of companies in our industry, some of which present EBITDA when reporting their results. We regularly evaluate our performance as compared to other companies in our industry that have different financing and capital structures and/or tax rates by using EBITDA. In addition, we utilize EBITDA in evaluating acquisition targets. Management also believes that EBITDA is a useful tool for measuring our ability to meet our future debt service, capital expenditures and working capital requirements, and EBITDA is commonly used by us and our investors to measure our ability to service indebtedness. EBITDA is not a substitute for the GAAP measures of net income, income from operations and net cash provided by operating activities and is not necessarily a measure of our ability to fund our cash needs. In addition, it should be noted that companies calculate EBITDA differently and, therefore, EBITDA as presented for us may not be comparable to EBITDA reported by other companies. EBITDA has material limitations as a performance measure because it excludes interest expense, depreciation and amortization and income taxes. The following table reconciles EBITDA to net income, income from operations and net cash provided by operating activities.

Reconciliation of EBITDA to Net Income, Income from Operations and Net Cash Provided by Operating Activities

	Year Ended December 31,				
	2020	2019	2018	2017	2016
	(dollars in millions)				
Net cash provided by operating activities	\$ 1,297	\$ 1,301	\$ 1,409	\$ 1,528	\$ 867
Changes in operating assets and liabilities and other	(778)	(785)	(313)	(723)	(346)
Deferred income taxes	(146)	(54)	(62)	534	(101)
Net income	373	462	1,034	1,339	420
Less:					
Other income, net	44	38	52	15	54
Interest expense	(142)	(124)	(126)	(159)	(79)
Benefit from (provision for) income taxes	42	(108)	(300)	258	(138)
Income from operations	429	656	1,408	1,225	583
Add:					
Depreciation and amortization	773	713	641	601	378
Other income, net	44	38	52	15	54
EBITDA	<u>\$ 1,246</u>	<u>\$ 1,407</u>	<u>\$ 2,101</u>	<u>\$ 1,841</u>	<u>\$ 1,015</u>

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

Overview

We are a vertically-integrated global manufacturer and marketer of basic chemicals, vinyls, polymers and building products. Our two principal operating segments are Vinyls and Olefins. We use the majority of our internally-produced basic chemicals to produce higher value-added chemicals, polymers and building products.

Consumption of the basic chemicals that we manufacture in the commodity portions of our olefins and vinyls processes has increased significantly since we began operations in 1986. Our olefins and vinyls products are some of the most widely used chemicals in the world and are upgraded into a wide variety of higher value-added chemical products used in many end-markets. Chlor-alkali and petrochemicals are typically manufactured in large volume by a number of different producers using widely available technologies. The chlor-alkali and petrochemical industries exhibit cyclical commodity characteristics, and margins are influenced by changes in the balance between supply and demand and the resulting operating rates, the level of general economic activity and the price of raw materials. Due to the significant size of new plants, capacity additions are built in large increments and typically require several years of demand growth to be absorbed. The cycle is generally characterized by periods of tight supply, leading to high operating rates and margins, followed by a decline in operating rates and margins primarily as a result of excess new capacity additions.

Westlake is the second-largest chlor-alkali producer and the second-largest PVC producer in the world. Since late 2010, the PVC industry in the U.S. has experienced an increase in PVC resin exports, driven largely by more competitive feedstock and energy cost positions in the U.S. As a consequence, the U.S. PVC resin industry operating rates have improved since 2010. Globally, there were large chlor-alkali capacity additions between 2008 and 2015 resulting in excess capacity and lower industry operating rates, which exerted downward pressure on caustic soda pricing. From 2015 through the end of 2018, the capacity additions have been outpaced by an increase in demand driven by improving economic growth and U.S. producers' competitive export position, which resulted in improved operating rates and caustic soda pricing. Since the end of 2018, the uncertainties surrounding international trade have impacted both domestic and export prices for our products. Global demand for most of our products strengthened in the fourth quarter of 2020, and we expect global demand for most of our products to remain robust into early 2021. Depending on the performance of the global economy, potential changes in international trade and tariffs policies, the trend of crude oil prices, the timing of the new capacity additions in 2021 and beyond, and the sustainability of the current, strong demand for most of our products, our financial condition, results of operations or cash flows could be negatively or positively impacted.

Ethane-based ethylene producers have in the recent past experienced a cost advantage over naphtha-based ethylene producers during periods of higher crude oil prices. This cost advantage has resulted in a strong export market for polyethylene and other ethylene derivatives and has benefited operating margins and cash flows for our Olefins segment during such periods. However, we have seen a significant reduction in the cost advantage enjoyed by North American ethane-based ethylene producers due to lower crude oil prices from the third quarter of 2014 through 2020, which has resulted in reduced prices and lower margins for our Olefins segment. Further, our Olefins segment has experienced lower profitability in recent periods due to several new ethylene and polyethylene capacity additions in North America and Asia that have led to additional supply of ethylene and polyethylene. In the past year, we have seen volatility in ethane and ethylene prices, primarily due to changes in demand resulting from the coronavirus ("COVID-19") pandemic, anticipated timing for certain new ethylene capacity additions and availability of natural gas liquids, as well as fluctuation in the price of crude oil. Global demand for most of our products strengthened in the fourth quarter of 2020, and we expect global demand for most of our products to remain robust into early 2021. However, new ethylene and polyethylene capacity additions in North America, Asia and the Middle East will add additional supply and may continue to contribute to periods of lower profitability in our Olefins segment.

We purchase significant amounts of ethane feedstock, natural gas, ethylene and salt from external suppliers for use in production of basic chemicals in the olefins and vinyls chains. We also purchase significant amounts of electricity to supply the energy required in our production processes. While we have agreements providing for the supply of ethane feedstock, natural gas, ethylene, salt and electricity, the contractual prices for these raw materials and energy vary with market conditions and may be highly volatile. Factors that have caused volatility in our raw material prices in the past, and which may do so in the future include:

- the availability of feedstock from shale gas and oil drilling;
- supply and demand for crude oil;
- shortages of raw materials due to increasing demand;
- ethane and liquefied natural gas exports;
- capacity constraints due to higher construction costs for investments, construction delays, strike action or involuntary shutdowns;

- the general level of business and economic activity; and
- the direct or indirect effect of governmental regulation.

Significant volatility in raw material costs tends to put pressure on product margins as sales price increases could lag behind raw material cost increases. Conversely, when raw material costs decrease, customers may seek immediate relief in the form of lower sales prices. We currently use derivative instruments to reduce price volatility risk on feedstock commodities and lower overall costs. Normally, there is a pricing relationship between a commodity that we process and the feedstock from which it is derived. When this pricing relationship deviates from historical norms, we have from time to time entered into derivative instruments and physical positions in an attempt to take advantage of this relationship.

Our historical results have been significantly affected by our plant production capacity, our efficient use of that capacity and our ability to increase capacity. Since our inception, we have followed a disciplined growth strategy that focuses on plant acquisitions, new plant construction and internal expansion. We evaluate each expansion project on the basis of its ability to produce sustained returns in excess of our cost of capital and its ability to improve efficiency or reduce operating costs. We also regularly look at acquisition opportunities that would be consistent with, or complimentary to, our overall business strategies. Depending on the size of the acquisition, any such acquisitions could require external financing.

As noted above in Item 1A, "Risk Factors," we are subject to extensive environmental regulations, which may impose significant additional costs on our operations in the future. Further, concerns about GHG emissions and their possible effects on climate change has led to the enactment of regulations, and to proposed legislation and additional regulations, that could affect us in the form of increased cost of feedstocks and fuel, other increased costs of production and decreased demand for our products. While we do not expect any of these enactments or proposals to have a material adverse effect on us in the near term, we cannot predict the longer-term effect of any of these regulations or proposals on our future financial condition, results of operations or cash flows.

Non-GAAP Financial Measures

The body of accounting principles generally accepted in the United States is commonly referred to as "GAAP." For this purpose, a non-GAAP financial measure is generally defined by the SEC as one that purports to measure historical or future financial performance, financial position or cash flows that (1) excludes amounts, or is subject to adjustments that have the effect of excluding amounts, that are included in the most directly comparable measure calculated and presented in accordance with GAAP in the statement of income, balance sheet or statement of cash flows (or equivalent statements) of the registrant; or (2) includes amounts, or is subject to adjustments that have the effect of including amounts, that are excluded from the most directly comparable measure so calculated and presented. In this report, we disclose non-GAAP financial measures, primarily earnings before interest, taxes, depreciation and amortization ("EBITDA"). We define EBITDA as net income before interest expense, income taxes, depreciation and amortization. The non-GAAP financial measures described in this Form 10-K are not substitutes for the GAAP measures of earnings and cash flows.

EBITDA is included in this Form 10-K because our management considers it an important supplemental measure of our performance and believes that it is frequently used by securities analysts, investors and other interested parties in the evaluation of companies in our industry, some of which present EBITDA when reporting their results. We regularly evaluate our performance as compared to other companies in our industry that have different financing and capital structures and/or tax rates by using EBITDA. In addition, we utilize EBITDA in evaluating acquisition targets. Management also believes that EBITDA is a useful tool for measuring our ability to meet our future debt service, capital expenditures and working capital requirements, and EBITDA is commonly used by us and our investors to measure our ability to service indebtedness. EBITDA is not a substitute for the GAAP measures of net income, income from operations and net cash provided by operating activities and is not necessarily a measure of our ability to fund our cash needs. In addition, it should be noted that companies calculate EBITDA differently and, therefore, EBITDA as presented for us may not be comparable to EBITDA reported by other companies. EBITDA has material limitations as a performance measure because it excludes interest expense, depreciation and amortization and income taxes.

Significant Developments

COVID-19, Industry Conditions and Our Business

On March 11, 2020, the World Health Organization declared the ongoing COVID-19 outbreak a pandemic and recommended containment and mitigation measures worldwide. The pandemic has resulted in widespread adverse impacts on the global economy. We experienced significant disruptions in the second quarter of 2020 as the pandemic and its impact on the global economy spread through most of our markets. While demand for some of our products used in cleaning, packaging and medical applications and manufacturing continues to be firm, we expected lower demand for certain of our other products that led us to proactively temporarily idle production at several of our smaller non-integrated plants and reduce operating rates at others in the beginning of the second quarter of 2020. Since the middle of the second quarter of 2020, a general ease in government restrictions in many jurisdictions across the world has resulted in a gradual increase in demand for our products. As a result, all of our idled plants recommenced production. Operating rates have improved over the course of the third and the fourth quarters of 2020 for most of our plants due to continuing increase in demand for our products. For a discussion of the additional impact on plant operating rates from hurricanes in the second half of 2020, see "*Impact of Hurricanes Laura and Delta*" below. We continue to monitor the volatile environment and may reduce operating rates or idle production if the pandemic and its financial impacts persist or worsen. Considering the uncertain and volatile environment, we could continue to experience significant disruptions to our business operations in the near future.

Our first priority in our response to this crisis has been the health and safety of our employees and those of our customers and vendors. We have implemented preventative measures and developed corporate and regional response plans to minimize unnecessary risk of exposure. We have modified certain business practices (including those related to employee travel, employee work locations and employee work practices) to conform to government restrictions and best practices encouraged by the Center for Disease Control and Prevention, the World Health Organization and other governmental and health authorities.

Though the government restrictions across the world generally started to ease in the later part of the second quarter of 2020, there is considerable uncertainty regarding the extent to which COVID-19 will continue to spread and the extent and duration of governmental and other measures implemented to try to slow the spread of the virus, such as large-scale travel bans and restrictions, border closures, quarantines, shelter-in-place orders and business and government shutdowns (whether through a continuation of existing measures or the re-imposition of prior measures). Certain parts of the world may see the implementation of new government restrictions due to a recent increase in COVID-19 cases. Restrictions of this nature have caused, and may continue to cause, us and our customers to experience reduced demand and operational delays. Lockdowns across the world and curtailed business activities specifically in transportation, construction, automotive and oil and gas related activities have resulted in and may continue to result in an oversupplied market.

Due to the sudden collapse of crude oil prices in early March 2020, the cost advantage of North American ethane-based ethylene producers over naphtha-based ethylene producers has been significantly eroded. We started seeing impact from this erosion towards the end of the first quarter of 2020. Crude oil prices have recovered somewhat since the second quarter of 2020, and the cost advantage of North American ethane-based ethylene producers has improved as well. If this trend is not sustained in the future, it could continue to result in reduced prices and lower margins for some of our products in the Vinyls segment and the Olefins segment.

We have taken proactive actions to respond to the challenges presented by the conditions described above and minimize the impact to our business. We have implemented strategies to reduce costs, increase operational efficiencies, maintain strong liquidity and lower our capital spending. Additionally, we deferred the planned turnaround at our Petro 2 ethylene unit and associated maintenance cost into the second half of 2021. The turnaround is expected to last approximately 60 days.

In addition, as of December 31, 2020, we had \$1,313 million of cash and cash equivalents on our consolidated balance sheet, which remains available to support our operations, in addition to the \$1 billion of availability under the Credit Agreement. On June 4, 2020, we fully repaid our borrowings of \$1 billion under the Credit Agreement from March 20, 2020.

The impact that COVID-19 will have on our business, cash flows, liquidity, financial condition and results of operations will depend on future developments, including, among others, the ultimate geographic spread and severity of the virus, the consequences of governmental and other measures designed to prevent the spread of the virus, the development of effective treatments and vaccines and their roll out, the duration of the outbreak, actions taken by governmental authorities, customers, suppliers and other third parties, workforce availability, and the timing and extent to which normal economic and operating conditions resume.

CARES Act

On March 27, 2020, the Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act") was enacted and signed into law. The CARES Act, among other things, permits any federal net operating loss ("NOL") generated in 2018, 2019 and 2020 to be carried back to each of the five tax years preceding the tax year of the federal NOL to fully offset taxable income to generate a refund of previously paid income taxes. However, any such federal NOL not carried back can be carried forward to fully offset taxable income, but only for the taxable years beginning before January 1, 2021, after which, the federal NOL deduction limitation not to exceed 80% of taxable income under the U.S. Tax Cuts and Jobs Act (the "Tax Act") will be reinstated. Federal NOLs generated in 2018, 2019 and 2020 measured at the current U.S. corporate tax rate of 21% that are carried back to taxable years prior to the Tax Act to fully offset taxable income taxed at the U.S. corporate tax rate of 35% result in an income tax rate benefit. At the end of 2019, we generated a federal NOL primarily due to bonus tax depreciation from the Company's investment in LACC, LLC ("LACC"), which is accounted for as an equity method investment. This federal NOL was increased to account for the disallowed interest deduction which originated in 2019 that is no longer disallowed due to the increase in the business interest expense deduction limitation from 30% to 50% of adjusted taxable income for tax years 2019 and 2020 as permitted under the CARES Act. For the year ended December 31, 2020, the carryback of the federal NOL resulted in a net tax benefit of \$95 million for the Company, primarily from the tax rate difference, partially offset by the reduction in the Internal Revenue Code Section 199 ("Section 199") domestic manufacturing deduction.

3.375% Senior Notes due 2030

On June 12, 2020, we completed the registered public offering of \$300 million aggregate principal amount of the 3.375% 2030 Senior Notes. See "Liquidity and Capital Resources—*Debt*" below and Note 11 to the consolidated financial statements appearing elsewhere in this Form 10-K for more information.

6 ½% GO Zone Senior Notes due 2029, 6 ½% GO Zone Senior Notes due 2035 and IKE Zone Senior Notes due 2035

On August 1, 2020, the Company purchased in lieu of optional redemption \$100 million aggregate principal amount of the 6 ½% 2029 GO Zone Bonds at a redemption price equal to 100% of the principal amount of the 6 ½% 2029 GO Zone Bonds plus accrued and unpaid interest to August 1, 2020. The 6 ½% 2029 GO Zone Bonds were offered by the Louisiana Local Government Environmental Facilities and Community Development Authority (the "Authority") in July 2010 under the Gulf Opportunity Zone Act of 2005 (the "GO Zone Act") for the benefit of the Company and bore interest at a rate of 6.50% per annum. In connection with the offering of the 6 ½% 2029 GO Zone Bonds in July 2010, the Company issued \$100 million aggregate principal amount of the 6 ½% 2029 GO Zone Senior Notes to evidence and secure the Company's obligations under the Amended and Restated Loan Agreement relating to the 6 ½% 2029 GO Zone Bonds. In connection with the purchase in lieu of optional redemption of the 2029 GO Zone Bonds, the 6 ½% 2029 GO Zone Senior Notes were cancelled. A portion of the net proceeds from the issuance of the 3.375% 2030 Senior Notes was used to fund the purchase in lieu of optional redemption of the 6 ½% 2029 GO Zone Bonds.

On November 1, 2020, the Company purchased in lieu of optional redemption (1) \$89 million aggregate principal amount of the 6 ½% 2035 GO Zone Bonds, and (2) \$65 million aggregate principal amount of the 6 ½% 2035 IKE Zone Bonds (together with the 6 ½% 2035 GO Zone Bonds, the "2035 Revenue Bonds"), in each case, at a redemption price equal to 100% of the principal amount of the 2035 Revenue Bonds plus accrued and unpaid interest to November 1, 2020. The 6 ½% 2035 GO Zone Bonds were issued by the Authority in December 2010 under the GO Zone Act for the benefit of the Company and bore interest at a rate of 6.50% per annum. The 6 ½% 2035 IKE Zone Bonds were issued by the Authority in December 2010 under Section 704 of the Emergency Economic Stabilization Act of 2008 for the benefit of the Company and bore interest at a rate of 6.50% per annum. In connection with the offering of the 2035 Revenue Bonds in December 2010, the Company issued \$89 million aggregate principal amount of the 6 ½% 2035 GO Zone Senior Notes and \$65 million aggregate principal amount of the 6 ½% 2035 IKE Zone Senior Notes to evidence and secure the Company's obligations under the Loan Agreements relating to the 2035 Revenue Bonds. In connection with the purchase of the 2035 Revenue Bonds by the Company in lieu of optional redemption, the 6 ½% 2035 GO Zone Senior Notes and the 6 ½% 2035 IKE Zone Senior Notes were cancelled. A portion of the net proceeds from the issuance of the 3.375% 2030 Senior Notes was used to fund the purchase in lieu of optional redemption of the 2035 Revenue Bonds.

Impact of Hurricanes Laura and Delta

On August 27, 2020, Hurricane Laura made landfall in Louisiana as a Category 4 storm, which resulted in widespread damage to property and infrastructure in the greater Lake Charles area, including the electricity transmission system. As a precautionary measure, Westlake idled its facilities in the Lake Charles area in advance of Hurricane Laura. As a result of Hurricane Laura, most of Westlake's facilities in the Lake Charles area were shut down starting the last week of August 2020 and remained shut down through much of September 2020. On October 9, 2020, Hurricane Delta made landfall as a Category 2 storm in the same general vicinity of Louisiana. Several facilities that had resumed production at the end of September 2020 then had to idle production as a result of Hurricane Delta. All of these facilities resumed production in November 2020. The shut downs resulted in additional maintenance expense of approximately \$83 million in 2020 and lower plant operating rates and lower production for many of our major products in the third and fourth quarters of 2020.

Schkopau Plant Closure

During September 2020, the Company initiated consultations with the works council at its Schkopau, Germany site regarding the closure of the site's paste polyvinyl chloride plant and the plant was shut down in December 2020. The decision was driven by the plant's lack of long-term economic viability. The Company took an accounting charge of \$34 million in the third quarter of 2020 associated with the closure. Customers will continue to be supplied from the Company's larger, backward-integrated sites at Burghausen, Gendorf and Cologne, Germany.

February Weather Event

In February 2021, large parts of the southern United States, including Texas, Louisiana, Kentucky, and Mississippi, experienced extreme winter weather. Due to the extreme weather, several of our facilities in the region experienced disruption to their operations, resulting in lost production and additional maintenance costs.

Results of Operations

Segment Data

	Year Ended December 31,		
	2020	2019	2018
	(dollars in millions, except per share data)		
Net external sales			
Vinyls			
PVC, caustic soda and other	\$ 4,570	\$ 5,068	\$ 5,359
Building products	1,402	1,268	1,257
Total Vinyls	<u>5,972</u>	<u>6,336</u>	<u>6,616</u>
Olefins			
Polyethylene	1,226	1,301	1,519
Styrene, feedstock and other	306	481	500
Total Olefins	<u>1,532</u>	<u>1,782</u>	<u>2,019</u>
Total	<u><u>\$ 7,504</u></u>	<u><u>\$ 8,118</u></u>	<u><u>\$ 8,635</u></u>
Income (loss) from operations			
Vinyls	\$ 301	\$ 451	\$ 913
Olefins	160	260	573
Corporate and other	(32)	(55)	(78)
Total income from operations	429	656	1,408
Interest expense	(142)	(124)	(126)
Other income, net	44	38	52
Provision for (benefit from) income taxes	(42)	108	300
Net income	373	462	1,034
Net income attributable to noncontrolling interests	43	41	38
Net income attributable to Westlake Chemical Corporation	<u>\$ 330</u>	<u>\$ 421</u>	<u>\$ 996</u>
Diluted earnings per share	<u><u>\$ 2.56</u></u>	<u><u>\$ 3.25</u></u>	<u><u>\$ 7.62</u></u>
Year Ended December 31,			
	2020	2019	
	Average Sales Price	Volume	Average Sales Price
Product sales price and volume percentage change from prior year			
Vinyls	-4 %	-2 %	-8 %
Olefins	-7 %	-7 %	-21 %
Company average	-4 %	-3 %	-11 %
			+5 %

	Average Industry Prices ⁽¹⁾		
	Year Ended December 31,		
	2020	2019	2018
Average domestic prices			
Ethane (cents/lb) ⁽²⁾	6.4	7.3	11.0
Propane (cents/lb) ⁽³⁾	11.0	12.7	20.8
Ethylene (cents/lb) ⁽⁴⁾	17.5	18.5	19.0
Polyethylene (cents/lb) ⁽⁵⁾	57.5	59.0	71.3
Styrene (cents/lb) ⁽⁶⁾	56.0	79.1	91.4
Caustic soda (\$/short ton) ⁽⁷⁾	674	692	768
Chlorine (\$/short ton) ⁽⁸⁾	180	175	171
PVC (cents/lb) ⁽⁹⁾	74.0	68.4	67.4
Average export prices			
Polyethylene (cents/lb) ⁽¹⁰⁾	44.2	41.0	55.8
Caustic soda (\$/short ton) ⁽¹¹⁾	250	273	474
PVC (cents/lb) ⁽¹²⁾	39.6	34.9	36.9

- (1) Industry pricing data was obtained through IHS Markit ("IHS"). We have not independently verified the data.
- (2) Average Mont Belvieu spot prices of purity ethane over the period.
- (3) Average Mont Belvieu spot prices of non-TET propane over the period.
- (4) Average North American spot prices of ethylene over the period.
- (5) Average North American Net Transaction prices of polyethylene low density GP-Film grade over the period.
- (6) Average North American contract prices of styrene over the period.
- (7) Average USGC-CSLi index values for caustic soda over the period. As stated by IHS, "the caustic soda price listing represents the USGC-CSLi values. USGC-CSLi does not reflect contract price discounts, implementation lags, caps or other adjustments factors. Additionally, it is not intended to represent a simple arithmetic average of all market transactions occurring during the month. Rather, the USGC-CSLi is most representative of the month-to-month caustic soda price movement for contract volumes of liquid 50% caustic soda rather than the absolute value of contract prices at a particular point in time. It is intended to serve only as a benchmark."
- (8) Average North American contract prices of chlorine over the period. Effective January 1, 2019, IHS made a non-market average downward adjustment of \$172.50 per short ton to chlorine prices. For comparability, we adjusted the prior period's chlorine price downward by \$172.50 per short ton consistent with the IHS non-market adjustment.
- (9) Average North American contract prices of pipe grade PVC over the period. As stated by IHS, "the contract resin prices posted reflect an "index" or "market" for prices before discounts, rebates, incentives, etc."
- (10) Average North American export price for low density polyethylene GP-Film grade over the period.
- (11) Average North American low spot export prices of caustic soda over the period.
- (12) Average North American spot export prices of PVC over the period.

Summary

For the year ended December 31, 2020, net income attributable to Westlake Chemical Corporation was \$330 million, or \$2.56 per diluted share, on net sales of \$7,504 million. This represents a decrease in net income attributable to Westlake Chemical Corporation of \$91 million, or \$0.69 per diluted share, compared to 2019 net income attributable to Westlake Chemical Corporation of \$421 million, or \$3.25 per diluted share, on net sales of \$8,118 million. Net income for the year ended December 31, 2020 decreased versus the prior year primarily due to lower global sales prices for several of our major products, including caustic soda, and lower sales volumes for caustic soda resulting from the impact of the COVID-19 pandemic and lower crude oil prices. Net income for 2020 was also impacted by the shutdowns of our Lake Charles facilities in the second half of 2020 due to Hurricanes Laura and Delta, which resulted in lower plant operating rates, higher maintenance expense and lower production for many of our major products. In addition, in 2020 we had a higher interest expense related to higher average borrowings. These decreases were partially offset by the income tax rate benefit of \$95 million, or \$0.74 per diluted share, resulting from the carryback of federal net operating losses permitted by the CARES Act, higher sales volumes for downstream building products, higher contributions from our ethylene joint venture LACC, LLC ("LACC") and lower fuel costs and selling, general and administrative expenses. Income from operations was \$429 million for the year ended December 31, 2020 as compared to \$656 million for the year ended December 31, 2019, a decrease of \$227 million. The decrease in income from operations was primarily due to lower global sales prices for our major products, lower sales volume for caustic soda, lower operating rates and higher maintenance expense due to Hurricanes Laura and Delta. The decreases were partially offset by higher sales volumes for downstream building products and higher contributions from LACC, lower fuel costs and selling, general and administrative costs. Net sales decreased by \$614 million to \$7,504 million in 2020 from \$8,118 million in 2019, mainly due to lower sales prices and volumes for several of our major products, including caustic soda, partially offset by higher sales volumes for downstream building products.

2020 Compared with 2019

Net Sales. Net sales decreased by \$614 million, or 8%, to \$7,504 million in 2020 from \$8,118 million in 2019, primarily attributable to lower sales prices and volumes for several of our major products, including caustic soda, partially offset by higher sales volumes for downstream building products. Average sales prices for 2020 decreased by 4% as compared to 2019 due to slower global economic activity as a result of the COVID-19 pandemic and lower crude oil prices. Sales volumes decreased by 3% in 2020 as compared to 2019.

Gross Profit. Gross profit margin percentage decreased to 14% in 2020 from 16% in 2019. The gross profit margin decreased primarily due to lower global sales prices for several of our major products and lower sales volumes for caustic soda resulting from the impact of the COVID-19 pandemic and lower crude oil prices. Gross profit margin was also impacted by the shutdown of our Lake Charles facilities in the second half of 2020 due to Hurricanes Laura and Delta, which resulted in lower plant operating rates, higher maintenance expense and lower production for many of our major products. These decreases were partially offset by higher sales volumes for downstream building products and lower fuel costs.

Selling, General and Administrative Expenses. Selling, general and administrative expenses decreased by \$9 million to \$449 million in 2020 from \$458 million in 2019. This decrease was mainly due to lower employee compensation and selling expenses.

Amortization of Intangibles. Amortization expense for 2020 was \$109 million, which was comparable to \$109 million for 2019.

Restructuring, Transaction and Integration-related Costs. Restructuring, transaction and integration-related costs were \$36 million in 2020 as compared to \$37 million in 2019. The restructuring, transaction and integration-related costs for 2020 primarily related to the closure of the non-integrated PVC plant located in Germany and included the \$8 million write-off of certain assets and other expenses associated with the plant closure. The restructuring, transaction and integration-related costs for 2019 primarily consisted of restructuring expenses of \$26 million and acquisition costs.

Interest Expense. Interest expense increased by \$18 million to \$142 million in 2020 from \$124 million in 2019, primarily as a result of higher average debt outstanding in 2020 as compared to 2019. The higher average debt balance in 2020 was primarily due to the borrowing of \$1 billion under our revolving credit facility in March 2020 out of an abundance of caution (which we fully repaid in June 2020), the issuance of the €700 million aggregate principal amount of 1.625% 2029 Senior Notes in July 2019, which were outstanding for the full calendar year in 2020 (as compared to less than half a year in 2019), and the issuance of the \$300 million aggregate principal amount of 3.375% 2030 Senior Notes in June 2020 and lower interest capitalization due to lower activity with respect to capital expenditure projects during 2020 as compared to the prior year, partially offset by the purchase in lieu of redemption of the 6 1/2% 2029 GO Zone Bonds, the 6 1/2% 2035 GO Zone Bonds and the 6 1/2% 2035 IKE Zone Bonds. See "Liquidity and Capital Resources—Debt" below and Note 11 to the consolidated financial statements included in this Form 10-K for further discussion of our indebtedness.

Other Income, Net. Other income, net of \$44 million in 2020 was higher as compared to other income, net of \$38 million in 2019. This increase was primarily due to higher expected return on pension plan assets.

Income Taxes. The effective income tax rate was a benefit of 13% in 2020 as compared to an expense of 19% in 2019. The change in effective tax rate in 2020 as compared to the prior year was primarily due to the income tax rate benefit resulting from the carryback of federal net operating loss to taxable years that were taxed at the U.S. corporate tax rate of 35% as permitted under the CARES Act, partially offset by the reduction in the Section 199 domestic manufacturing deduction as a result of the net operating loss carryback.

Vinyls Segment

Net Sales. Net sales for the Vinyls segment decreased by \$364 million, or 6%, to \$5,972 million in 2020 from \$6,336 million in 2019. The decrease was mainly due to lower sales prices and volumes for caustic soda, partially offset by higher sales volumes for downstream building products, as compared to the prior year. Average sales prices for the Vinyls segment decreased by 4% in 2020, as compared to 2019, primarily due to lower global economic activity as a result of the COVID-19 pandemic. Average sales volumes decreased by 2% in 2020, as compared to 2019.

Income from Operations. Income from operations for the Vinyls segment decreased by \$150 million to \$301 million in 2020 from \$451 million in 2019. This decrease in income from operations was due to lower sales prices and volumes for caustic soda, mainly resulting from slower global economic activity due to the COVID-19 pandemic. The decrease in income from operations versus the prior year was also due to higher maintenance expense and other costs related to lower production, in each case due to Hurricanes Laura and Delta. These decreases were partially offset by higher sales volumes for downstream building products, higher contributions from LACC and lower fuel costs.

Olefins Segment

Net Sales. Net sales for the Olefins segment decreased by \$250 million, or 14%, to \$1,532 million in 2020 from \$1,782 million in 2019. The decrease was mainly due to lower sales prices for our major products. Our sales volumes were also impacted by the lower production due to Hurricanes Laura and Delta. Sales volumes for the Olefins segment decreased by 7% in 2020 as compared to 2019. Average sales prices for the Olefins segment decreased by 7% in 2020 as compared to 2019 due to lower global economic activity as a result of the COVID-19 pandemic and lower crude oil prices.

Income from Operations. Income from operations for the Olefins segment decreased by \$100 million to \$160 million in 2020 from \$260 million in 2019. The decrease in income from operations was due to the lower sales prices for our major products, mainly resulting from lower crude oil prices and slower global economic activity due to the COVID-19 pandemic. The decrease in income from operations versus the prior year was also due to lower sales volumes for many of our major products, higher maintenance expense and other costs related to lower production, in each case due to Hurricanes Laura and Delta. Trading activity in 2020 resulted in a gain of approximately \$4 million as compared to a loss of \$26 million in 2019.

2019 Compared with 2018

Net Sales. Net sales decreased by \$517 million, or 6%, to \$8,118 million in 2019 from \$8,635 million in 2018, primarily attributable to lower sales prices for our major products and lower sales volumes for PVC resin, partially offset by higher sales volumes for polyethylene, styrene and PVC compounds. Average sales prices for 2019 decreased by 11% as compared to 2018. Sales volumes increased by 5% in 2019 as compared to 2018.

Gross Profit. Gross profit margin percentage decreased to 16% in 2019 from 23% in 2018. The gross profit margin decreased primarily due to lower sales prices for our major products (resulting in lower margins), partially offset by lower ethane feedstock, purchased ethylene and fuel costs, as compared to 2018.

Selling, General and Administrative Expenses. Selling, general and administrative expenses increased by \$13 million to \$458 million in 2019 from \$445 million in 2018. This increase was mainly due to selling, general and administrative expenses related to the acquisition of NAKAN, partially offset by lower professional consulting fees.

Amortization of Intangibles. Amortization expense for 2019 was \$109 million, as compared to \$101 million for 2018. The increase in amortization expense was primarily due to intangible assets related to the acquisition of NAKAN.

Restructuring, Transaction and Integration-related Costs. Restructuring, transaction and integration-related costs of \$37 million in 2019 were higher as compared to \$33 million in 2018. The restructuring, transaction and integration-related costs for 2019 primarily consisted of restructuring expenses of \$26 million and acquisition costs. The restructuring expenses primarily represent charges associated with the write-off of certain assets. The restructuring, transaction and integration-related costs for 2018 of \$33 million primarily consisted of integration-related consulting fees and acquisition costs.



Interest Expense. Interest expense decreased by \$2 million to \$124 million in 2019 from \$126 million in 2018, primarily as a result of a lower average interest rate for the outstanding debt in 2019 as compared to 2018. The lower average interest rate was primarily due to the redemption of the 4.875% 2023 Notes and the 4.625% 2021 Notes in 2018 and the issuance of the 1.625% 2029 Senior Notes in July 2019.

Other Income, Net. Other income, net decreased by \$14 million to \$38 million in 2019 from \$52 million in 2018. This decrease was primarily due to the recognition of a one-time pension settlement gain of \$14 million in 2018.

Income Taxes. The effective income tax expense rate was 19% in 2019 as compared to 22% in 2018. The effective tax rate in 2019 was lower as compared to 2018 and lower compared to the U.S. federal statutory rate of 21%, primarily due to the reduction of a valuation allowance recorded against foreign NOL and credit carryforwards and the reduction in accrual of withholding tax on unremitted foreign earnings, partially offset by an increase in state tax expense.

Vinyls Segment

Net Sales. Net sales for the Vinyls segment decreased by \$280 million, or 4%, to \$6,336 million in 2019 from \$6,616 million in 2018. Average sales prices for the Vinyls segment decreased by 8% in 2019, as compared to 2018, mainly due to lower sales prices for caustic soda and lower sales prices and volumes for PVC resins, partially offset by higher PVC compounds sales volumes. Average sales volumes increased by 3% in 2019, as compared to 2018.

Income from Operations. Income from operations for the Vinyls segment decreased by \$462 million to \$451 million in 2019 from \$913 million in 2018. This decrease in income from operations was primarily due to lower caustic soda and PVC resin sales prices, partially offset by lower purchased ethylene, ethane feedstock and fuel costs.

Olefins Segment

Net Sales. Net sales for the Olefins segment decreased by \$237 million, or 12%, to \$1,782 million in 2019 from \$2,019 million in 2018. The decrease was mainly due to lower sales prices for our major products, partially offset by higher polyethylene and styrene sales volumes, as compared to 2018. Average sales prices for the Olefins segment decreased by 21% in 2019 as compared to 2018, primarily due to increased olefins production from new industry capacity. Sales volumes for the Olefins segment increased by 9% in 2019 as compared to 2018.

Income from Operations. Income from operations for the Olefins segment decreased by \$313 million to \$260 million in 2019 from \$573 million in 2018. The decrease in income from operations was primarily due to the lower sales prices for our major products, partially offset by higher sales volumes for our major products and lower feedstock and fuel costs. Trading activity in 2019 resulted in a loss of approximately \$26 million as compared to a gain of \$3 million in 2018.

Cash Flows

Operating Activities

Operating activities provided cash of \$1,297 million in 2020, as compared to cash provided by operating activities of \$1,301 million in 2019. The changes in cash flows from operating activities in 2020, as compared to 2019, were mainly driven by the decrease in income from operations, the income tax refund of \$188 million under the CARES Act and working capital changes. Changes in components of working capital, which we define for purposes of this cash flow discussion as accounts receivable, inventories, prepaid expenses and other current assets, less accounts payable and accrued and other liabilities, used cash of \$17 million in 2020, as compared to \$68 million of cash provided in 2019, an unfavorable change of \$85 million. Unfavorable changes in working capital were due to a change in accounts receivable, which was driven by higher sales in the fourth quarter of 2020 and the expected additional income tax refund resulting from the CARES Act, as discussed previously. Favorable changes in working capital were due to lower inventories and higher accounts payable and accrued liabilities, primarily driven by the changes in inventory levels and operating activities.

Operating activities provided cash of \$1,301 million in 2019 as compared to cash provided of \$1,409 million in 2018. The \$108 million decrease in cash flows from operating activities was mainly due to the decrease in income from operations in 2019, as compared to 2018, partially offset by a decrease in working capital requirements. Income from operations decreased by \$752 million in 2019, as compared to 2018. The decrease in income from operations was primarily a result of lower sales prices for our major products, partially offset by lower purchased ethylene, ethane and fuel costs. Changes in components of working capital, which we define for purposes of this cash flow discussion as accounts receivable, inventories, prepaid expenses and other current assets, less accounts payable and accrued liabilities provided cash of \$68 million in 2019, as compared to \$290 million of cash used in 2018, a favorable change of \$358 million. The favorable change was driven mainly by changes in accounts receivable and inventories. Favorable changes in accounts receivables and inventories were primarily the result of lower sales prices for our products and lower feedstock costs in 2019 as compared to 2018.



Investing Activities

Net cash used for investing activities during 2020 was \$509 million as compared to net cash used of \$1,954 million in 2019. Capital expenditures were \$525 million in 2020 compared to \$787 million in 2019. The decrease in capital expenditures was primarily due to fewer expansion projects in 2020, as compared to 2019. Capital expenditures in 2020 were primarily related to projects to improve production capacity or reduce costs, maintenance and safety projects and environmental projects at our various facilities. In 2020, we received \$44 million from our joint venture, LACC, representing a return of investment. The Company's contribution to unconsolidated subsidiaries in 2020 was primarily comprised of \$14 million towards our investment in RS Cogen. Investing activities in 2019 were primarily due to acquisitions for \$314 million, net of cash acquired, the purchase of the additional 34.8% interest in LACC for \$817 million in November 2019 and payment of \$45 million to fund the construction costs of LACC. Capital expenditures in 2019 included certain announced expansion projects as well as projects to improve production capacity or reduce costs, maintenance and safety and environmental projects at our various facilities.

Net cash used for investing activities during 2019 was \$1,954 million as compared to net cash used of \$754 million in 2018. Capital expenditures were \$787 million in 2019 compared to \$702 million in 2018. Higher investing activities in 2019 were primarily due to acquisitions for \$314 million, net of cash acquired, the purchase of the additional 34.8% interest in LACC for \$817 million in November 2019 and payment of \$45 million to fund the construction costs of LACC. Capital expenditures in 2019 and 2018 were primarily related to expansion projects as well as projects to improve production capacity or reduce costs, maintenance and safety and environmental projects at our various facilities. The expansion projects include our previously announced expansions of PVC and VCM capacities at our plants in Germany and Geismar, Louisiana.

Financing Activities

Net cash used by financing activities during 2020 was \$216 million as compared to net cash provided of \$630 million in 2019. In 2020, out of abundance of caution, we borrowed \$1,000 million under our revolving credit facility, which we subsequently fully repaid in June 2020. In 2020, we completed the registered public offering of \$300 million aggregate principal amount of the 3.375% 2030 Senior Notes and we purchased in lieu of optional redemption the \$100 million 6 ½% 2029 GO Zone Senior Notes, the \$89 million 6 ½% 2035 GO Zone Senior Notes and the \$65 million 6 ½% 2035 IKE Zone Senior Notes. The remaining activities in 2020 were primarily related to the \$137 million payment of cash dividends, the \$55 million payment of cash distributions to noncontrolling interests, repurchases of common stock of \$54 million and repayment of short-term notes payable of \$17 million. In 2019, we received proceeds of \$784 million from the issuance of the 1.625% 2029 Senior Notes and \$63 million from the issuance of Westlake Partners common units. The remaining activities in 2019 were primarily related to the \$132 million payment of cash dividends, the \$50 million payment of cash distributions to noncontrolling interests and repurchases of common stock of \$30 million.

Net cash provided by financing activities during 2019 was \$630 million as compared to net cash used of \$1,427 million in 2018. In 2019, we received proceeds of \$784 million from the issuance of the 1.625% 2029 Senior Notes and \$63 million from the issuance of Westlake Partners common units. The remaining activities in 2019 were primarily related to the \$132 million payment of cash dividends, the \$50 million payment of cash distributions to noncontrolling interests and repurchases of common stock of \$30 million. The 2018 activity was mainly related to the redemption of \$704 million principal amount of the 2021 Notes in February 2018 and the redemption of \$461 million principal amount of the 2023 Notes in May 2018. The remaining activities in 2018 were primarily related to the \$120 million payment of cash dividends, the \$45 million payment of cash distributions to noncontrolling interests and repurchases of common stock of \$106 million.

Liquidity and Capital Resources

Liquidity and Financing Arrangements

Our principal sources of liquidity are from cash and cash equivalents, cash from operations, short-term borrowings under the Credit Agreement and our long-term financing.

In November 2014, our Board of Directors authorized a \$250 million stock repurchase program (the "2014 Program"). In November 2015, our Board of Directors approved the expansion of the 2014 Program by an additional \$150 million. In August 2018, our Board of Directors approved the further expansion of the existing 2014 Program by an additional \$150 million. As of December 31, 2020, we had repurchased 7,075,720 shares of our common stock for an aggregate purchase price of approximately \$419 million under the 2014 Program. During the year ended December 31, 2020, 995,529 shares of our common stock were repurchased under the 2014 Program. Purchases under the 2014 Program may be made either through the open market or in privately negotiated transactions. Decisions regarding the amount and the timing of purchases under the 2014 Program will be influenced by our cash on hand, our cash flow from operations, general market conditions and other factors. The 2014 Program may be discontinued by our Board of Directors at any time.

On October 4, 2018, Westlake Partners and Westlake Partners GP, the general partner of Westlake Partners, entered into an Equity Distribution Agreement with UBS Securities LLC, Barclays Capital Inc., Citigroup Global Markets Inc., Deutsche Bank Securities Inc., RBC Capital Markets, LLC, Merrill Lynch, Pierce, Fenner & Smith Incorporated and Wells Fargo Securities, LLC to offer and sell Westlake Partners common units, from time to time, up to an aggregate offering amount of \$50 million. This Equity Distribution Agreement was amended on February 28, 2020 to reference a new shelf registration for utilization under this agreement. No common units have been issued under this program in 2018, 2019 or 2020.

On March 20, 2020, out of an abundance of caution, we borrowed \$1 billion under our \$1 billion revolving credit facility that is scheduled to mature on July 24, 2023 (the "Credit Agreement") to maintain financial flexibility in light of uncertainty in the global markets caused by COVID-19. On June 4, 2020, we fully repaid the \$1 billion of borrowings under the Credit Agreement and, as a result, have no current borrowings outstanding under our revolving credit facility.

On June 12, 2020, we closed the public offering of \$300 million aggregate principal amount of the 3.375% 2030 Senior Notes. Net proceeds from the issuance of the 3.375% 2030 Senior Notes was used to fund the purchase in lieu of optional redemption of (1) \$100 million aggregate principal amount of the 2029 GO Zone Bonds, (2) \$89 million aggregate principal amount of the 2035 GO Zone Bonds and (3) \$65 million aggregate principal amount of the 2035 IKE Zone Bonds.

As discussed in more detail above under 'Significant Developments', the Company (i) purchased in lieu of optional redemption \$100 million aggregate principal amount of the 2029 GO Zone Bonds on August 1, 2020, and in connection therewith, the 6 ½% 2029 GO Zone Senior Notes were cancelled, and (ii) purchased in lieu of optional redemption (1) \$89 million aggregate principal amount of the 2035 GO Zone Bonds and (2) \$65 million aggregate principal amount of the 2035 IKE Zone Bonds, in each case, on November 1, 2020, and in connection therewith, the 6 ½% 2035 GO Zone Senior Notes and the 6 ½% 2035 IKE Zone Senior Notes were cancelled.

We believe that our sources of liquidity as described above are adequate to fund our normal operations and ongoing capital expenditures. Funding of any potential large expansions or potential acquisitions would likely necessitate, and therefore depend on our ability to obtain, additional financing in the future. We may not be able to access additional liquidity at cost effective interest rates due to the volatility of the commercial credit markets.

Cash and Cash Equivalents

As of December 31, 2020, our cash and cash equivalents totaled \$1,313 million. In addition, we have the Credit Agreement available to supplement cash if needed, as described under "Debt" below.

Debt

As of December 31, 2020, our indebtedness totaled \$3,566 million. See Note 11 to the consolidated financial statements appearing elsewhere in this Form 10-K for a discussion of our long-term indebtedness. Defined terms used in this section have the definitions assigned to such terms in Note 11 to the consolidated financial statements included in Item 8 of this Form 10-K.

Our ability to make payments on our indebtedness and to fund planned capital expenditures will depend on our ability to generate cash in the future, which is subject to general economic, financial, competitive, legislative, regulatory and other factors that are beyond our control. Based on our current level of operations and unless we were to undertake a new expansion or large acquisition, we believe our cash flows from operations, available cash and available borrowings under the Credit Agreement will be adequate to meet our normal operating needs for the foreseeable future.

Credit Agreement

On July 24, 2018, we entered into a new \$1 billion revolving credit facility that is scheduled to mature on July 24, 2023 (the "Credit Agreement"). The Credit Agreement bears interest at either (a) LIBOR plus a spread ranging from 1.00% to 1.75% or (b) Alternate Base Rate plus a spread ranging from 0.00% to 0.75% in each case depending on the credit rating of the Company. As of December 31, 2020, we had no borrowings outstanding under the Credit Agreement. As of December 31, 2020, we had no outstanding letters of credit and had borrowing availability of \$1 billion under the Credit Agreement. The Credit Agreement contains certain affirmative and negative covenants, including a quarterly total leverage ratio financial maintenance covenant. As of December 31, 2020, we were in compliance with the total leverage ratio financial maintenance covenant.

The Credit Agreement also contains certain events of default and if and for so long as certain events of default have occurred and are continuing, any overdue amounts outstanding under the Credit Agreement will accrue interest at an increased rate, the lenders can terminate their commitments thereunder and payments of any outstanding amounts could be accelerated by the lenders. None of our subsidiaries are required to guarantee our obligations under the Credit Agreement.

The Credit Agreement includes a \$150 million sub-limit for letters of credit, and any outstanding letters of credit will be deducted from availability under the facility. The Credit Agreement also provides for a discretionary \$50 million commitment for swingline loans to be provided on a same-day basis. We may also increase the size of the facility, in increments of at least \$25 million, up to a maximum of \$500 million, subject to certain conditions and if certain lenders agree to commit to such an increase.

In connection with our entry into the Credit Agreement, all guarantees by our then subsidiaries of our payment obligations under the 4.375% 2047 Senior Notes, the 3.60% 2022 Senior Notes, the 3.50% 2032 GO Zone Refunding Senior Notes, the 3.60% 2026 Senior Notes and the 5.0% 2046 Senior Notes were released.

3.60% Senior Notes due 2022

In July 2012, we issued \$250 million aggregate principal amount of the 3.60% 2022 Senior Notes. We may optionally redeem the 3.60% 2022 Senior Notes at any time and from time to time prior to April 15, 2022 (three months prior to the maturity date) for 100% of the principal plus accrued interest and a discounted "make whole" payment. On or after April 15, 2022, we may optionally redeem the 3.60% 2022 Senior Notes for 100% of the principal plus accrued interest. The holders of the 3.60% 2022 Senior Notes may require us to repurchase the 3.60% 2022 Senior Notes at a price of 101% of their principal amount, plus accrued and unpaid interest to the date of repurchase, upon the occurrence of both a "change of control" and, within 60 days of such change of control, a "below investment grade rating event" (as such terms are defined in the indenture governing the 3.60% 2022 Senior Notes).

3.60% Senior Notes due 2026 and 5.0% Senior Notes due 2046

In August 2016, we completed the private offering of \$750 million aggregate principal amount of our 3.60% 2026 Senior Notes and \$700 million aggregate principal amount of our 5.0% 2046 Senior Notes. In March 2017, the Company commenced registered exchange offers to exchange the 3.60% 2026 Senior Notes and the 5.0% 2046 Senior Notes for new notes that are identical in all material respects to the 3.60% 2026 Senior Notes and the 5.0% 2046 Senior Notes, except that the offer and issuance of the new Securities and Exchange Commission-registered notes have been registered under the Securities Act of 1933, as amended (the "Securities Act"). The exchange offers expired on April 24, 2017, and approximately 99.97% of the 3.60% 2026 Senior Notes and 100% of the 5.0% 2046 Senior Notes were exchanged. The notes that were not exchanged in the exchange offers have not been registered under the Securities Act or any state securities laws and may not be offered or sold in the U.S. absent registration or an applicable exemption from registration requirements or a transaction not subject to the registration requirements of the Securities Act or any state securities law.

Revenue Bonds

In December 1997, we entered into a loan agreement with a public trust established for public purposes for the benefit of the Parish of Calcasieu, Louisiana. The public trust issued \$11 million principal amount of tax-exempt waste disposal revenue bonds in order to finance our construction of waste disposal facilities for an ethylene plant. The waste disposal revenue bonds expire in December 2027 and are subject to redemption and mandatory tender for purchase prior to maturity under certain conditions. Interest on the waste disposal revenue bonds accrues at a rate determined by a remarketing agent and is payable quarterly. The interest rate on the waste disposal revenue bonds at December 31, 2020 and 2019 was 0.14% and 1.78%, respectively.

1.625% Senior Notes due 2029

In July 2019, we completed the registered public offering of €700 million aggregate principal amount of the 1.625% 2029 Senior Notes due July 17, 2029. The Company received approximately \$779 million of net proceeds from the offering. We may optionally redeem the 1.625% 2029 Senior Notes at any time and from time to time prior to April 17, 2029 (three months prior to the maturity date) for 100% of the principal plus accrued interest and a discounted "make whole" payment. On or after April 17, 2029, we may optionally redeem the 1.625% 2029 Senior Notes for 100% of the principal amount plus accrued interest. The holders of the 1.625% 2029 Senior Notes may require us to repurchase the 1.625% 2029 Senior Notes at a price of 101% of their principal amount, plus accrued and unpaid interest to the date of repurchase, upon the occurrence of both a "change of control" and, within 60 days of such change of control, a "below investment grade rating event" (as such terms are defined in the indenture governing the 1.625% 2029 Senior Notes).

GO Zone Bonds and IKE Zone Bonds

In November 2017, the Louisiana Local Government Environmental Facility and Development Authority (the "Authority") completed the offering of \$250 million aggregate principal amount of 3.50% tax-exempt revenue refunding bonds due November 1, 2032 (the "Refunding Bonds"), the net proceeds of which were used to redeem \$250 million aggregate principal amount of the Authority's 6 ¾% tax-exempt revenue bonds due November 1, 2032 issued by the Authority under the GO Zone Act in December 2007. In connection with the issuance of the Refunding Bonds, we issued \$250 million of the 3.5% 2032 GO Zone Refunding Senior Notes. The Refunding Bonds are subject to optional redemption by the Authority upon the direction of the Company at any time on or after November 1, 2027, for 100% of the principal plus accrued interest.

In July 2010, the Authority completed the reoffering of \$100 million of the 6 ½% 2029 GO Zone Bonds. In connection with the reoffering of the 6 ½% 2029 GO Zone Bonds, we issued \$100 million of the 6 ½% 2029 GO Zone Senior Notes. In December 2010, the Authority issued \$89 million of the 6 ½% 2035 GO Zone Bonds. In connection with the issuance of the 6 ½% 2035 GO Zone Bonds, we issued \$89 million of the 6 ½% 2035 GO Zone Senior Notes. In December 2010, the Authority completed the offering of \$65 million of the 6 ½% 2035 IKE Zone Bonds under Section 704 of the Emergency Economic Stabilization Act of 2008. In connection with the issuance of the 6 ½% 2035 IKE Zone Bonds, we issued \$65 million of the 6 ½% 2035 IKE Zone Senior Notes.

On August 1, 2020, the Company purchased the 6 ½% 2029 GO Zone Bonds in lieu of optional redemption, and in connection therewith, the 6 ½% 2029 GO Zone Senior Notes were cancelled. On November 1, 2020, the Company purchased the 6 ½% 2035 GO Zone Bonds and the 6 ½% 2035 IKE Zone Bonds in lieu of optional redemption, and in connection therewith, the 6 ½% 2035 GO Zone Senior Notes and the 6 ½% 2035 IKE Zone Senior Notes were cancelled. We used a portion of the net proceeds from the issuance of the 3.375% 2030 Senior Notes to fund the purchase in lieu of optional redemption of the 6 ½% 2029 GO Zone Bonds, the 6 ½% 2035 GO Zone Bonds and the 6 ½% 2035 IKE Zone Bonds.

3.375% Senior Notes due 2030

In June 2020, we completed the registered public offering of \$300 million aggregate principal amount of the 3.375% 2030 Senior Notes due June 15, 2030. The Company received approximately \$297 million of net proceeds from the offering, and used a portion of the net proceeds to fund the purchase in lieu of optional redemption of the 6 ½% 2029 GO Zone Bonds, the 6 ½% 2035 GO Zone Bonds and the 6 ½% 2035 IKE Zone Bonds. We may optionally redeem the 3.375% 2030 Senior Notes at any time and from time to time prior to March 15, 2030 (three months prior to the maturity date) for 100% of the principal plus accrued interest and a discounted "make whole" payment. On or after March 15, 2030, we may optionally redeem the 3.375% 2030 Senior Notes for 100% of the principal amount plus accrued interest. The holders of the 3.375% 2030 Senior Notes may require us to repurchase the 3.375% 2030 Senior Notes at a price of 101% of their principal amount, plus accrued and unpaid interest to, but not including, the date of repurchase, upon the occurrence of both a "change of control" and, within 60 days of such change of control, a "below investment grade rating event" (as such terms are defined in the indenture governing the 3.375% 2030 Senior Notes).

4.375% Senior Notes due 2047

In November 2017, we completed the registered public offering of \$500 million aggregate principal amount of 4.375% Senior Notes due November 15, 2047. We may optionally redeem the 4.375% 2047 Senior Notes at any time and from time to time prior to May 15, 2047 (six months prior to the maturity date) for 100% of the principal plus accrued interest and a discounted "make whole" payment. On or after May 15, 2047, we may optionally redeem the 4.375% 2047 Senior Notes for 100% of the principal amount plus accrued interest. The holders of the 4.375% 2047 Senior Notes may require us to repurchase the 4.375% 2047 Senior Notes at a price of 101% of their principal amount, plus accrued and unpaid interest to, but not including, the date of repurchase, upon the occurrence of both a "change of control" and, within 60 days of such change of control, a "below investment grade rating event" (as such terms are defined in the indenture governing the 4.375% 2047 Senior Notes).

The indenture governing the 3.60% 2022 Senior Notes, the 3.60% 2026 Senior Notes, the 1.625% 2029 Senior Notes, the 3.375% 2030 Senior Notes, the 3.5% 2032 Senior Notes, the 5.0% 2046 Senior Notes, and the 4.375% 2047 Senior Notes, contain customary events of default and covenants that, among other things and subject to certain exceptions, restrict us and certain of our subsidiaries' ability to (1) incur certain secured indebtedness, (2) engage in certain sale and leaseback transactions and (3) consolidate, merge or transfer all or substantially all of its assets.

As of December 31, 2020, we were in compliance with all of our long-term debt covenants.

Westlake Chemical Partners LP Credit Arrangements

Our subsidiary, Westlake Chemical Finance Corporation, is the lender party to a \$600 million revolving credit facility with Westlake Chemical Partners LP ("Westlake Partners"), originally entered into on April 29, 2015 and amended in August and December 2017. In addition, on March 19, 2020, Westlake Partners and Westlake Chemical Finance Corporation entered into an amendment to the revolving credit facility, to extend the maturity date to March 19, 2023 and add a phase-out provision for LIBOR, which is to be replaced by an alternate benchmark rate. Borrowings under the revolving credit facility bear interest at LIBOR plus a spread ranging from 2.0% to 3.0% (depending on Westlake Partners' consolidated leverage ratio), payable quarterly. Westlake Partners may pay all or a portion of the interest on any borrowings in kind, in which case any such amounts would be added to the principal amount of the loan. As of December 31, 2020, outstanding borrowings under the revolving credit facility totaled \$377 million and bore interest at the LIBOR rate plus 2.0%.

Our subsidiary, Westlake Polymers LLC, is the administrative agent to a \$600 million revolving credit facility with OpCo. The revolving credit facility is scheduled to mature in September 2023. As of December 31, 2020, outstanding borrowings under the credit facility totaled \$23 million and bore interest at the LIBOR rate plus 2.0%, which is accrued in arrears quarterly.

We consolidate Westlake Partners and OpCo for financial reporting purposes as we have a controlling financial interest. As such, the revolving credit facilities described above between our subsidiaries and Westlake Partners and OpCo are eliminated upon consolidation.

Contractual Obligations and Commercial Commitments

In addition to long-term debt, we are required to make payments relating to various types of obligations. The following table summarizes our contractual obligations as of December 31, 2020 relating to long-term debt, operating leases, finance leases, pension benefits funding, post-retirement healthcare benefits, purchase obligations and interest payments for the next five years and thereafter. The amounts do not include deferred charges and other items classified in other liabilities in the consolidated balance sheet due to the uncertainty of the future payment schedule.

	Payment Due by Period				
	Total	2021	2022-2023	2024-2025	Thereafter
	(dollars in millions)				
Contractual Obligations					
Long-term debt	\$ 3,620	\$ —	\$ 250	\$ —	\$ 3,370
Operating leases	523	102	154	96	171
Finance leases	17	3	5	5	4
Pension benefits funding	140	6	40	38	56
Post-retirement healthcare benefits	78	8	15	15	40
Purchase obligations	6,654	1,747	1,714	1,220	1,973
Interest payments	1,970	126	238	233	1,373
Asset retirement obligations	63	12	—	2	49
Total	\$ 13,065	\$ 2,004	\$ 2,416	\$ 1,609	\$ 7,036
Other Commercial Commitments					
Standby letters of credit	\$ 23	\$ 17	\$ —	\$ —	\$ 6

Pension Benefits Funding. This represents the projected timing of contributions to our defined benefit pension plans which cover certain eligible employees in the United States and non-U.S. countries.

Post-retirement Healthcare Benefits. This represents the projected timing of contributions to our post-retirement healthcare benefits to the employees of certain subsidiaries who meet certain minimum age and service requirements.

Purchase Obligations. Purchase obligations include agreements to purchase goods and services that are enforceable and legally binding and that specify all significant terms, including a minimum quantity and price. We are party to various obligations to purchase goods and services, including commitments to purchase various feedstock, utilities, nitrogen, oxygen, product storage, pipeline usage and logistic support, in each case in the ordinary course of our business, as well as various purchase commitments for our capital projects. The amounts shown in the table above reflect our estimates based on the contractual quantities and the prices in effect under contractual agreements as of December 31, 2020.

Interest Payments. Interest payments are based on interest rates in effect at December 31, 2020.

Asset Retirement Obligations. This includes the estimated costs and timing of payments to satisfy our recognized asset retirement obligations.

Standby Letters of Credit. This includes (1) our obligation under an \$11 million letter of credit issued in connection with the \$11 million tax-exempt waste disposal revenue bonds and (2) other letters of credit totaling \$12 million issued primarily to support commercial obligations and obligations under our insurance programs, including workers' compensation claims.

Uncertain Income Tax Positions. We have recognized a liability for our uncertain income tax positions of approximately \$17 million as of December 31, 2020. We do not believe we are likely to pay any material amounts during the year ending December 31, 2021. The ultimate resolution and timing of payment for remaining matters continues to be uncertain and are therefore excluded from the Contractual Obligations table above.

Off-Balance Sheet Arrangements

None.

Critical Accounting Policies

Critical accounting policies are those that are important to our financial condition and require management's most difficult, subjective or complex judgments. Different amounts would be reported under different operating conditions or under alternative assumptions. We have evaluated the accounting policies used in the preparation of the accompanying consolidated financial statements and related notes and believe those policies are reasonable and appropriate.

We apply those accounting policies that we believe best reflect the underlying business and economic events, consistent with GAAP. Our more critical accounting policies include those related to long-lived assets, fair value estimates, accruals for long-term employee benefits, accounts receivable, income taxes and environmental and legal obligations. Inherent in such policies are certain key assumptions and estimates. We periodically update the estimates used in the preparation of the financial statements based on our latest assessment of the current and projected business and general economic environment. Our significant accounting policies are summarized in Note 1 to the consolidated financial statements appearing elsewhere in this Form 10-K. We believe the following to be our most critical accounting policies applied in the preparation of our financial statements.

Long-Lived Assets. Key estimates related to long-lived assets include useful lives, recoverability of carrying values and existence of any retirement obligations. Such estimates could be significantly modified. The carrying values of long-lived assets could be impaired by significant changes or projected changes in supply and demand fundamentals (which would have a negative impact on operating rates or margins), new technological developments, new competitors with significant raw material or other cost advantages, adverse changes associated with the United States and world economies, the cyclical nature of the chemical and refining industries and uncertainties associated with governmental actions.

We evaluate long-lived assets for potential impairment indicators whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable, including when negative conditions such as significant current or projected operating losses exist. Our judgments regarding the existence of impairment indicators are based on legal factors, market conditions and the operational performance of our businesses. Actual impairment losses incurred could vary significantly from amounts estimated. Long-lived assets assessed for impairment are grouped at the lowest level for which identifiable cash flows are largely independent of the cash flows of other assets and liabilities. Additionally, future events could cause us to conclude that impairment indicators exist and that associated long-lived assets of our businesses are impaired. Any resulting impairment loss could have a material adverse impact on our financial condition and results of operations.

The estimated useful lives of long-lived assets range from one to 40 years. Depreciation and amortization of these assets, including amortization of deferred turnaround costs, under the straight-line method over their estimated useful lives totaled \$773 million, \$713 million and \$641 million in 2020, 2019 and 2018, respectively. If the useful lives of the assets were found to be shorter than originally estimated, depreciation or amortization charges would be accelerated.

We defer the costs of planned major maintenance activities, or turnarounds, and amortize the costs over the period until the next planned turnaround of the affected unit. Total costs deferred on turnarounds were \$24 million, \$40 million and \$79 million in 2020, 2019 and 2018, respectively. Amortization in 2020, 2019 and 2018 of previously deferred turnaround costs was \$48 million, \$55 million and \$39 million, respectively. As of December 31, 2020, deferred turnaround costs, net of accumulated amortization, totaled \$102 million. Expensing turnaround costs as incurred would likely result in greater variability of our quarterly operating results and would adversely affect our financial position and results of operations.

Additional information concerning long-lived assets and related depreciation and amortization appears in Notes 6 and 8 to the consolidated financial statements appearing elsewhere in this Form 10-K.

Fair Value Estimates. We develop estimates of fair value to allocate the purchase price paid to acquire a business to the assets acquired and liabilities assumed in an acquisition, to assess impairment of long-lived assets, goodwill and intangible assets and to record marketable securities and pension plan assets. We use all available information to make these fair value determinations, including the engagement of third-party consultants. At December 31, 2020, our recorded goodwill was \$1,083 million. In addition, we record all pension plan assets and certain marketable securities at fair value. The fair value of these items is determined by quoted market prices or from observable market-based inputs. See Note 16 to the consolidated financial statements appearing elsewhere in this Form 10-K for more information.

Business Combinations and Intangible Assets Including Goodwill. We account for business combinations using the acquisition method of accounting, and accordingly, the assets and liabilities of the acquired business are recorded at their fair values at the date of acquisition. The excess of the purchase price over the estimated fair value is recorded as goodwill. Any changes in the estimated fair values of the net assets recorded for acquisitions prior to the finalization of more detailed analysis, but not to exceed one year from the date of acquisition, will change the amount of the purchase price allocable to goodwill. Any subsequent changes to any purchase price allocations that are material to our consolidated financial results will be adjusted in the same period's financial statements, including the effect on earnings of changes in depreciation, amortization or other income effects, if any, as a result of the change to the provisional amounts, calculated as if the accounting had been completed at the acquisition date. All acquisition costs are expensed as incurred and in-process research and development costs are recorded at fair value as an indefinite-lived intangible asset and assessed for impairment thereafter until completion, at which point the asset is amortized over its expected useful life. Separately recognized transactions associated with business combinations are generally expensed subsequent to the acquisition date. The application of business combination and impairment accounting requires the use of significant estimates and assumptions.

Goodwill is evaluated for impairment at least annually, or when events or changes in circumstances indicate the fair value of a reporting unit with goodwill has been reduced below its carrying value. We perform our annual impairment assessment for the Olefins and Vinyls reporting units in October and April, respectively. We may elect to perform an optional qualitative assessment to determine whether a quantitative impairment analysis is required. The qualitative assessment considers factors such as macroeconomic conditions, industry and market considerations, cost factors related to raw materials and labor, current and projected financial performance, changes in management or strategy, and market capitalization. Alternatively, we may unconditionally elect to bypass the qualitative assessment and perform a quantitative goodwill impairment assessment in any period.

We elected to perform the quantitative assessment for both of our segments' reporting units during 2020. The quantitative analysis compares a reporting unit's fair value to its carrying amount to determine whether goodwill is impaired. The fair values of the reporting units are calculated using both a discounted cash flow methodology and a market value methodology. The discounted cash flow projections are based on a forecast to reflect the cyclical nature of the business. The forecast is based on historical results and estimates by management, including its strategic and operational plans, and financial performance of the market. The future cash flows are discounted to present value using an applicable discount rate. The significant assumptions used in determining the fair value of the reporting unit using the market value methodology include the determination of appropriate market comparables and the estimated multiples of EBITDA a willing buyer is likely to pay. Even if the fair values of the reporting units decreased by 10% from the fair values determined in the most recent quantitative tests performed during 2020, the carrying values of the reporting units would not have exceeded their fair values. See Item 1A, "Risk Factors—If our goodwill, indefinite-lived intangible assets or other intangible assets become impaired in the future, we may be required to record non-cash charges to earnings, which could be significant."

The results of operations of acquired businesses are included in our consolidated financial statements from the acquisition date.

Long-Term Employee Benefit Costs. Our costs for long-term employee benefits, particularly pension and postretirement medical and life benefits, are incurred over long periods of time and involve many uncertainties over those periods. The net periodic benefit cost attributable to current periods is based on several assumptions about such future uncertainties and is sensitive to changes in those assumptions. It is our responsibility, often with the assistance of independent experts, to select assumptions that represent the best estimates of those uncertainties. It is also our responsibility to review those assumptions periodically and, if necessary, adjust the assumptions to reflect changes in economic or other factors.

Accounting for employee retirement plans involves estimating the cost of benefits that are to be provided in the future and attempting to match, for each employee, that estimated cost to the period worked. To accomplish this, we rely extensively on advice from actuaries, and we make assumptions about inflation, investment returns, mortality, employee turnover and discount rates that ultimately impact amounts recorded. Changes in these assumptions may result in different expense and liability amounts. One of the more significant assumptions relates to the discount rate for measuring benefit obligations. At December 31, 2020, the projected pension benefit obligations for U.S. and non-U.S. plans were calculated using assumed weighted average discount rates of 2.1% and 0.8%, respectively. The discount rates were determined using a benchmark pension discount curve and applying spot rates from the curve to each year of expected benefit payments to determine the appropriate discount rate. As a result of the funding relief provided by the enactment of the Bipartisan Budget Act of 2015, no minimum funding requirements are expected during 2021 for the U.S. pension plans. Additional information on the 2021 funding requirements and key assumptions underlying these benefit costs appear in Note 14 to the consolidated financial statements appearing elsewhere in this Form 10-K.

The following table reflects the sensitivity of the benefit obligation of our pension plans to changes in the actuarial assumptions:

	2020	
	U.S. Plans	Non-U.S. Plans
	(dollars in millions)	
Projected benefit obligation, end of year	\$ 748	\$ 173
Discount rate increases by 100 basis points	(82)	(25)
Discount rate decreases by 100 basis points	102	30

A one-percentage point increase or decrease in assumed healthcare trend rates would not have a significant effect on the amounts reported for the healthcare plans.

While we believe that the amounts recorded in the consolidated financial statements appearing elsewhere in this Form 10-K related to these retirement plans are based on the best estimates and judgments available, the actual outcomes could differ from these estimates.

Income Taxes. We utilize the liability method of accounting for income taxes. Under the liability method, deferred tax assets or liabilities are recorded based upon temporary differences between the tax basis of assets and liabilities and their carrying values for financial reporting purposes. Deferred tax expense or benefit is the result of changes in the deferred tax assets and liabilities during the period. Valuation allowances are recorded against deferred tax assets when it is considered more likely than not that the deferred tax assets will not be realized. Additional information on income taxes appears in Note 17 to the consolidated financial statements appearing elsewhere in this Form 10-K.

Environmental and Legal Obligations. We consult with various professionals to assist us in making estimates relating to environmental costs and legal proceedings. We accrue an expense when we determine that it is probable that a liability has been incurred and the amount is reasonably estimable. While we believe that the amounts recorded in the accompanying consolidated financial statements related to these contingencies are based on the best estimates and judgments available, the actual outcomes could differ from our estimates. Additional information about certain legal proceedings and environmental matters appears in Note 22 to the consolidated financial statements appearing elsewhere in this Form 10-K.

Asset Retirement Obligations. We recognize asset retirement obligations in the period in which the liability becomes probable and reasonably estimable. Initially, the asset retirement obligation is recorded at fair value and capitalized as a component of the carrying value of the long-lived asset to which the obligation relates. The liability is recorded at its future value each period, and the capitalized cost is depreciated over the estimated useful life of the related asset. Upon settlement of the liability, a gain or loss is recorded. We have conditional asset retirement obligations for the removal and disposal of hazardous materials from certain of our manufacturing facilities. Additional information on asset retirement obligations appears in Note 1, under Asset Retirement Obligations, to the consolidated financial statements appearing elsewhere in this Form 10-K.

We also have conditional asset retirement obligations that have not been recognized because the fair values of the conditional legal obligations cannot be measured due to the indeterminate settlement date of the obligations. Settlements of the unrecognized conditional asset retirement obligations are not expected to have a material adverse effect on our financial condition, results of operations or cash flows in any individual reporting period.

Recent Accounting Pronouncements

See Note 1 to the consolidated financial statements included in Item 8 of this Form 10-K for a full description of recent accounting pronouncements, including expected dates of adoption and estimated effects on results of operations and financial condition.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk

Commodity Price Risk

A substantial portion of our products and raw materials are commodities whose prices fluctuate as market supply and demand fundamentals change. Accordingly, product margins and the level of our profitability tend to fluctuate with changes in the business cycle. We try to protect against such instability through various business strategies. Our strategies include ethylene product feedstock flexibility and moving downstream into the olefins and vinyls products where pricing is more stable. We use derivative instruments in certain instances to reduce price volatility risk on feedstocks and products. Based on our open derivative positions on ethane at December 31, 2020, a hypothetical \$0.10 increase in the price of a gallon of ethane would have increased our income before income taxes by \$35 million and a hypothetical \$0.10 increase in the price of a million British thermal units of natural gas would have decreased our income before income taxes by \$2 million.

Interest Rate Risk

We are exposed to interest rate risk with respect to fixed and variable rate debt. At December 31, 2020, we had \$3,609 million aggregate principal amount of fixed rate debt. We are subject to the risk of higher interest cost if and when this debt is refinanced. If interest rates were 1.0% higher at the time of refinancing, our annual interest expense would increase by approximately \$36 million. Also, at December 31, 2020, we had \$11 million principal amount of variable rate debt outstanding, which represents the tax-exempt waste disposal revenue bonds. We do not currently hedge our variable interest rate debt, but we may do so in the future. The average variable interest rate for our variable rate debt of \$11 million as of December 31, 2020 was 0.14%. A hypothetical 100 basis point increase in the average interest rate on our variable rate debt would not result in a material change in the interest expense.

LIBOR is used as a reference rate for borrowings under our revolving line of credit. The phase-out of LIBOR is set to commence at the end of 2021 and conclude by June 30, 2023. We do not expect the impact of the LIBOR phase out to be material as we do not have any external LIBOR-based borrowings outstanding at December 31, 2020.

Foreign Currency Exchange Rate Risk

We are exposed to foreign currency exchange rate risk associated with our international operations. However, the effect of fluctuations in foreign currency exchange rates caused by our international operations has not had a material impact on our overall operating results. We may engage in activities to mitigate our exposure to foreign currency exchange risk in certain instances through the use of currency exchange derivative instruments, including forward exchange contracts, cross-currency swaps or spot purchases. A forward exchange contract obligates us to exchange predetermined amounts of specified currencies at a stated exchange rate on a stated date. A cross-currency swap obligates us to make periodic payments in the local currency and receive periodic payments in our functional currency based on the notional amount of the instrument. In January 2018, we entered into foreign exchange hedging contracts designated as net investment hedges with an aggregate notional value of €220 million designed to reduce the volatility in stockholders' equity from changes in currency exchange rates associated with our net investments in foreign operations. In July 2019, we terminated a portion of the foreign exchange hedging contract with a notional value of €70 million. The notional value of the remaining net investment hedges was €150 million at December 31, 2020. The arrangement is scheduled to mature in 2026.

In July 2019, we completed the registered public offering of €700 million aggregate principal amount of the 1.625% Senior Notes. We designated this euro-denominated debt as a non-derivative net investment hedge of a portion of our net investments in euro functional-currency denominated subsidiaries to offset foreign currency fluctuations.

Item 8. Financial Statements and Supplementary Data

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Financial statement schedules not included in this Form 10-K have been omitted because they are not applicable or because the required information is shown in the financial statements or notes thereto.

MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

The management of Westlake Chemical Corporation is responsible for establishing and maintaining adequate internal control over financial reporting. Westlake'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.

Westlake management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2020. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in *Internal Control—Integrated Framework* (2013). Based on its assessment, Westlake's management has concluded that the Company's internal control over financial reporting was effective as of December 31, 2020 based on those criteria.

PricewaterhouseCoopers LLP, the independent registered public accounting firm that audited the financial statements included in this Annual Report on Form 10-K, has also audited the effectiveness of internal control over financial reporting as of December 31, 2020 as stated in their report that appears on the following page.

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of Westlake Chemical Corporation

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Westlake Chemical Corporation and its subsidiaries (the "Company") as of December 31, 2020 and 2019, and the related consolidated statements of operations, of comprehensive income, of changes in stockholders' equity and of cash flows for each of the three years in the period ended December 31, 2020, including the related notes (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2020, 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, 2020 and 2019, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2020 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, 2020, 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 for the North America Vinyls reporting unit

As described in Notes 1 and 8 to the consolidated financial statements, the Company's Vinyls segment goodwill balance was \$1,053 million as of December 31, 2020, which includes the goodwill balance associated with the North America Vinyls reporting unit. Management performs its annual impairment assessment for the Vinyls reporting units in April, including the North America Vinyls reporting unit. The quantitative analysis compares the reporting unit's fair value to its carrying amount to determine whether goodwill is impaired. The fair value of the North America Vinyls reporting unit assessed during the April 2020 impairment test was calculated using both a discounted cash flow methodology and a market value methodology. The discounted cash flow projections were based on a long-term forecast. The forecast was based on prices and spreads projected by third-party industry publications, historical results, and estimates by management, including its strategic and operational plans. Significant assumptions used in the discounted cash flow projection included projected sales volumes based on production capacities. The future cash flows were discounted to present value using a discount rate. Significant assumptions used in determining the fair value of the reporting unit using the market value methodology included the determination of market comparables and the estimated multiples of net income before interest expense, income taxes, depreciation and amortization ("EBITDA") a willing buyer is likely to pay.

The principal considerations for our determination that performing procedures relating to the goodwill impairment assessment for the North America Vinyls reporting unit is a critical audit matter are there was significant judgment by management when developing the fair value estimate of this reporting unit. This in turn led to a high degree of auditor judgment, subjectivity, and effort in performing procedures and evaluating the significant assumptions used in management's discounted cash flow and market value methodologies, including projected sales volumes, discount rate, determination of market comparables and the estimated multiples of EBITDA. In addition, the audit effort involved the use of professionals with specialized skill and knowledge to assist in evaluating the audit evidence obtained from these procedures.

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 the goodwill impairment assessment for the Company's reporting units, including controls over measurement of the fair value of the North America Vinyls reporting unit. These procedures also included, among others, testing management's process for developing the fair value estimate; evaluating the appropriateness of the discounted cash flow and market value methodologies; testing the completeness, accuracy, and relevance of underlying data used in the model; and evaluating the significant assumptions used by management, including projected sales volumes, discount rate, determination of market comparables and the estimated multiples of EBITDA. When assessing the assumptions related to projected sales volumes, market comparables, and estimated multiples of EBITDA, we evaluated 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 evaluating the appropriateness of the Company's discounted cash flow and market value methodologies and certain significant assumptions, including the discount rate.

/s/PricewaterhouseCoopers LLP

Houston, Texas
February 24, 2021

We have served as the Company's auditor since 1986, which includes periods before the Company became subject to SEC reporting requirements.

WESTLAKE CHEMICAL CORPORATION
CONSOLIDATED BALANCE SHEETS

	December 31,	
	2020	2019
ASSETS		
Current assets		
Cash and cash equivalents	\$ 1,313	\$ 728
Accounts receivable, net	1,214	1,036
Inventories	918	936
Prepaid expenses and other current assets	32	42
Total current assets	3,477	2,742
Property, plant and equipment, net	6,920	6,912
Operating lease right-of-use assets	461	443
Goodwill	1,083	1,074
Customer relationships, net	444	523
Other intangible assets, net	168	187
Equity method investments	1,059	1,112
Other assets, net	223	268
Total assets	\$ 13,835	\$ 13,261
LIABILITIES AND EQUITY		
Current liabilities		
Accounts payable	\$ 536	\$ 473
Accrued and other liabilities	821	768
Total current liabilities	1,357	1,241
Long-term debt, net	3,566	3,445
Deferred income taxes	1,368	1,255
Pension and other post-retirement benefits	391	360
Operating lease liabilities	376	355
Other liabilities	199	202
Total liabilities	7,257	6,858
Commitments and contingencies (Note 22)		
Stockholders' equity		
Preferred stock, \$0.01 par value, 50,000,000 shares authorized; no shares issued and outstanding	—	—
Common stock, \$0.01 par value, 300,000,000 shares authorized; 134,651,380 and 134,651,380 shares issued at December 31, 2020 and 2019, respectively	1	1
Common stock, held in treasury, at cost; 6,821,174 and 6,266,609 shares at December 31, 2020 and 2019, respectively	(401)	(377)
Additional paid-in capital	569	553
Retained earnings	5,938	5,757
Accumulated other comprehensive loss	(64)	(74)
Total Westlake Chemical Corporation stockholders' equity	6,043	5,860
Noncontrolling interests	535	543
Total equity	6,578	6,403
Total liabilities and equity	\$ 13,835	\$ 13,261

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

WESTLAKE CHEMICAL CORPORATION
CONSOLIDATED STATEMENTS OF OPERATIONS

	Year Ended December 31,		
	2020	2019	2018
(in millions of dollars, except share amounts and per share data)			
Net sales	\$ 7,504	\$ 8,118	\$ 8,635
Cost of sales	6,481	6,858	6,648
Gross profit	1,023	1,260	1,987
Selling, general and administrative expenses	449	458	445
Amortization of intangibles	109	109	101
Restructuring, transaction and integration-related costs	36	37	33
Income from operations	429	656	1,408
Other income (expense)			
Interest expense	(142)	(124)	(126)
Other income, net	44	38	52
Income before income taxes	331	570	1,334
Provision for (benefit from) income taxes	(42)	108	300
Net income	373	462	1,034
Net income attributable to noncontrolling interests	43	41	38
Net income attributable to Westlake Chemical Corporation	\$ 330	\$ 421	\$ 996
Earnings per common share attributable to Westlake Chemical Corporation:			
Basic	\$ 2.57	\$ 3.26	\$ 7.66
Diluted	\$ 2.56	\$ 3.25	\$ 7.62
Weighted average common shares outstanding:			
Basic	127,850,592	128,395,184	129,401,823
Diluted	128,089,058	128,757,293	129,985,753

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

WESTLAKE CHEMICAL CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

	Year Ended December 31,		
	2020	2019	2018
	(in millions of dollars)		
Net income	\$ 373	\$ 462	\$ 1,034
Other comprehensive income (loss), net of income taxes			
Pension and other post-retirement benefits			
Pension and other post-retirement benefits reserves adjustment	(37)	(32)	(33)
Income tax benefit on pension and other post-retirement benefits	10	8	8
Foreign currency translation adjustments			
Foreign currency translation	23	17	(59)
Income tax benefit (provision) on foreign currency translation	18	(4)	—
Other comprehensive income (loss), net of income taxes	14	(11)	(84)
Comprehensive income	<u>387</u>	<u>451</u>	<u>950</u>
Comprehensive income attributable to noncontrolling interests, net of tax of \$1, \$2 and \$4 for 2020, 2019 and 2018, respectively	47	42	36
Comprehensive income attributable to Westlake Chemical Corporation	<u>\$ 340</u>	<u>\$ 409</u>	<u>\$ 914</u>

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

WESTLAKE CHEMICAL CORPORATION
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY

stock-based compensation	—	—	(440,964)	30	(13)	(12)	—	—	5
Stock-based compensation	—	—	—	—	29	—	—	—	29
Dividends declared	—	—	—	—	—	(137)	—	—	(137)
Distributions to noncontrolling interests	—	—	—	—	—	—	—	(55)	(55)
Balances at December 31, 2020	134,651,380	\$ 1	6,821,174	\$ (401)	\$ 569	\$ 5,938	\$ (64)	\$ 535	\$ 6,578

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

WESTLAKE CHEMICAL CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year Ended December 31,		
	2020	2019	2018
	(in millions of dollars)		
Cash flows from operating activities			
Net income	\$ 373	\$ 462	\$ 1,034
Adjustments to reconcile net income to net cash provided by operating activities			
Depreciation and amortization	773	713	641
Stock-based compensation expense	29	25	22
Loss from disposition and write-off of property, plant and equipment	33	49	44
Deferred income taxes	146	54	62
Other losses (gains), net	21	1	(20)
Changes in operating assets and liabilities, net of effect of business acquisitions			
Accounts receivable	(161)	59	(58)
Inventories	29	112	(123)
Prepaid expenses and other current assets	2	(1)	(1)
Accounts payable	67	(89)	(100)
Accrued and other liabilities	46	(13)	(8)
Other, net	(61)	(71)	(84)
Net cash provided by operating activities	1,297	1,301	1,409
Cash flows from investing activities			
Acquisition of businesses, net of cash acquired	—	(314)	—
Additions to investments in unconsolidated subsidiaries	(18)	(862)	(68)
Additions to property, plant and equipment	(525)	(787)	(702)
Return of investment from an unconsolidated subsidiary	44	—	—
Other, net	(10)	9	16
Net cash used for investing activities	(509)	(1,954)	(754)
Cash flows from financing activities			
Distributions to noncontrolling interests	(55)	(50)	(45)
Dividends paid	(137)	(132)	(120)
Net proceeds from debt issuance and drawdown of revolver	1,299	784	—
Net proceeds from issuance of Westlake Chemical Partners LP common units	—	63	—
Net proceeds from (repayment of) short-term notes payable	(17)	2	—
Repayment of revolver and senior notes	(1,254)	—	(1,165)
Repurchase of common stock for treasury	(54)	(30)	(106)
Other, net	2	(7)	9
Net cash provided by (used for) financing activities	(216)	630	(1,427)
Effect of exchange rate changes on cash, cash equivalents and restricted cash	15	(2)	(7)
Net increase (decrease) in cash, cash equivalents and restricted cash	587	(25)	(779)
Cash, cash equivalents and restricted cash at beginning of the year	750	775	1,554
Cash, cash equivalents and restricted cash at end of the year	\$ 1,337	\$ 750	\$ 775

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

WESTLAKE CHEMICAL CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(in millions of dollars, except share amounts and per share data)

1. Description of Business and Significant Accounting Policies

Description of Business

Westlake Chemical Corporation (the "Company") operates as an integrated global manufacturer and marketer of basic chemicals, vinyls, polymers and building products. These products include some of the most widely used chemicals in the world, which are fundamental to many diverse consumer and industrial markets, including flexible and rigid packaging, automotive products, coatings, residential and commercial construction as well as other durable and non-durable goods. The Company's customers range from large chemical processors and plastics fabricators to small construction contractors, municipalities and supply warehouses primarily throughout North America and Europe. The petrochemical industry is subject to price fluctuations and volatile feedstock pricing typical of a commodity-based industry, the effects of which may not be immediately passed along to customers.

Westlake Chemical Partners LP

In 2014, the Company formed Westlake Chemical Partners LP ("Westlake Partners") to operate, acquire and develop ethylene production facilities and related assets. Westlake Partners' assets consist of a limited partner interest in Westlake Chemical OpCo LP ("OpCo"), as well as the general partner interest in OpCo. OpCo's assets include two ethylene production facilities at the Company's Lake Charles, Louisiana site, one ethylene production facility at the Company's Calvert City, Kentucky site and a 200-mile common carrier ethylene pipeline that runs from Mont Belvieu, Texas to the Company's Longview, Texas site. As of December 31, 2020, the Company held a 77.2% limited partner interest in OpCo and a controlling interest in Westlake Partners. The operations of Westlake Partners are consolidated in the Company's financial statements.

Principles of Consolidation

The consolidated financial statements include the accounts of the Company and subsidiaries in which the Company directly or indirectly owns more than a 50% voting interest and exercises control and, when applicable, entities for which the Company has a controlling financial interest or is the primary beneficiary. Investments in majority-owned companies where the Company does not exercise control and investments in nonconsolidated affiliates (20%-50% owned companies, joint ventures and partnerships) are accounted for using the equity method of accounting. Undistributed earnings from joint ventures included in retained earnings were immaterial as of December 31, 2020. All intercompany transactions and balances are eliminated in consolidation.

Certain reclassifications have been made to the prior-year financial statements to conform to the current year presentation.

Noncontrolling interests represent the direct equity interests held by investors in the Company's consolidated subsidiaries, Westlake Partners, Taiwan Chlorine Industries, Ltd. and Suzhou Huasu Plastics Co., Ltd.

Basis of Presentation

The accompanying consolidated financial statements have been prepared in conformity with the accounting principles generally accepted in the United States.

Cash and Cash Equivalents

Cash equivalents consist of highly liquid investments that are readily convertible into cash and have a maturity of three months or less at the date of acquisition.

Concentration of Credit Risk

Financial instruments which potentially subject the Company to concentration of risk consist principally of trade receivables from customers engaged in manufacturing polyethylene products, polyvinyl chloride ("PVC") products and PVC pipe products. The Company performs periodic credit evaluations of the customers' financial condition and generally does not require collateral. The Company maintains allowances for potential losses.

WESTLAKE CHEMICAL CORPORATION**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**
(in millions of dollars, except share amounts and per share data)***Allowance for Credit Losses***

The determination of the allowance for credit losses is based on estimation of the amount of accounts receivable that the Company believes are unlikely to be collected. Estimating this amount requires analysis of the financial strength of the Company's customers, the use of historical experience, the Company's accounts receivable aged trial balance, customer specific collectability analysis and an evaluation of economic conditions. The allowance for credit losses is reviewed quarterly. Past due balances over 90 days and high-risk accounts as determined by the analysis of financial strength of customers are reviewed individually for collectability.

Inventories

Inventories primarily include product, material and supplies. Inventories are stated at lower of cost or net realizable value. Cost is determined using the first-in, first-out ("FIFO") or average method.

Property, Plant and Equipment

Property, plant and equipment are carried at cost, net of accumulated depreciation. Cost includes expenditures for improvements and betterments that extend the useful lives of the assets and interest capitalized on significant capital projects. Capitalized interest was \$4, \$9 and \$7 for the years ended December 31, 2020, 2019 and 2018, respectively. Repair and maintenance costs are charged to operations as incurred. Gains and losses on the disposition or retirement of fixed assets are reflected in the consolidated statement of operations when the assets are sold or retired.

Depreciation is provided by utilizing the straight-line method over the estimated useful lives of the assets as follows:

Classification	Years
Buildings and improvements	40
Plant and equipment	10-25
Other	3-15

Impairment of Long-Lived Assets

The Company reviews long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Long-lived assets assessed for impairment are grouped at the lowest level for which identifiable cash flows are largely independent of the cash flows of other assets and liabilities. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to future net undiscounted cash flows expected to be generated by the asset. Assets are considered to be impaired if the carrying amount of an asset exceeds the future undiscounted cash flows. The impairment recognized is measured by the amount by which the carrying amount of the assets exceeds the fair value of the assets. Assets to be disposed of are reported at the lower of the carrying amount or estimated fair value less costs to sell.

Impairment of Goodwill and Intangible Assets

Goodwill is tested for impairment at least annually, or when events or changes in circumstances indicate the fair value of a reporting unit with goodwill has been reduced below its carrying value. The Company performed its annual impairment tests for the Vinyls and Olefins segments' goodwill in April 2020 and October 2020, respectively, and the impairment tests indicated that the recorded goodwill was not impaired. There has been no impairment of the Vinyls or Olefins segments' goodwill since the goodwill was initially recorded. Other intangible assets with finite lives are amortized over their estimated useful lives and reviewed for impairment in accordance with the provisions of the accounting guidance. See Note 8 for more information on the Company's annual goodwill impairment tests.

WESTLAKE CHEMICAL CORPORATION**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**
(in millions of dollars, except share amounts and per share data)***Equity Method Investments***

The Company accounts for investments using the equity method of accounting if the Company has the ability to exercise significant influence over, but not control of, an investee. Significant influence generally exists if the Company has an ownership interest representing between 20% and 50% of the voting rights. Under the equity method of accounting, investments are stated initially at cost and are adjusted for subsequent additional investments and the proportionate share of profit or losses and distributions. The Company records its share of the profits or losses of the equity investments, net of income taxes, in the consolidated statements of income. The equity method investments are evaluated for impairment when events or changes in circumstances indicate, in management's judgment, that the carrying value of such investments may have experienced an other-than-temporary decline in value. When evidence of loss in value has occurred, management compares the estimated fair value of investment to the carrying value of investment to determine whether an impairment has occurred. If the estimated fair value is less than the carrying value and management considers the decline in value to be other-than-temporary, the excess of the carrying value over the estimated fair value is recognized in the consolidated financial statements as an impairment.

Other Assets, net

Other assets, net include turnaround costs, investments in unconsolidated subsidiaries, restricted cash, deferred charges and other long-term assets.

The Company accounts for turnaround costs under the deferral method. Turnarounds are the scheduled and required shutdowns of specific operating units in order to perform planned major maintenance activities. The costs related to the significant overhaul and refurbishment activities include maintenance materials, parts and direct labor costs. The costs of the turnaround are deferred when incurred at the time of the turnaround and amortized (within depreciation and amortization) on a straight-line basis until the next planned turnaround, which ranges from three to six years. Deferred turnaround costs are presented as a component of other assets, net. The cash outflows related to these costs are included in operating activities in the consolidated statement of cash flows.

Business Combinations

The Company records business combinations using the acquisition method of accounting. Under the acquisition method of accounting, identifiable assets acquired and liabilities assumed are recorded at their acquisition date fair values. The excess of the purchase price over the estimated fair value is recorded as goodwill. Changes in the estimated fair values of net assets recorded for acquisitions prior to the finalization of more detailed analysis, but not to exceed one year from the date of acquisition, will adjust the amount of the purchase price allocable to goodwill. Measurement period adjustments are reflected in the period in which they occur.

Income Taxes

The Company utilizes the liability method of accounting for deferred income taxes. Under the liability method, deferred tax assets or liabilities are recorded based upon temporary differences between the tax basis of assets and liabilities and their carrying values for financial reporting purposes. Deferred tax expense or benefit is the result of changes in the deferred tax assets and liabilities during the period. Valuation allowances are recorded against deferred tax assets when it is considered more likely than not that the deferred tax assets will not be realized.

In February 2018, the FASB issued an accounting standards update, Income Statement—Reporting Comprehensive Income, to (1) allow reclassification from accumulated other comprehensive income (loss) to retained earnings for stranded tax effects resulting from the Tax Act; and (2) require certain disclosures about stranded tax effects. Certain tax effects become stranded in accumulated other comprehensive income (loss) when deferred tax balances originally recorded at the historical income tax rate are adjusted in income from operations based on the lower, newly-enacted income tax rate. The Company adopted the accounting standard effective October 1, 2018 and reclassified \$13 of stranded tax effects relating to its pension benefits liability and cumulative effect of foreign exchange from accumulated other comprehensive income (loss) to retained earnings.

As a result of the Tax Act, the Financial Accounting Standards Board ("FASB") concluded that Global Intangible Low-Taxed Income Tax ("GILTI tax") can be recognized in the financial statements, no later than December 22, 2018, per an accounting policy choice, by: (1) recording a period cost (permanent item) or (2) providing deferred income taxes stemming from certain basis differences that are expected to result in GILTI tax. The Company elected to record GILTI tax as a period cost.

WESTLAKE CHEMICAL CORPORATION**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**
(in millions of dollars, except share amounts and per share data)***Foreign Currency Translation***

Assets and liabilities of foreign subsidiaries are translated to U.S. dollars at the exchange rate as of the end of the year. Statement of operations items are translated at the average exchange rate for the year. The resulting translation adjustment is recorded as a separate component of stockholders' equity.

Revenue Recognition

Revenue is recognized when the Company transfers control of inventories to its customers. Amounts recognized as revenues reflect the consideration to which the Company expects to be entitled in exchange for those inventories. Provisions for discounts, rebates and returns are incorporated in the estimate of variable consideration and reflected as reduction to revenue in the same period as the related sales.

Control of inventories generally transfers upon shipment for domestic sales. The Company excludes taxes collected on behalf of customers from the estimated contract price. For export contracts, the point at which control passes to the customer varies depending on the terms specified in the customer contract.

The Company generally invoices customers and recognizes revenue and accounts receivable upon transferring control of inventories. In limited circumstances, the Company transfers control of inventories shortly before it has an unconditional right to receive consideration, resulting in recognition of contract assets. The Company also receives advance payments from certain customers, resulting in recognition of contract liabilities. Contract assets and liabilities are generally settled within the period and are not material to the consolidated balance sheets. The Company expenses sales commissions when incurred. These costs are recorded within selling, general and administrative expenses. Aside from the amounts disclosed within Note 9, the Company does not disclose the value of unsatisfied performance obligations because its contracts with customers (1) have an original expected duration of one year or less or (2) have only variable consideration that is calculated based on market prices at specified dates and is allocated to wholly unsatisfied performance obligations.

The Company adopted ASU No. 2014-09, Revenue from Contracts with Customers ("ASC 606"), effective January 1, 2018. The Company applied the modified retrospective transition method to all contracts that were not completed as of the adoption date. The cumulative effects of changes to the Company's consolidated January 1, 2018 balance sheet for the adoption of this accounting standard were immaterial.

ASC 606 requires disclosure of disaggregated revenue into categories that depict the nature of how the Company's revenue and cash flows are affected by economic factors. The Company discloses revenues by product and segment in Note 23.

Leases

The Company is obligated under various long-term and short-term operating leases for rail cars, buildings, land and other transportation and storage assets. The Company determines whether an arrangement is, or contains, a lease at contract inception. Some of the Company's arrangements contain both lease and non-lease components. For certain transportation equipment leases, the Company accounts for the lease and non-lease components as a single lease component. The Company records right-of-use assets and corresponding lease liabilities for operating leases with terms greater than one year. Operating lease right-of-use assets and liabilities are recorded at the present value of the fixed lease payments over the life of the lease. The majority of the Company's leases do not provide an implicit rate. Therefore, the Company uses its incremental borrowing rate at lease commencement to measure operating lease right-of-use assets and lease liabilities. Certain of the Company's leases provide for renewal and purchase options. Renewal and purchase options are evaluated at lease commencement and included in the lease term if they are reasonably certain to be exercised. Short-term leases are recognized in rental expense on a straight-line basis over the lease term and are not recorded in the consolidated balance sheets. The Company's finance leases are not material to the consolidated financial statements.

The Company adopted ASU No. 2016-02, Leases, effective January 1, 2019 using the optional transition method, which allows entities to recognize a cumulative adjustment to the opening balance sheet in the period of adoption. The Company elected the package of optional transition expedients and was not required to reassess (1) whether any existing contracts are or contain leases, (2) classification of existing leases as operating or capital or (3) whether initial direct costs for existing leases qualify for capitalization under the new accounting standard. The Company did not elect the use of hindsight to determine the lease term when considering lease renewal or termination options. Additionally, the Company elected to continue accounting for existing land easements under its accounting policies that were in effect prior to adoption of the new lease standard.

WESTLAKE CHEMICAL CORPORATION**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**
(in millions of dollars, except share amounts and per share data)***Transportation and Freight***

Amounts billed to customers for freight and handling costs on outbound shipments are included in net sales in the consolidated statements of operations. Transportation and freight costs incurred by the Company on outbound shipments are included in cost of sales in the consolidated statements of operations.

Price Risk Management

The Company recognizes derivative instruments on the balance sheet at fair value, and changes in a derivative's fair value are currently recognized in earnings or comprehensive income, depending on the designation of the derivative. If the derivative is designated as a fair value hedge, the changes in the fair value of the derivative and of the hedged item attributable to the hedged risk are recognized in earnings. If the derivative is designated as a cash flow hedge, the effective portion of the change in the fair value of the derivative is recorded in comprehensive income and is recognized in the statement of operations when the hedged item affects earnings. Ineffective portions of changes in the fair value of cash flow hedges are recognized in earnings currently. The derivative instruments did not have a material impact on the Company's consolidated financial statements.

Asset Retirement Obligations

The Company has conditional asset retirement obligations for the removal and disposal of hazardous materials from certain of the Company's manufacturing facilities.

The Company recognizes asset retirement obligations in the period in which the liability becomes probable and reasonably estimable. Recognized asset retirement obligations are initially recorded at fair value and capitalized as a component of the carrying value of the long-lived asset to which the obligation relates. The liability is accreted to its future value each period, and the capitalized cost is depreciated over the estimated useful life of the related asset. Upon settlement of the liability, a gain or loss is recorded. As of December 31, 2020, the Company had \$12 and \$17 of asset retirement obligations recorded as accrued and other liabilities and other liabilities, respectively. As of December 31, 2019, the Company had \$7 and \$20 of asset retirement obligations recorded as accrued and other liabilities and other liabilities, respectively.

The Company also has conditional asset retirement obligations that have not been recognized because the fair values of the conditional legal obligations cannot be measured due to the indeterminate settlement date of the obligations. Settlements of the unrecognized conditional asset retirement obligations are not expected to have a material adverse effect on the Company's financial condition, results of operations or cash flows in any individual reporting period.

Environmental Costs

Environmental costs relating to current operations are expensed or capitalized, as appropriate, depending on whether such costs provide future economic benefits. Remediation liabilities are recognized when the costs are considered probable and can be reasonably estimated. Measurement of liabilities is based on currently enacted laws and regulations, existing technology and undiscounted site-specific costs. Environmental liabilities in connection with properties that are sold or closed are realized upon such sale or closure, to the extent they are probable and estimable and not previously reserved. Recognition of any joint and several liabilities is based upon the Company's best estimate of its final pro rata share of the liability.

Use of Estimates

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

WESTLAKE CHEMICAL CORPORATION**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**
(in millions of dollars, except share amounts and per share data)

On March 11, 2020, the World Health Organization declared the ongoing coronavirus ("COVID-19") outbreak a pandemic and recommended containment and mitigation measures worldwide. Events surrounding the COVID-19 pandemic resulted in widespread adverse impacts on the global economy in 2020. As the COVID-19 pandemic and its impacts on the global economy continue, the Company expects to experience further near-term impacts on its business operations. However, the impact that COVID-19 will have on the financial condition, results of operations and cash flows of the Company cannot be estimated with certainty at this time as it will depend on future developments, including, among others, the ultimate duration, geographic spread and severity of the virus, the consequences of governmental and other measures designed to prevent the spread of the virus, the development of effective treatments and vaccines and their roll out, actions taken by customers, suppliers and other third parties, workforce availability, and the timing and extent to which normal economic and operating conditions resume.

Recent Accounting Pronouncements***Income Taxes (ASU No. 2019-12)***

In December 2019, the FASB issued an accounting standards update removing certain exceptions for investments, intra-period allocations and interim calculations and adding guidance to reduce complexity in accounting for income taxes. The accounting standard will be effective for reporting periods beginning after December 15, 2020. Early adoption of this guidance is permitted. The accounting standard is effective for reporting periods beginning after December 15, 2020 and is not expected to have a material impact on the Company's consolidated financial position, results of operations and cash flows.

Reference Rate Reform (ASU No. 2020-04)

In March 2020, the FASB issued an accounting standards update to provide optional expedients and exceptions for applying generally accepted accounting principles to contracts, hedging relationships and other transactions affected by reference rate reform, if certain criteria are met. The amendments in this update are effective for all entities from January 1, 2020 through December 31, 2022. The Company is in the process of evaluating the adoption of this optional accounting standards update as certain exceptions provided under this guidance may be applicable to future reference rate reform related transitions.

Recently Adopted Accounting Standards***Credit Losses (ASU No. 2016-13)***

In June 2016, the FASB issued an accounting standards update providing new guidance for the accounting for credit losses on loans and other financial instruments. The new guidance introduces an approach based on expected losses to estimate credit losses on trade receivables, debt securities and certain types of financial instruments. The standard also modifies the impairment model for available-for-sale debt securities and provides for a simplified accounting model for purchased financial assets with credit deterioration since their origination. In November 2019, the FASB issued an additional authoritative guidance related to credit losses. The accounting standard became effective for reporting periods beginning after December 15, 2019. The Company adopted this accounting standard effective January 1, 2020 and the adoption did not have a material impact on the Company's consolidated financial position, results of operations and cash flows.

Intangibles - Goodwill and Other (ASU No. 2017-04)

In January 2017, the FASB issued an accounting standards update to simplify the subsequent measurement of goodwill. The guidance removes Step 2 of the goodwill impairment test, which requires a hypothetical purchase price allocation. A goodwill impairment will now be the amount by which a reporting unit's carrying value exceeds its fair value, not to exceed the carrying amount of goodwill. The accounting standard became effective for reporting periods beginning after December 15, 2019. The Company adopted this accounting standard effective January 1, 2020, and the adoption did not have a material impact on the Company's consolidated financial position, results of operations and cash flows.

WESTLAKE CHEMICAL CORPORATION**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**
(in millions of dollars, except share amounts and per share data)**Fair Value Measurement (ASU No. 2018-13)**

In August 2018, the FASB issued an accounting standards update to modify the disclosure requirements on fair value measurements. An entity is permitted to early adopt any removed or modified disclosures and delay adoption of the additional disclosures until the effective date. Most amendments should be applied retrospectively, but certain amendments will be applied prospectively. The accounting standard became effective for reporting periods beginning after December 15, 2019. The Company adopted this accounting standard effective January 1, 2020, and the adoption did not have a material impact on the Company's consolidated financial position, results of operations and cash flows.

2. Acquisition**NAKAN™**

On January 2, 2019, the Company acquired all of the outstanding equity interests in the parent entity of the NAKAN™ global compounding solutions business. NAKAN's products are used in a wide-variety of applications, including in the automotive, building and construction, and medical industries.

The closing purchase price of \$249 was paid with available cash on hand. The acquisition is being accounted for under the acquisition method of accounting. The assets acquired and liabilities assumed and the results of operations of NAKAN are included in the Vinyls segment.

NAKAN's net sales and earnings since the acquisition date were not material to the Company's consolidated statement of operations for the year ended December 31, 2019. The acquisition-related costs recognized in the consolidated statement of operations for the year ended December 31, 2019 were not material. The pro forma impact of this acquisition has not been presented as it is not material to the Company's consolidated statements of operations for the years ended December 31, 2019 and 2018.

WESTLAKE CHEMICAL CORPORATION**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**
(in millions of dollars, except share amounts and per share data)

The following table summarizes the fair value of identified assets acquired and liabilities assumed at the date of acquisition. The allocation of consideration transferred is based on management's estimates, judgments and assumptions. When determining the fair values of assets acquired and liabilities assumed, management made significant estimates, judgments and assumptions. Management estimated that consideration paid exceeded the fair value of the net assets acquired. Therefore, goodwill of \$40 was recorded. The goodwill recognized is primarily attributable to the expected value to be achieved from the acquisition. The information below represents the purchase price allocation:

Cash	\$	10
Accounts receivable		53
Inventories		40
Prepaid expenses and other current assets		7
Property, plant and equipment		75
Operating lease right-of-use assets		3
Intangible assets:		
Customer relationships (weighted average lives of 17 years)		65
Technology (weighted average lives of 14 years)		40
Trade name (life of 15 years)		25
Other assets		12
Total assets acquired		330
Accounts payable		57
Accrued and other liabilities		18
Deferred income taxes		31
Pension and other post-retirement benefits		4
Operating lease liabilities		3
Other long-term liabilities		8
Total liabilities assumed		121
Total identifiable net assets acquired		209
Goodwill		40
Total purchase consideration	\$	249

3. Financial Instruments***Cash Equivalents***

The Company had \$0 and \$240 of held-to-maturity securities with original maturities of three months or less, primarily consisting of corporate debt securities, classified as cash equivalents at December 31, 2020 and 2019, respectively. The Company's investments in held-to-maturity securities were held at amortized cost, which approximates fair value.

Restricted Cash and Cash Equivalents

The Company had restricted cash and cash equivalents of \$24 and \$22 at December 31, 2020 and 2019, respectively. The Company's restricted cash and cash equivalents are primarily related to balances that are restricted for payment of distributions to certain of the Company's current and former employees and are reflected primarily in other assets, net in the consolidated balance sheets.

WESTLAKE CHEMICAL CORPORATION**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**
(in millions of dollars, except share amounts and per share data)**4. Accounts Receivable**

Accounts receivable consist of the following at December 31:

	2020	2019
Trade customers	\$ 1,086	\$ 948
Related parties	9	12
Allowance for credit losses	(17)	(22)
	1,078	938
Federal and state taxes	92	59
Other	44	39
Accounts receivable, net	\$ 1,214	\$ 1,036

5. Inventories

Inventories consist of the following at December 31:

	2020	2019
Finished products	\$ 524	\$ 568
Feedstock, additives, chemicals and other raw materials	227	210
Materials and supplies	167	158
Inventories	\$ 918	\$ 936

6. Property, Plant and Equipment

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

	2020	2019
Land	\$ 207	\$ 198
Buildings and improvements	652	608
Plant and equipment	8,687	8,227
Other	557	496
	10,103	9,529
Less: Accumulated depreciation	(3,710)	(3,168)
	6,393	6,361
Construction in progress	527	551
Property, plant and equipment, net	\$ 6,920	\$ 6,912

Depreciation expense on property, plant and equipment of \$558, \$519 and \$478 is included primarily in cost of sales in the consolidated statements of operations for the years ended December 31, 2020, 2019 and 2018, respectively.

WESTLAKE CHEMICAL CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
(in millions of dollars, except share amounts and per share data)**7. Leases**

Lease-related asset and liability balances were as follows:

	December 31, 2020	December 31, 2019
Operating Leases		
Right-of-use assets	<u>\$ 461</u>	<u>\$ 443</u>
Accrued and other liabilities	\$ 89	\$ 93
Operating lease liabilities	376	355
Total operating lease liabilities	<u>\$ 465</u>	<u>\$ 448</u>
Weighted Average Remaining Term (in years)	8	8
Weighted Average Lease Discount Rate	3.1 %	3.5 %

The Company's operating lease cost is comprised of payments related to operating leases recorded in the consolidated balance sheet and short-term rental payments for leases that are not recorded in the consolidated balance sheet. Variable operating lease cost was not material to the consolidated statement of operations for the years ended December 31, 2020 and 2019. The components of operating lease expense were as follows:

	December 31, 2020	December 31, 2019
Operating lease cost ⁽¹⁾	\$ 117	\$ 113
Short-term lease cost	70	58
Total operating lease cost	<u>\$ 187</u>	<u>\$ 171</u>

(1) Includes fixed lease payments for operating leases recorded in the consolidated balance sheet.

Maturities of lease liabilities were as follows at December 31, 2020:

	Operating Leases
2021	\$ 102
2022	85
2023	69
2024	54
2025	42
Thereafter	171
Total lease payments	523
Less: imputed interest	(58)
Present value of lease liabilities	<u>\$ 465</u>

Related Party Leases

The Company leases certain assets under operating leases with related parties. Right-of-use assets and the associated operating lease liabilities for related party operating leases were approximately \$41 and \$50 as of December 31, 2020 and December 31, 2019, respectively. The Company recognized operating lease cost for fixed lease payments to related parties of \$12 and \$18 for the years ended December 31, 2020 and 2019, respectively.

WESTLAKE CHEMICAL CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
(in millions of dollars, except share amounts and per share data)**8. Goodwill and Other Intangible Assets*****Goodwill***

The gross carrying amounts and changes in the carrying amount of goodwill for the years ended December 31, 2020 and 2019 are as follows:

	Vinyls Segment	Olefins Segment	Total
Balance at December 31, 2018	\$ 972	\$ 30	\$ 1,002
Goodwill acquired during the year	67	—	67
Effects of changes in foreign exchange rates	5	—	5
Balance at December 31, 2019	1,044	30	1,074
Effects of changes in foreign exchange rates	9	—	9
Balance at December 31, 2020	<u>\$ 1,053</u>	<u>\$ 30</u>	<u>\$ 1,083</u>

Vinyls Segment Goodwill

The Company performed its annual impairment analysis for the Vinyls reporting units during the second quarter of 2020. The fair values of the North America and other reporting units assessed during the April 2020 impairment analysis were determined using both a discounted cash flow methodology and a market value methodology. Based upon this assessment, the Company determined that the fair values of the Vinyls reporting units were greater than their carrying value.

The discounted cash flow projections were based on a long-term forecast to reflect the cyclical nature of the housing and construction markets as the Company's Vinyls businesses are significantly influenced by those markets. The forecast was based on prices and spreads projected by IHS Markit ("IHS"), a chemical industry organization offering market and business advisory services for the chemical market, historical results and estimates by management, including its strategic and operational plans. Other significant assumptions used in the discounted cash flow projection included projected sales volumes based on production capacities. The future cash flows were discounted to present value using a discount rate ranging from 7.8% to 10.8%. The significant assumptions used in determining the fair values of the reporting units using the market value methodology include the determination of appropriate market comparables and the estimated multiples of net income before interest expense, income taxes, depreciation and amortization ("EBITDA") a willing buyer is likely to pay.

Olefins Segment Goodwill

The Company performed its annual impairment analysis for the Olefins segment, the reporting unit assessed, during the fourth quarter of 2020. The fair value of the Olefins segment reporting unit assessed during the October 2020 impairment analysis was determined using both a discounted cash flow methodology and a market value methodology. Based upon this assessment, the Company determined that the fair value of the Olefins segment reporting unit was greater than its carrying value.

The discounted cash flow projections were based on a long-term forecast to reflect the cyclical nature of the Company's Olefins business. The forecast was based on prices and spreads projected by IHS, historical results and estimates by management, including its strategic and operational plans. Other significant assumptions used in the discounted cash flow projection included projected sales volumes based on production capacities. The future cash flows were discounted to present value using a discount rate of 9.0%. The significant assumptions used in determining the fair values of the reporting unit using the market value methodology included the determination of appropriate market comparables and the estimated multiples of EBITDA a willing buyer was likely to pay.

There were no events or circumstances indicating that the fair value of either of the Vinyls or Olefins reporting units had been reduced below its carrying value during 2020.

WESTLAKE CHEMICAL CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
(in millions of dollars, except share amounts and per share data)**Intangible Assets**

Intangible assets consisted of the following at December 31:

	2020			2019			Weighted Average Life
	Cost	Accumulated Amortization	Net	Cost	Accumulated Amortization	Net	
Customer relationships	\$ 845	\$ (401)	\$ 444	\$ 832	\$ (309)	\$ 523	11
Other intangible assets:							
Licenses and intellectual property	178	(94)	84	172	(79)	93	13
Trademarks	125	(50)	75	120	(37)	83	13
Other	35	(26)	9	35	(24)	11	11
Total other intangible assets	\$ 338	\$ (170)	\$ 168	\$ 327	\$ (140)	\$ 187	

Scheduled amortization of intangible assets for the next five years is as follows: \$120, \$108, \$60, \$54 and \$52 in 2021, 2022, 2023, 2024 and 2025, respectively.

9. Equity Method Investments**LACC, LLC Joint Venture**

In 2015, Eagle US 2 LLC ("Eagle"), a wholly-owned subsidiary of the Company, and Lotte Chemical USA Corporation, a subsidiary of Lotte Chemical Corporation ("Lotte"), formed a joint venture, LACC, LLC ("LACC"), to design, build and operate an ethylene facility with 2.2 billion pounds per year of ethylene production capacity. Pursuant to a contribution and subscription agreement between Eagle and LACC, Eagle contributed \$225 to LACC to fund construction costs of the ethylene plant, representing approximately 12% of the membership interests in LACC.

On November 12, 2019, we, through Eagle, completed the acquisition of an additional 34.8% of the membership interests in LACC from Lotte for approximately \$817. As of December 31, 2020, the Company's investment exceeded the underlying equity in net assets by approximately \$166 which was assigned to goodwill and not amortized.

The ethylene plant was built adjacent to the Company's chlor-alkali facility in Lake Charles. During the third quarter of 2019, the ethylene plant began commercial operations.

The Company accounts for its investment in LACC under the equity method of accounting. The LACC joint venture is a cost-sharing arrangement between the members of LACC. The members of LACC receive their proportionate shares of ethylene offtake each month and fund cash operating costs, excluding depreciation and amortization. As a result, LACC recognizes net losses equal to depreciation and amortization each period. The Company's equity in losses from LACC, which is equal to its share of depreciation and amortization expenses, is recognized in cost of sales in the consolidated statements of operations. The Company's investment in LACC is recorded as a component of equity method investments in the consolidated balance sheets. The Company's capital contributions to fund its share of capital expenditures are classified within investing activities in the consolidated statements of cash flows.

The Company's ethylene offtake from LACC was approximately 787 million pounds during the year ended December 31, 2020.

WESTLAKE CHEMICAL CORPORATION**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**
(in millions of dollars, except share amounts and per share data)

Changes in the Company's investment in LACC for the years ended December 31, 2020 and 2019 were as follows:

	Investment in LACC
Balance at December 31, 2018	\$ 183
Cash contributions	45
Additional interest purchased	817
Depreciation and amortization	(7)
Return of investment	—
Balance at December 31, 2019	1,038
Cash contributions	4
Additional interest purchased	—
Depreciation and amortization	(37)
Return of investment	(44)
Balance at December 31, 2020	\$ 961

Services Provided to LACC and Lotte

The Company provides certain utilities and other services to LACC and Lotte. Pursuant to a construction and reimbursement agreement, LACC and Lotte agreed to reimburse the Company for construction costs over a 6.5-year period beginning in 2020. In addition to the reimbursements for construction costs, the Company charges LACC and Lotte certain fixed fees under an operating, maintenance and logistics agreement. The Company accounts for the reimbursement of construction costs and the fixed fees as components of the total transaction price and recognizes it ratably in net sales over approximately 25 years. The remaining performance obligations at December 31, 2020, representing these fixed components of the transaction price, totaled \$57 and \$78 from LACC and Lotte, respectively. The associated contract liabilities recorded from LACC and Lotte totaled \$10 and \$12 as of December 31, 2020, respectively, and \$5 and \$7 as of December 31, 2019, respectively. In addition to the reimbursements for construction costs and other fixed fees, the Company charges LACC and Lotte certain variable fees.

Other Equity Method Investments

In addition to LACC, the Company has other equity method investments amounting to \$98 and \$74 as of December 31, 2020 and 2019, respectively. See Note 20 for more detailed information.

10. Accounts Payable

Accounts payable consist of the following:

	December 31, 2020	December 31, 2019
Accounts payable—third parties	\$ 529	\$ 435
Accounts payable to related parties	—	12
Notes payable	7	26
Accounts payable	\$ 536	\$ 473

WESTLAKE CHEMICAL CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
(in millions of dollars, except share amounts and per share data)**11. Long-Term Debt**

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

	December 31, 2020			December 31, 2019		
	Principal Amount	Unamortized Discount and Debt Issuance Costs	Net Long-Term Debt	Principal Amount	Unamortized Discount and Debt Issuance Costs	Net Long-Term Debt
3.60% senior notes due 2022 (the "3.60% 2022 Senior Notes")	\$ 250	\$ (1)	\$ 249	\$ 250	\$ (1)	\$ 249
3.60% senior notes due 2026 (the "3.60% 2026 Senior Notes")	750	(6)	744	750	(8)	742
Loan related to tax-exempt waste disposal revenue bonds due 2027	11	—	11	11	—	11
1.625% senior notes due 2029 (the "1.625% 2029 Senior Notes")	859	(10)	849	785	(11)	774
6 ½% senior notes due 2029 (the "6 ½% 2029 GO Zone Senior Notes")	—	—	—	100	(1)	99
3.375% senior notes due 2030 (the "3.375% 2030 Senior Notes")	300	(4)	296	—	—	—
3.50% senior notes due 2032 (the "3.50% 2032 GO Zone Refunding Senior Notes")	250	(1)	249	250	(1)	249
6 ½% senior notes due 2035 (the "6 ½% 2035 GO Zone Senior Notes")	—	—	—	89	(1)	88
6 ½% senior notes due 2035 (the "6 ½% 2035 IKE Zone Senior Notes")	—	—	—	65	—	65
5.0% senior notes due 2046 (the "5.0% 2046 Senior Notes")	700	(23)	677	700	(23)	677
4.375% senior notes due 2047 (the "4.375% 2047 Senior Notes")	500	(9)	491	500	(9)	491
Long-term debt	<u>\$ 3,620</u>	<u>\$ (54)</u>	<u>\$ 3,566</u>	<u>\$ 3,500</u>	<u>\$ (55)</u>	<u>\$ 3,445</u>

Credit Agreement

On July 24, 2018, the Company entered into a new \$1,000 revolving credit facility that is scheduled to mature on July 24, 2023 (the "Credit Agreement") and, in connection therewith, terminated the existing \$1,000 revolving credit facility that was scheduled to mature on August 23, 2021 (the "Prior Credit Agreement"). The Credit Agreement bears interest at either (a) LIBOR plus a spread ranging from 1.00% to 1.75% or (b) Alternate Base Rate plus a spread ranging from 0.00% to 0.75% in each case depending on the credit rating of the Company. At December 31, 2020, the Company had no borrowings outstanding under the Credit Agreement. As of December 31, 2020, the Company had no outstanding letters of credit and had \$1,000 of borrowing availability under the Credit Agreement. The Credit Agreement contains certain affirmative and negative covenants, including a quarterly total leverage ratio financial maintenance covenant. As of December 31, 2020, the Company was in compliance with the total leverage ratio financial maintenance covenant. The Credit Agreement also contains certain events of default and if and for so long as certain events of default have occurred and are continuing, any overdue amounts outstanding under the Credit Agreement will accrue interest at an increased rate, the lenders can terminate their commitments thereunder and payments of any outstanding amounts could be accelerated by the lenders.

The Credit Agreement includes a \$150 sub-limit for letters of credit, and any outstanding letters of credit will be deducted from availability under the facility. The Credit Agreement also provides for a discretionary \$50 commitment for swingline loans to be provided on a same-day basis. The Company may also increase the size of the facility, in increments of at least \$25, up to a maximum of \$500, subject to certain conditions and if certain lenders agree to commit to such an increase.

WESTLAKE CHEMICAL CORPORATION**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**
(in millions of dollars, except share amounts and per share data)**3.60% Senior Notes due 2022**

In July 2012, the Company issued \$250 aggregate principal amount of the 3.60% 2022 Senior Notes. The 3.60% 2022 Senior Notes are unsecured and were issued with an original issue discount of \$1. There is no sinking fund and no scheduled amortization of the 3.60% 2022 Senior Notes prior to maturity. The Company may optionally redeem the 3.60% 2022 Senior Notes in accordance with the terms of the 3.60% 2022 Senior Notes.

3.60% Senior Notes due 2026 and 5.0% Senior Notes due 2046

In August 2016, the Company issued \$750 aggregate principal amount of the 3.60% 2026 Senior Notes and \$700 aggregate principal amount of the 5.0% 2046 Senior Notes. In March 2017, the Company commenced registered exchange offers to exchange the 3.60% 2026 Senior Notes and the 5.0% 2046 Senior Notes for new notes that are identical in all material respects to the 3.60% 2026 Senior Notes and the 5.0% 2046 Senior Notes, except that the offer and issuance of the new Securities and Exchange Commission-registered notes have been registered under the Securities Act of 1933, as amended (the "Securities Act"). The exchange offers expired on April 24, 2017, and approximately 99.97% of the 3.60% 2026 Senior Notes and 100% of the 5.0% 2046 Senior Notes were exchanged. The 3.60% 2026 Senior Notes that were not exchanged in the 3.60% 2026 Senior Notes exchange offer have not been registered under the Securities Act or any state securities laws and may not be offered or sold in the U.S. absent registration or an applicable exemption from registration requirements or a transaction not subject to the registration requirements of the Securities Act or any state securities law.

Revenue Bonds

In December 1997, the Company entered into a loan agreement with a public trust established for public purposes for the benefit of the Parish of Calcasieu, Louisiana. The public trust issued \$11 principal amount of tax-exempt waste disposal revenue bonds in order to finance the Company's construction of waste disposal facilities for an ethylene plant. The waste disposal revenue bonds expire in December 2027 and are subject to redemption and mandatory tender for purchase prior to maturity under certain conditions. The interest rate on the waste disposal revenue bonds at December 31, 2020 and 2019 was 0.14% and 1.78%, respectively.

1.625% Senior Notes due 2029

On July 17, 2019, the Company completed the registered public offering of €700 aggregate principal amount of the 1.625% 2029 Senior Notes. The Company received approximately \$779 of net proceeds from the offering. The 1.625% 2029 Senior Notes will accrue interest from July 17, 2019 at a rate of 1.625% per annum, payable annually in arrears on July 17 of each year, beginning July 17, 2020. The Company may optionally redeem the 1.625% 2029 Senior Notes in accordance with the terms of the 1.625% 2029 Senior Notes. The Company designated this euro-denominated debt as a non-derivative net investment hedge of a portion of the Company's net investments in euro functional-currency denominated subsidiaries to offset foreign currency fluctuations.

GO Zone Bonds and IKE Zone Bonds

In December 2010, the Louisiana Local Government Authority Environmental Facilities and Community Development Authority (the "Authority"), a political subdivision of the State of Louisiana, completed the offering of \$65 of 6 ½% tax-exempt revenue bonds due November 1, 2035 under Section 704 of the Emergency Economic Stabilization Act of 2008 (the "6 ½% 2035 IKE Zone Bonds") and \$89 of 6 ½% tax-exempt revenue bonds due November 1, 2035 under the Gulf Opportunity Zone Act of 2005 (the "GO Zone Act") (the "6 ½% 2035 GO Zone Bonds"). In connection with the issuance of the 6 ½% 2035 IKE Zone Bonds and the 6 ½% 2035 GO Zone Bonds, the Company issued \$65 of the 6 ½% 2035 IKE Zone Senior Notes and \$89 of the 6 ½% 2035 GO Zone Senior Notes, respectively.

In July 2010, the Authority completed the reoffering of \$100 of 6 ½% tax-exempt revenue bonds due August 1, 2029 under the GO Zone Act (the "6 ½% 2029 GO Zone Bonds"). In connection with the reoffering of the 6 ½% 2029 GO Zone Bonds, the Company issued \$100 of the 6 ½% 2029 GO Zone Senior Notes.

WESTLAKE CHEMICAL CORPORATION**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**
(in millions of dollars, except share amounts and per share data)

In November 2017, the Authority completed the remarketing of \$250 aggregate principal amount of 3.50% tax-exempt revenue refunding bonds due November 1, 2032 (the "3.50% 2032 GO Zone Bonds"). In connection with the remarketing of the 3.50% 2032 GO Zone Bonds, the Company issued \$250 of the 3.50% 2032 Senior Notes. The 3.50% 2032 GO Zone Bonds are subject to optional redemption by the Authority upon the direction of the Company at any time on or after November 1, 2027, for 100% of the principal amount plus accrued interest. The indenture governing the 3.50% 2032 Senior Notes contains customary events of default and covenants that will restrict the Company and certain of the Company's subsidiaries' ability to (1) incur certain secured indebtedness, (2) engage in certain sale-leaseback transactions and (3) consolidate, merge or transfer all or substantially all of its assets.

On August 1, 2020, the Company purchased in lieu of optional redemption \$100 aggregate principal amount of the 6 ½% 2029 GO Zone Bonds at a redemption price equal to 100% of the principal amount of the 6 ½% 2029 GO Zone Bonds plus accrued and unpaid interest to August 1, 2020. In connection with the purchase in lieu of optional redemption of the 6 ½% 2029 GO Zone Bonds, the 6 ½% 2029 GO Zone Senior Notes were cancelled.

On November 1, 2020, the Company purchased in lieu of optional redemption (1) \$89 aggregate principal amount of the 6 ½% 2035 GO Zone Bonds, and (2) \$65 aggregate principal amount of the 6 ½% 2035 IKE Zone Bonds (together with the 6 ½% 2035 GO Zone Bonds, the "2035 Revenue Bonds"), in each case, at a redemption price equal to 100% of the principal amount of the 2035 Revenue Bonds plus accrued and unpaid interest to November 1, 2020. In connection with the purchase of the 2035 Revenue Bonds by the Company in lieu of optional redemption, the 6 ½% 2035 GO Zone Senior Notes and the 6 ½% 2035 IKE Zone Senior Notes were cancelled. A portion of the net proceeds from the issuance of the 3.375% 2030 Senior Notes was used to fund the purchase in lieu of optional redemption of the 6 ½% 2029 GO Zone Bonds and the 2035 Revenue Bonds.

In connection with each offering of the tax-exempt bonds, the Company entered into a loan agreement with the Authority pursuant to which the Company agreed to pay all of the principal, premium, if any, and interest on the bonds and certain other amounts to the Authority. The net proceeds from the offerings were loaned by the Authority to the Company. The Company used the proceeds to expand, refurbish and maintain certain of its facilities in the Louisiana Parishes of Calcasieu and Ascension. As of December 31, 2020, the Company had drawn all proceeds from the tax-exempt bonds.

3.375% Senior Notes due 2030

On June 12, 2020, the Company completed the registered public offering of \$300 aggregate principal amount of its 3.375% Senior Notes due June 15, 2030 (the "3.375% 2030 Senior Notes"). There is no sinking fund and no scheduled amortization of the 3.375% 2030 Senior Notes prior to maturity. The 3.375% 2030 Senior Notes accrue interest from June 12, 2020 at a rate of 3.375% per annum, payable semi-annually in arrears on June 15 and December 15 of each year, beginning December 15, 2020. The Company may optionally redeem the 3.375% 2030 Senior Notes in accordance with the terms of the 3.375% 2030 Senior Notes.

4.375% Senior Notes due 2047

In November 2017, the Company completed the registered public offering of \$500 aggregate principal amount of the 4.375% 2047 Senior Notes. The 4.375% 2047 Senior Notes are unsecured and mature on November 15, 2047. There is no sinking fund and no scheduled amortization of the 4.375% 2047 Senior Notes prior to maturity. The Company may optionally redeem the 4.375% 2047 Senior Notes in accordance with the terms of the 4.375% 2047 Senior Notes.

The indenture governing the 3.60% 2022 Senior Notes, the 3.60% 2026 Senior Notes, the 1.625% 2029 Senior Notes, the 3.375% 2030 Senior Notes, the 3.50% 2032 Senior Notes, the 5.0% 2046 Senior Notes, and the 4.375% 2047 Senior Notes contain customary events of default and covenants that will restrict the Company and certain of the Company's subsidiaries' ability to (1) incur certain secured indebtedness, (2) engage in certain sale-leaseback transactions and (3) consolidate, merge or transfer all or substantially all of its assets.

As of December 31, 2020, the Company was in compliance with all of its long-term debt covenants.

The weighted average interest rate on all long-term debt was 3.4% and 3.6% at December 31, 2020 and 2019, respectively. Unamortized debt issuance costs on long-term debt were \$28 and \$30 at December 31, 2020 and 2019, respectively.

Aggregate scheduled maturities of long-term debt during the next five years consist of \$250 in 2022. There are no other scheduled maturities of debt in 2021 through 2025.

WESTLAKE CHEMICAL CORPORATION**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**
(in millions of dollars, except share amounts and per share data)**12. Stockholders' Equity**

The Company's Board of Directors has declared regular quarterly dividends to holders of its common stock aggregating \$137, \$132 and \$120 for the years ended December 31, 2020, 2019 and 2018, respectively.

Common Stock

Each share of common stock entitles the holder to one vote on all matters on which holders are permitted to vote, including the election of directors. There are no cumulative voting rights. Accordingly, holders of a majority of the total votes entitled to vote in an election of directors will be able to elect all of the directors standing for election. Subject to preferences that may be applicable to any outstanding preferred stock, the holders of the common stock will share equally on a per share basis any dividends when, as and if declared by the Board of Directors out of funds legally available for that purpose. If the Company is liquidated, dissolved or wound up, the holders of the Company's common stock will be entitled to a ratable share of any distribution to stockholders, after satisfaction of all the Company's liabilities and of the prior rights of any outstanding class of the Company's preferred stock. The Company's common stock has no preemptive or conversion rights or other subscription rights. There are no redemption or sinking fund provisions applicable to the Company's common stock.

Preferred Stock

The Company's charter authorizes the issuance of shares of preferred stock. The Company's Board of Directors has the authority, without shareholder approval, to issue preferred shares from time to time in one or more series, and to fix the number of shares and terms of each such series. The Board may determine the designations and other terms of each series including dividend rates, whether dividends will be cumulative or non-cumulative, redemption rights, liquidation rights, sinking fund provisions, conversion or exchange rights and voting rights.

Stock Repurchase Program

In November 2014, the Company's Board of Directors approved a \$250 share repurchase program (the "2014 Program"). In November 2015, the Company's Board of Directors approved the expansion of the 2014 Program by an additional \$150. In August 2018, the Company's Board of Directors approved the expansion of the 2014 Program by an additional \$150. The number of shares repurchased by the Company under the 2014 Program was 995,529, 517,712 and 1,368,881 for the years ended December 31, 2020, 2019 and 2018, respectively. As of December 31, 2020, the Company had repurchased a total of 7,075,720 shares of its common stock for an aggregate purchase price of approximately \$419.

Any shares repurchased under the 2014 Program are held by the Company as treasury stock and may be used for general corporate purposes, including for the 2013 Omnibus Incentive Plan. In 2014, the Company began delivering treasury shares to employees and non-employee directors for options exercised and for the settlement of restricted stock units. The cost of treasury shares delivered is determined using the specific identification method.

13. Accumulated Other Comprehensive Income (Loss)

Changes in accumulated other comprehensive income (loss) by component were as follows:

	Pension and Other Post-Retirement Benefits Liability, Net of Tax	Cumulative Foreign Currency Exchange, Net of Tax	Total
Balances at December 31, 2018	\$ 27	\$ (89)	\$ (62)
Net other comprehensive income (loss) attributable to Westlake Chemical Corporation	(24)	12	(12)
Balances at December 31, 2019	3	(77)	(74)
Net other comprehensive income (loss) attributable to Westlake Chemical Corporation	(27)	37	10
Balances at December 31, 2020	\$ (24)	\$ (40)	\$ (64)

In 2018, the Company reclassified certain income tax effects to retained earnings upon adoption of ASU No. 2018-02. See Note 1 (Income taxes) for additional information.

WESTLAKE CHEMICAL CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
(in millions of dollars, except share amounts and per share data)

The following table provides the details of the amounts reclassified from accumulated other comprehensive income (loss) into net income in the consolidated statements of operations:

Details about Accumulated Other Comprehensive Income (Loss) Components	Location of Reclassification (Income (Expense)) in Consolidated Statements of Operations	Year Ended December 31,		
		2020	2019	2018
Pension settlement gain	(1)	—	—	14
Income tax benefit (provision) on pension and other post-retirement benefits	Provision for (benefit from) income taxes	—	—	(3)
Total reclassifications for the period		\$ —	\$ —	\$ 11

- (1) The accumulated other comprehensive income (loss) component is included in the computation of net periodic benefit cost and reflected in other income, net in the consolidated statements of operations. See Note 14 for additional information on the pension settlement gain recognized in 2018.

14. Employee Benefits

Defined Contribution Plans

U.S. Plans

The Company has a defined contribution savings plan covering the eligible U.S. regular full-time and part-time employees, whereby eligible employees may elect to contribute up to 100% of their annual eligible compensation, subject to an annual plan limit in line with the annual elective contribution limit as determined by the Internal Revenue Service. The Company matches its employee's contribution up to a certain percentage of such employee's compensation, per the terms of the plan. The Company may, at its discretion and per the terms of the plan, make an additional non-matching contribution in an amount as the Board of Directors may determine. For the years ended December 31, 2020, 2019 and 2018, the Company recorded approximately \$21, \$20 and \$21, respectively, to expense for these contributions.

Further, within the plan, the Company also makes an annual retirement contribution to substantially all employees of certain subsidiaries. The Company's contributions to the plan are determined as a percentage of employees' pay. For the years ended December 31, 2020, 2019 and 2018, the Company charged approximately \$34, \$32 and \$31, respectively, to expense for these contributions.

Non-U.S. Plans

The Company has defined contribution plans in several countries covering eligible employees of the Company. The Company's contributions to the plans are based on applicable laws in each country. Contributions to the Company's non-U.S. defined contribution plans are made by both the employee and the Company. For the years ended December 31, 2020, 2019 and 2018, the Company charged approximately \$4, \$4 and \$5, respectively, to expense for its contributions to these plans.

Defined Benefit Plans

U.S. Plans

The Company has noncontributory defined benefit pension plans that cover certain eligible salaried and wage employees of certain subsidiaries. However, eligibility for the Company's plans has been frozen. Benefits for salaried employees under these plans are based primarily on years of service and employees' pay near retirement. Benefits for wage employees are based upon years of service and a fixed amount as periodically adjusted. The Company recognizes the years of service prior to the Company's acquisition of the subsidiary's facilities for purposes of determining vesting, eligibility and benefit levels for certain employees of the subsidiary and for determining vesting and eligibility for certain other employees of the subsidiary. The measurement date for these plans is December 31.

WESTLAKE CHEMICAL CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
(in millions of dollars, except share amounts and per share data)*Non-U.S. Plans*

The Company has defined benefit pension plans covering current and former employees associated with the Company's operations. These pension plans are closed to new participants. Benefits for employees for these plans are based primarily on employees' pay near retirement. The majority of these pension plans are unfunded and have no plan assets. The measurement date for the non-U.S. plans is December 31.

Details of the changes in benefit obligations, plan assets and funded status of the Company's pension plans are as follows:

	2020		2019	
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans
Change in benefit obligation				
Benefit obligation, beginning of year	\$ 703	\$ 144	\$ 648	\$ 136
Service cost	3	2	3	2
Interest cost	17	2	23	3
Actuarial loss (gain)	64	14	80	14
Benefits paid	(39)	(4)	(51)	(4)
Plan amendments	—	—	—	(4)
Settlements	—	—	—	(1)
Foreign exchange effects	—	13	—	(2)
Other	—	2	—	—
Benefit obligation, end of year	<u>\$ 748</u>	<u>\$ 173</u>	<u>\$ 703</u>	<u>\$ 144</u>

	2020		2019	
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans
Change in plan assets				
Fair value of plan assets, beginning of year	\$ 526	\$ 19	\$ 486	\$ 17
Actual return	78	1	92	1
Employer contribution	2	4	2	—
Benefits paid	(39)	(4)	(51)	—
Administrative expenses paid	(4)	—	(3)	—
Foreign exchange effects	—	1	—	1
Fair value of plan assets, end of year	<u>\$ 563</u>	<u>\$ 21</u>	<u>\$ 526</u>	<u>\$ 19</u>
Funded status, end of year	<u>\$ (185)</u>	<u>\$ (152)</u>	<u>\$ (177)</u>	<u>\$ (125)</u>

	2020		2019	
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans
Amounts recognized in the consolidated balance sheet at December 31				
Current liabilities	\$ (2)	\$ (4)	\$ (2)	\$ (2)
Noncurrent liabilities	(183)	(148)	(175)	(123)
Net amount recognized	<u>\$ (185)</u>	<u>\$ (152)</u>	<u>\$ (177)</u>	<u>\$ (125)</u>
	2020		2019	
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans
Amounts recognized in accumulated other comprehensive income (loss)				
Net loss (gain)	\$ 6	\$ 34	\$ (16)	\$ 22
Prior service cost	—	(4)	—	(4)
Total before tax ⁽¹⁾	<u>\$ 6</u>	<u>\$ 30</u>	<u>\$ (16)</u>	<u>\$ 18</u>

(1) After-tax totals for pension benefits were \$(24) and \$0 for 2020 and 2019, respectively, and are reflected in stockholders' equity as accumulated other comprehensive income (loss).

WESTLAKE CHEMICAL CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
(in millions of dollars, except share amounts and per share data)

In the U.S., the Pension Protection Act of 2006 (the "Pension Protection Act") established a relationship between a qualified pension plan's funded status and the actual benefits that can be provided. Restrictions on plan benefits and additional funding and notice requirements are imposed when a plan's funded status is less than certain threshold levels. For the 2020 plan year, the funded status for the Company's U.S. pension plans are above 80% and, as such, are exempt from the Pension Protection Act's benefit restrictions.

Pension plans with an accumulated benefit obligation in excess of plan assets at December 31 are as follows:

	2020		2019	
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans
Information for pension plans with an accumulated benefit obligation in excess of plan assets				
Projected benefit obligation	\$ (748)	\$ (164)	\$ (703)	\$ (143)
Accumulated benefit obligation	(748)	(163)	(703)	(138)
Fair value of plan assets	563	13	526	18

The following table provides the components of net periodic benefit costs, other changes in plan assets and benefit obligation recognized in other comprehensive income.

	Year Ended December 31,					
	2020		2019		2018	
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans
Components of net periodic benefit cost						
Service cost	\$ 3	\$ 2	\$ 3	\$ 2	\$ 3	\$ 2
Administrative expenses	3	—	4	—	3	—
Interest cost	17	2	23	3	24	3
Expected return on plan assets	(35)	(1)	(33)	(1)	(42)	(1)
Net amortization	—	1	—	—	(1)	1
Settlement gain	—	—	—	—	(14)	—
Net periodic benefit cost (gain)	\$ (12)	\$ 4	\$ (3)	\$ 4	\$ (27)	\$ 5
Other changes in plan assets and benefit obligation recognized in other comprehensive income (OCI)						
Net loss (gain) emerging	\$ 22	\$ 13	\$ 20	\$ 13	\$ 20	\$ 1
Settlement gain	—	—	—	—	14	—
Effect of plan change	—	—	—	(4)	—	—
Amortization of net gain (loss)	—	(1)	—	—	1	(1)
Total recognized in OCI	\$ 22	\$ 12	\$ 20	\$ 9	\$ 35	\$ —
Total net periodic benefit cost and OCI	\$ 10	\$ 16	\$ 17	\$ 13	\$ 8	\$ 5

The estimated prior service cost and net loss for the defined benefit plans to be amortized from accumulated other comprehensive income (loss) into net periodic benefit cost during 2021 are expected to be \$0 and \$3, respectively.

During 2018, the Company's U.S. pension plans settled portions of their projected benefit obligations through the purchase of annuities and lump sum payments to certain participants. In conjunction with the settlement, the Company also remeasured the pension obligations and plan assets of the affected plans, resulting in a \$26 increase in accumulated other comprehensive income (loss) before tax and a corresponding decrease in net pension liabilities recorded in the consolidated balance sheets. During 2018, the Company recognized a \$14 one-time settlement gain in other income, net, which was reclassified from accumulated other comprehensive income (loss).

WESTLAKE CHEMICAL CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
(in millions of dollars, except share amounts and per share data)

The weighted-average assumptions used to determine pension plan obligations and net periodic benefit costs for the plans are as follows:

	2020		2019		2018	
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans
Weighted average assumptions used to determine benefit obligations at December 31						
Discount rate	2.1 %	0.8 %	3.0 %	1.3 %	4.1 %	2.0 %
Rate of compensation increase	— %	2.6 %	— %	2.6 %	— %	2.6 %
Weighted average assumptions used to determine net periodic benefit costs for years ended December 31						
Discount rate for benefit obligations	3.0 %	1.3 %	4.1 %	2.0 %	3.4 %	1.8 %
Discount rate for service cost	3.2 %	1.4 %	4.2 %	2.2 %	3.8 %	2.0 %
Discount rate for interest cost	2.6 %	1.6 %	3.7 %	2.2 %	3.3 %	2.0 %
Expected return on plan assets	7.0 %	4.0 %	7.0 %	4.0 %	7.0 %	3.8 %
Rate of compensation increase	— %	2.6 %	— %	2.6 %	— %	2.6 %

The discount rates for the Company's U.S. and non-U.S. plans are determined using a benchmark pension discount curve and applying spot rates from the curve to each year of expected benefit payments to determine the appropriate discount rate for the Company. The assumed long-term return on plan assets is estimated by considering factors such as the plan's overall investment strategy, current economic conditions and historical averages.

The Company's U.S. pension plan investments are held in the Westlake Defined Benefit Plan. The Company's overall investment strategy for these pension plan assets is to achieve a balance between moderate income generation and capital appreciation. The investment strategy includes a mix of approximately 60% of investments for long-term growth, and 40% for near-term benefit payments with a diversification of asset types. These pension funds' investment policies target asset allocations from approximately 60% equity securities and 40% fixed income securities in order to pursue a balance between moderate income generation and capital appreciation.

Equity securities primarily include investments in large-cap and small-cap companies located in the U.S. and international developed and emerging markets stocks. Fixed income securities are comprised of investment and non-investment grade bonds, including U.S. Treasuries and U.S. and non-U.S. corporate bonds of companies from diversified industries. Each pension fund investment policy allows a discretionary range in various asset classes within the asset allocation model of up to 10%. The Company does not believe that there are significant concentrations of risk in the pension plan assets due to its strategy of asset diversification. At December 31, 2020, plan assets did not include direct ownership of the Company's common stock.

Under the accounting guidance for fair value measurements, inputs used to measure fair value are classified in one of three levels:

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

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.

WESTLAKE CHEMICAL CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
(in millions of dollars, except share amounts and per share data)

The investments in the collective trust and mutual funds are valued using a market approach based on the net asset value of units held. The fair values of the Company's U.S. plan assets at December 31, by asset category, are as follows:

	2020					
	U.S. Plans			Non U.S. Plans		
	Level 1	Level 2	Total	Level 1	Level 2	Total
Cash and common stock:						
Cash and cash equivalents	\$ —	\$ —	\$ —	\$ 6	\$ —	\$ 6
Common stock	—	—	—	—	—	—
Collective investment trust and mutual funds—Equity securities:						
Large-cap funds ⁽¹⁾	64	132	196	—	2	2
Small-cap funds ⁽²⁾	—	14	14	—	—	—
International funds ⁽³⁾	84	50	134	—	6	6
Collective investment trust and mutual funds—Fixed income:						
Bond funds ⁽⁴⁾	116	96	212	—	7	7
Short-term investment funds	—	7	7	—	—	—
	\$ 264	\$ 299	\$ 563	\$ 6	\$ 15	\$ 21

	2019					
	U.S. Plans			Non U.S. Plans		
	Level 1	Level 2	Total	Level 1	Level 2	Total
Cash and common stock:						
Cash and cash equivalents	\$ —	\$ —	\$ —	\$ 6	\$ —	\$ 6
Common stock	15	—	15	—	—	—
Collective investment trust and mutual funds—Equity securities:						
Large-cap funds ⁽¹⁾	49	112	161	—	1	1
Small-cap funds ⁽²⁾	8	14	22	—	—	—
International funds ⁽³⁾	75	45	120	—	5	5
Collective investment trust and mutual funds—Fixed income:						
Bond funds ⁽⁴⁾	100	98	198	—	7	7
Short-term investment funds	—	10	10	—	—	—
	\$ 247	\$ 279	\$ 526	\$ 6	\$ 13	\$ 19

- (1) Substantially all of the assets of these funds are invested in large-cap U.S. companies. The remainder of the assets of these funds is invested in cash reserves.
- (2) Substantially all of the assets of these funds are invested in small-cap U.S. companies. The remainder of the assets of these funds is invested in cash reserves.
- (3) Substantially all of the assets of these funds are invested in international companies in developed markets (excluding the U.S.). The remainder of the assets of these funds is invested in cash reserves.
- (4) This category represents investment grade bonds of U.S. issuers, including U.S. Treasury notes.

The Company's funding policy for its U.S. plans is consistent with the minimum funding requirements of federal law and regulations, and based on preliminary estimates, the Company expects to make contributions of approximately \$1 for the pension plans in 2021.

WESTLAKE CHEMICAL CORPORATION**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**
(in millions of dollars, except share amounts and per share data)**Multi-employer Plans****Non-U.S. Plans**

The Company participates in two multi-employer plans, Pensionskasse der Mitarbeiter der Hoechst-Gruppe VVaG and Pensionskasse der Wacker-Chemie GmbH VVaG, which provide benefits to certain of the Company's employees in Germany. These multi-employer plans are closed to new participants. The benefit obligations are covered up to a certain salary threshold by contributions made by the Company and employees to the plans.

Contributions to the Company's multi-employer plans are expensed as incurred and were as follows:

	Year Ended December 31,		
	2020	2019	2018
	Non-U.S. Plans	Non-U.S. Plans	Non-U.S. Plans
Contributions to multi-employer plans ⁽¹⁾	\$ 5	\$ 9	\$ 7

- (1) The plan information for both the Pensionskasse der Mitarbeiter der Hoechst-Gruppe VVaG and Pensionskasse der Wacker-Chemie GmbH VVaG plans is publicly available. The plans provide fixed, monthly retirement payments on the basis of the credits earned by the participating employees. To the extent that the plans are underfunded, future contributions to the plans may increase and may be used to fund retirement benefits for employees related to other employers. The Company does not consider either of its multi-employer plans individually significant.

Other Post-retirement Benefits

In the U.S., the Company provides post-retirement healthcare and life insurance benefits for certain employees and their dependents who meet minimum age and service requirements. The Company has the right to modify or terminate some of these benefits.

The Company also has a post-retirement plan in Canada which is unfunded and provides medical and life insurance benefits for certain employees and their dependents.

The following table provides a reconciliation of the benefit obligations of the Company's unfunded post-retirement healthcare plans.

	2020		2019	
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans
Change in benefit obligation				
Benefit obligation, beginning of year	\$ 65	\$ 4	\$ 67	\$ 3
Service cost	1	—	1	—
Interest cost	1	—	2	—
Actuarial loss (gain)	3	—	3	1
Benefits paid	(7)	—	(8)	—
Benefit obligation, end of year	\$ 63	\$ 4	\$ 65	\$ 4
Change in plan assets				
Fair value of plan assets, beginning of year	\$ —	\$ —	\$ —	\$ —
Employer contribution	7	—	8	—
Benefits paid	(7)	—	(8)	—
Fair value of plan assets, end of year	\$ —	\$ —	\$ —	\$ —
Funded status, end of year	\$ (63)	\$ (4)	\$ (65)	\$ (4)

WESTLAKE CHEMICAL CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
(in millions of dollars, except share amounts and per share data)

	2020		2019	
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans
Amounts recognized in the consolidated balance sheet at December 31				
Current liabilities	\$ (8)	\$ —	\$ (8)	\$ —
Noncurrent liabilities	(55)	(5)	(57)	(5)
Net amount recognized	<u><u>\$ (63)</u></u>	<u><u>\$ (5)</u></u>	<u><u>\$ (65)</u></u>	<u><u>\$ (5)</u></u>

	2020		2019	
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans
Amounts recognized in accumulated other comprehensive income (loss)				
Net gain	\$ —	\$ —	\$ (3)	\$ —
Total before tax ⁽¹⁾	<u><u>\$ —</u></u>	<u><u>\$ —</u></u>	<u><u>\$ (3)</u></u>	<u><u>\$ —</u></u>

(1) After-tax totals for post-retirement healthcare benefits were \$0 and \$3 for 2020 and 2019, respectively, and are reflected in stockholders' equity as accumulated other comprehensive income (loss).

The following table provides the components of net periodic benefit costs, other changes in plan assets and benefit obligation recognized in other comprehensive income.

	Year Ended December 31,					
	2020		2019		2018	
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans
Components of net periodic benefit cost						
Service cost	\$ 1	\$ —	\$ 1	\$ —	\$ 1	\$ —
Interest cost	1	—	2	—	2	—
Net amortization	—	—	—	—	—	—
Net periodic benefit cost	<u><u>\$ 2</u></u>	<u><u>\$ —</u></u>	<u><u>\$ 3</u></u>	<u><u>\$ —</u></u>	<u><u>\$ 3</u></u>	<u><u>\$ —</u></u>
Other changes in plan assets and benefit obligation recognized in OCI						
Net loss (gain) emerging	\$ 3	\$ —	\$ 3	\$ —	\$ (1)	\$ (1)
Total recognized in OCI	<u><u>\$ 3</u></u>	<u><u>\$ —</u></u>	<u><u>\$ 3</u></u>	<u><u>\$ —</u></u>	<u><u>\$ (1)</u></u>	<u><u>\$ (1)</u></u>
Total net periodic benefit cost and OCI	<u><u>\$ 5</u></u>	<u><u>\$ —</u></u>	<u><u>\$ 6</u></u>	<u><u>\$ —</u></u>	<u><u>\$ 2</u></u>	<u><u>\$ (1)</u></u>

The estimated prior service cost and net loss for the post-retirement healthcare benefit plans that will be amortized from accumulated other comprehensive income (loss) into net periodic benefit cost during 2021 are both expected to be zero.

WESTLAKE CHEMICAL CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
(in millions of dollars, except share amounts and per share data)

The weighted-average assumptions used to determine post-retirement healthcare plan obligations and net periodic benefit costs for the plans are as follows:

	2020		2019		2018	
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans
Weighted average assumptions used to determine benefit obligations at December 31						
Discount rate	1.5 %	2.7 %	2.5 %	3.2 %	3.7 %	3.9 %
Health care cost trend rate						
- Initial rate	6.5 %	5.6 %	6.8 %	5.7 %	7.0 %	5.8 %
- Ultimate rate	4.5 %	4.0 %	4.5 %	4.0 %	4.5 %	4.0 %
- Years to ultimate	9	20	10	21	11	22
Weighted average assumptions used to determine net periodic benefit costs for years ended December 31						
Discount rate for benefit obligations	2.5 %	3.2 %	3.7 %	3.9 %	3.0 %	3.6 %
Discount rate for service cost	2.8 %	3.2 %	4.0 %	3.9 %	3.4 %	3.6 %
Discount rate for interest cost	2.2 %	3.2 %	3.4 %	3.9 %	2.7 %	3.6 %
Health care cost trend rate						
- Initial rate	6.8 %	5.7 %	7.0 %	5.8 %	7.0 %	6.1 %
- Ultimate rate	4.5 %	4.0 %	4.5 %	4.0 %	4.5 %	4.5 %
- Years to ultimate	9	20	10	21	10	11

The discount rate is determined using a benchmark pension discount curve and applying spot rates from the curve to each year of expected benefit payments to determine the appropriate discount rate for the Company. A one percentage-point increase or decrease in assumed healthcare trend rates would not have a significant effect on the amounts reported for the healthcare plans.

Estimated Future Benefit Payments

The following benefit payments are expected to be paid:

	Pension Benefits	Other Post-retirement Benefits
Estimated future benefit payments:		
Year 1	\$ 45	\$ 8
Year 2	45	8
Year 3	47	8
Year 4	46	7
Year 5	47	7
Years 6 to 10	234	18

WESTLAKE CHEMICAL CORPORATION**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**
(in millions of dollars, except share amounts and per share data)**15. Stock-Based Compensation**

Under the Westlake Chemical Corporation 2013 Omnibus Incentive Plan (as amended and restated in 2017, the "2013 Plan"), all employees and non-employee directors of the Company, as well as certain individuals who have agreed to become the Company's employees, are eligible for awards. Shares of common stock may be issued as authorized in the 2013 Plan. At the discretion of the administrator of the 2013 Plan, employees and non-employee directors may be granted awards in the form of stock options, stock appreciation rights, stock awards, restricted stock units or cash awards (any of which may be a performance award). Outstanding stock option awards have a 10-year term and vest (1) ratably on an annual basis over a three-year period or (2) at the end of a five-year period. Outstanding restricted stock units and performance stock units vest either (1) ratably on an annual basis over a two to five-year period or (2) at the end of a three or six-year period. In accordance with accounting guidance related to share-based payments, stock-based compensation expense for all stock-based compensation awards is based on estimated grant-date fair value. The Company recognizes these stock-based compensation costs net of a forfeiture rate and on a straight-line basis over the requisite service period of the award for only those shares expected to vest. For the years ended December 31, 2020, 2019 and 2018, the total recognized stock-based compensation expense related to equity awards issued under the 2013 Plan was \$29, \$24 and \$18, respectively.

Option activity and changes during the year ended December 31, 2020 were as follows:

	Options	Weighted Average Exercise Price	Weighted Average Remaining Term (Years)	Aggregate Intrinsic Value
Outstanding at December 31, 2019	1,385,948	\$ 60.29		
Granted	462,007	65.81		
Exercised	(247,414)	23.78		
Cancelled	(21,671)	77.46		
Outstanding at December 31, 2020	<u>1,578,870</u>	<u>\$ 67.39</u>	<u>6.8</u>	<u>\$ 27</u>
Exercisable at December 31, 2020	<u>877,908</u>	<u>\$ 62.91</u>	<u>5.2</u>	<u>\$ 19</u>

For options outstanding at December 31, 2020, the options had the following range of exercise prices:

Range of Prices	Options Outstanding	Weighted Average Remaining Contractual Life (Years)
\$30.05 - \$45.70	309,149	3.6
\$61.87 - \$63.98	280,044	5.6
\$65.81 - \$65.81	453,311	9.1
\$68.09 - \$79.83	369,495	7.2
\$107.75 - \$107.75	166,871	7.1

The aggregate intrinsic value in the table above represents the total pretax intrinsic value (the difference between the Company's closing stock price on the last trading day of the year and the exercise price, multiplied by the number of in-the-money options) that would have been received by the option holders had all option holders exercised their options on December 31, 2020. This amount changes based on the fair market value of the Company's common stock. For the years ended December 31, 2020, 2019 and 2018, the total intrinsic value of options exercised was \$11, \$1 and \$21, respectively.

As of December 31, 2020, \$7 of total unrecognized compensation cost related to stock options is expected to be recognized over a weighted-average period of 1.8 years. Income tax benefits of \$2, \$0 and \$4 were realized from the exercise of stock options during the years ended December 31, 2020, 2019 and 2018, respectively.

WESTLAKE CHEMICAL CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
(in millions of dollars, except share amounts and per share data)

The Company used the Black-Scholes option pricing model to value its options. The table below presents the weighted average value and assumptions used in determining each option's fair value. Volatility was calculated using historical trends of the Company's common stock price.

	Stock Option Grants		
	Year Ended December 31,		
	2020	2019	2018
Weighted average fair value	\$ 15.55	\$ 21.02	\$ 28.94
Risk-free interest rate	1.4 %	2.5 %	2.7 %
Expected life in years	5	5	5
Expected volatility	29.4 %	28.9 %	27.6 %
Expected dividend yield	1.6 %	1.2 %	0.7 %

Non-vested restricted stock units as of December 31, 2020 and changes during the year ended December 31, 2020 were as follows:

	Number of Units	Weighted Average Grant Date Fair Value
Non-vested at December 31, 2019	463,283	\$ 78.69
Granted	368,868	65.09
Vested	(193,550)	64.10
Forfeited	(18,945)	76.42
Non-vested at December 31, 2020	<u>619,656</u>	<u>\$ 75.22</u>

As of December 31, 2020, there was \$18 of unrecognized stock-based compensation expense related to non-vested restricted stock units. This cost is expected to be recognized over a weighted-average period of 1.9 years. The total fair value of restricted stock units that vested during the years ended December 31, 2020, 2019 and 2018 was \$12, \$28 and \$10, respectively.

Performance stock unit payout is based on the greater of the average annual economic-value added results for the Company (equal to net operating profit after tax less a capital charge based upon the weighted average cost of capital) and relative total shareholder return as compared to a peer group of companies. The units have payouts that range from zero to 200 percent of the target award.

Non-vested performance stock units as of December 31, 2020 and changes during the year ended December 31, 2020 were as follows:

	Number of Units	Weighted Average Grant Date Fair Value
Non-vested at December 31, 2019	77,217	\$ 114.38
Granted	109,552	74.61
Vested	—	—
Forfeited	(2,979)	88.23
Non-vested at December 31, 2020	<u>183,790</u>	<u>\$ 91.10</u>

As of December 31, 2020, there was \$9 of unrecognized stock-based compensation expense related to non-vested performance stock units. This cost is expected to be recognized over a weighted-average period of 1.8 years. The total fair value of performance stock units that vested during the years ended December 31, 2020 and 2019, was \$0. The Company did not commence awarding performance stock units until after January 1, 2019.

The Company used a Monte Carlo simulation model to value the performance stock units on the grant date. The table below presents the assumptions used in determining grant date fair value. Volatility was calculated using historical trends of the Company's common stock price.

WESTLAKE CHEMICAL CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
(in millions of dollars, except share amounts and per share data)

	Performance Stock Units	
	Year Ended December 31,	
	2020	2019
Risk-free interest rate	1.4 %	2.5 %
Expected life in years	2.88	2.88
Expected volatility of Westlake Chemical Corporation common stock	32.0 %	30.3 %
Expected volatility of peer companies	15.7% - 47.4%	14.5% - 47.8%
Average correlation coefficient of peer companies	0.49	0.49
Grant date fair value	\$ 74.61	\$ 114.38

Westlake Chemical Partners LP Awards

The Company's wholly-owned subsidiary and the general partner of Westlake Partners, Westlake Chemical Partners GP LLC ("Westlake Partners GP"), maintains a unit-based compensation plan for directors and employees of WLKP GP and Westlake Partners.

The Westlake Partners 2014 Long-term Incentive Plan ("Westlake Partners 2014 Plan") permits various types of equity awards including but not limited to grants of phantom units and restricted units. Awards granted under the Westlake Partners 2014 Plan may be settled with Westlake Partners units or in cash or a combination thereof. Compensation expense for these awards was not material to the Company's consolidated financial statements for the years ended December 31, 2020, 2019 and 2018.

16. Fair Value Measurements

The Company has financial assets and liabilities subject to fair value measures. These financial assets and liabilities include cash and cash equivalents, accounts receivable, net, accounts payable and long-term debt, all of which are recorded at carrying value. The amounts reported in the consolidated balance sheets for cash and cash equivalents, accounts receivable, net and accounts payable approximate their fair value due to the short maturities of these instruments. The carrying and fair values of the Company's long-term debt at December 31, 2020 and 2019 are summarized in the table below. The Company's long-term debt instruments are publicly-traded. A market approach, based upon quotes from financial reporting services, is used to measure the fair value of the Company's long-term debt. Because the Company's long-term debt instruments may not be actively traded, the inputs used to measure the fair value of the Company's long-term debt are classified as Level 2 inputs within the fair value hierarchy.

	2020		2019	
	Carrying Value	Fair Value	Carrying Value	Fair Value
3.60% 2022 Senior Notes	\$ 249	\$ 259	\$ 249	\$ 255
3.60% 2026 Senior Notes	744	846	742	777
Loan related to tax-exempt waste disposal revenue bonds due 2027	11	11	11	11
1.625% 2029 Senior Notes	849	897	774	785
6 1/2% 2029 GO Zone Senior Notes	—	—	99	103
3.375% 2030 Senior Notes	296	332	—	—
3.50% 2032 GO Zone Refunding Senior Notes	249	276	249	267
6 1/2% 2035 GO Zone Senior Notes	—	—	88	92
6 1/2% 2035 IKE Zone Senior Notes	—	—	65	68
5.0% 2046 Senior Notes	677	905	677	761
4.375% 2047 Senior Notes	491	597	491	505

WESTLAKE CHEMICAL CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
(in millions of dollars, except share amounts and per share data)**17. Income Taxes**

The components of income before income taxes are as follows:

	Year Ended December 31,		
	2020	2019	2018
Domestic	\$ 233	\$ 460	\$ 1,087
Foreign	98	110	247
	<u>\$ 331</u>	<u>\$ 570</u>	<u>\$ 1,334</u>

The Company's provision for (benefit from) income taxes consists of the following:

	Year Ended December 31,		
	2020	2019	2018
Current			
Federal	\$ (208)	\$ 20	\$ 158
State	6	9	28
Foreign	14	25	52
Total current	<u>(188)</u>	<u>54</u>	<u>238</u>
Deferred			
Federal	154	69	59
State	(13)	11	(2)
Foreign	5	(26)	5
Total deferred	<u>146</u>	<u>54</u>	<u>62</u>
Total provision for (benefit from) income taxes	<u>\$ (42)</u>	<u>\$ 108</u>	<u>\$ 300</u>

A reconciliation of taxes computed at the statutory rate to the Company's income tax expense is as follows:

	Year Ended December 31,		
	2020	2019	2018
Provision for federal income tax, at statutory rate	\$ 70	\$ 120	\$ 280
State income tax provision, net of federal income tax effect	2	10	28
Foreign income tax rate differential	2	(6)	14
CARES Act net operating loss carryback tax benefit	(95)	—	—
Depletion	(5)	(5)	(4)
Noncontrolling interests	(9)	(8)	(6)
Change in valuation allowance	3	(17)	(9)
Changes in state apportionment and other state adjustments	(7)	11	(6)
Other, net	(3)	3	3
Total income tax expense (benefit)	<u>\$ (42)</u>	<u>\$ 108</u>	<u>\$ 300</u>

WESTLAKE CHEMICAL CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
(in millions of dollars, except share amounts and per share data)

The tax effects of the principal temporary differences between financial reporting and income tax reporting at December 31 are as follows:

	2020	2019
Net operating loss carryforward	\$ 105	\$ 209
Credit carryforward	25	25
Operating lease liabilities	113	96
Accruals	63	65
Pension	90	83
Inventories	13	20
Other	43	26
Deferred taxes assets—total	<u>452</u>	<u>524</u>
Property, plant and equipment	(1,080)	(1,017)
Intangibles	(137)	(156)
Operating lease right-of-use asset	(112)	(95)
Turnaround costs	(17)	(21)
Consolidated partnerships	(181)	(194)
Equity method investments	(227)	(220)
Other	(18)	(18)
Deferred tax liabilities—total	<u>(1,772)</u>	<u>(1,721)</u>
Valuation allowance	(33)	(30)
Total net deferred tax liabilities	<u>\$ (1,353)</u>	<u>\$ (1,227)</u>
Balance sheet classifications		
Noncurrent deferred tax asset	\$ 15	\$ 28
Noncurrent deferred tax liability	(1,368)	(1,255)
Total net deferred tax liabilities	<u>\$ (1,353)</u>	<u>\$ (1,227)</u>

At December 31, 2020, the Company had foreign and state net operating loss carryforwards ("NOLs") of approximately \$209 and \$807, respectively. The decrease in the NOLs is primarily due to the carryback of federal net operating loss as permitted under the Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act"). Certain foreign and state NOLs do not expire, while certain other foreign and state NOLs expire in varying amounts between 2021 and 2040. Certain NOLs are subject to limitations on an annual basis. At December 31, 2020, the Company had various foreign and state credits carryforwards of \$3 and \$22, respectively, which either do not expire or expire in varying amounts between 2021 and 2034. Management believes the Company will realize the benefit of a portion of the net operating loss carryforwards before they expire, but to the extent that the full benefit may not be realized, a valuation allowance has been recorded. The valuation allowance increased by \$3 in 2020, primarily due to additional foreign current year losses not expected to be realized, partially offset by utilization of certain foreign net operating loss carryforwards and a release in valuation allowance resulting from a change in management judgment regarding the realizability of certain foreign deferred tax assets, including net operating loss, as a result of the change in expectations of income in future years.

As a result of the carryback of federal net operating loss to taxable years that were taxed at the U.S. corporate tax rate of 35% as permitted under the CARES Act, the Company recognized a net tax benefit of \$95, primarily from the tax rate difference, partially offset by the reduction in the Section 199 domestic manufacturing deduction.

The Company files income tax returns in the U.S. federal jurisdiction, various states and foreign jurisdictions. The Company is no longer subject to examinations by tax authorities before the year 2014.

WESTLAKE CHEMICAL CORPORATION**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**
(in millions of dollars, except share amounts and per share data)**18. Earnings and Dividends per Share**

The Company has unvested restricted stock units outstanding that are considered participating securities and, therefore, computes basic and diluted earnings per share under the two-class method. Basic earnings per share for the periods are based upon the weighted average number of shares of common stock outstanding during the periods. Diluted earnings per share include the effects of certain stock options and performance stock units.

	Year Ended December 31,		
	2020	2019	2018
Net income attributable to Westlake Chemical Corporation	\$ 330	\$ 421	\$ 996
Less:			
Net income attributable to participating securities	(1)	(2)	(5)
Net income attributable to common shareholders	<u>\$ 329</u>	<u>\$ 419</u>	<u>\$ 991</u>

The following table reconciles the denominator for the basic and diluted earnings per share computations shown in the consolidated statements of operations:

	Year Ended December 31,		
	2020	2019	2018
Weighted average common shares—basic	127,850,592	128,395,184	129,401,823
Plus incremental shares from:			
Assumed exercise of options and vesting of performance stock units	238,466	362,109	583,930
Weighted average common shares—diluted	<u>128,089,058</u>	<u>128,757,293</u>	<u>129,985,753</u>
Earnings per common share attributable to Westlake Chemical Corporation:			
Basic	\$ 2.57	\$ 3.26	\$ 7.66
Diluted	<u>\$ 2.56</u>	<u>\$ 3.25</u>	<u>\$ 7.62</u>

Excluded from the computation of diluted earnings per share for the years ended December 31, 2020, 2019 and 2018 are options to purchase 1,151,776, 562,773 and 150,479 shares of common stock, respectively. These options were outstanding during the periods reported but were excluded because the effect of including them would have been antidilutive.

Dividends per Share

Dividends per common share for the years ended December 31, 2020, 2019 and 2018 were as follows:

	Year Ended December 31,		
	2020	2019	2018
Dividends per common share	\$ 1.0650	\$ 1.0250	\$ 0.9200

19. Supplemental Information**Accrued and Other Liabilities**

Accrued and other liabilities were \$821 and \$768 at December 31, 2020 and 2019, respectively. Accrued rebates, which is a component of accrued and other liabilities, was \$128 and \$115 at December 31, 2020 and 2019, respectively. Other than the lease liability disclosed in Note 7, no other component of accrued and other liabilities was more than five percent of total current liabilities. Accrued liabilities with related parties were \$61 and \$41 at December 31, 2020 and 2019, respectively.

Non-cash Investing Activity

The change in capital expenditure accruals reducing additions to property, plant and equipment was \$2 and \$48 for the years ended December 31, 2020 and 2018, respectively. The change in capital expenditure accruals increasing additions to property, plant and equipment was \$14 for the year ended December 31, 2019.

WESTLAKE CHEMICAL CORPORATION**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**
(in millions of dollars, except share amounts and per share data)***Restructuring, Transaction and Integration-related Costs***

For the year ended December 31, 2020, the restructuring, transaction and integration-related costs of \$36 primarily consisted of restructuring expenses of \$34 related to the decision to close a non-integrated plant located in Germany that was part of the Vinyls segment. The expenses primarily consisted of the write-off of certain assets of \$8 and other costs associated with the plant closure. For the year ended December 31, 2019, the restructuring, transaction and integration-related costs of \$37 primarily consisted of restructuring expenses of \$26 and acquisition costs. The restructuring expenses represent charges associated with the write-off of certain assets in the Vinyls segment.

Other Income, Net

For the year ended December 31, 2020, other income, net included income from pension and post-retirement plans, income from unconsolidated subsidiaries and interest income of \$14, \$16 and \$14, respectively. For the year ended December 31, 2019, other income, net included income from unconsolidated subsidiaries and interest income of \$17 and \$20, respectively. For the year ended December 31, 2018, other income, net included income from pension and post-retirement plans, including a one-time settlement gain, income from unconsolidated subsidiaries and interest income of \$25, \$16 and \$17, respectively. No other components of other income, net were material to the statements of operations for the years ended December 31, 2020, 2019 and 2018.

Operating Lease Supplemental Cash Flow

Supplemental cash flow information related to leases was as follows:

	Year Ended December 31,	
	2020	2019
Operating cash flows from operating leases ⁽¹⁾	\$ 114	\$ 112
Right-of-use assets obtained in exchange for operating lease obligations	112	119

(1) Includes cash paid for amounts included in the measurement of operating lease liabilities recorded in the consolidated balance sheets.

Cash Flow Information

	Year Ended December 31,		
	2020	2019	2018
Cash paid (refunded) for:			
Interest paid, net of interest capitalized	\$ 140	\$ 116	\$ 140
Income taxes paid (refunded)	(135)	77	376

20. Related Party and Affiliate Transactions

The Company and Lotte have a joint venture, LACC, to design, build and operate an ethylene facility with 2.2 billion pounds per year of ethylene production capacity. See Note 9 for details of the Company's transactions with LACC.

The Company leases office space for management and administrative services from an affiliate of the Company's principal stockholder. For each of the years ended December 31, 2020, 2019 and 2018, the Company incurred lease payments of approximately \$3.

Cypress Interstate Pipeline L.L.C., a natural gas liquids pipeline joint venture company in which the Company owns a 50% equity stake, transports natural gas liquid feedstocks to the Company's Lake Charles complex through its pipeline. The Company accounts for its investments in Cypress Interstate Pipeline L.L.C. under the equity method of accounting. The investment in Cypress Interstate Pipeline L.L.C. at December 31, 2020 and 2019 was \$7 and \$8, respectively. For the years ended December 31, 2020, 2019 and 2018, the Company incurred pipeline lease service fees of approximately \$13, \$14 and \$14, respectively, payable to this joint venture for usage of the pipeline. The amounts due to this joint venture were \$1 and \$1 at December 31, 2020 and 2019, respectively.

WESTLAKE CHEMICAL CORPORATION**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**
(in millions of dollars, except share amounts and per share data)

The Company owns an approximately 20% interest in both YNCORIS GmbH & Co. KG (formerly known as InfraServ Knapsack GmbH & Co. KG) and InfraServ Gendorf GmbH & Co. KG (collectively "Infraserv"). The Company accounts for its investments in Infraserv under the equity method of accounting. The Company has service agreements with these entities, including contracts to provide electricity, technical and leasing services to certain of the Company's production facilities in Germany. The investment in Infraserv was \$64 and \$57 at December 31, 2020 and 2019, respectively. For the years ended December 31, 2020, 2019 and 2018, the Company incurred charges aggregating approximately \$149, \$155 and \$145, respectively, for these services. The amounts accrued for these related parties were approximately \$41 and \$36 at December 31, 2020 and 2019, respectively.

The Company owns a 50% interest in RS Cogen LLC ("RS Cogen"). RS Cogen operates a process steam, natural gas-fired cogeneration facility adjacent to the Lake Charles South Facility. The Company accounts for its investment in RS Cogen under the equity method of accounting. The investment in RS Cogen at December 31, 2020 and 2019 was \$26 and \$9, respectively. The Company's investment in RS Cogen increased by \$14 during the year ended December 31, 2020. For the years ended December 31, 2020, 2019 and 2018, the Company recorded purchases of approximately \$29, \$26 and \$25 from RS Cogen, respectively.

The Company owns a 50% interest in Vinyl Solutions, LLC ("Vinyl Solutions"). The Company accounts for its investments in Vinyl Solutions under the equity method of accounting. Vinyl Solutions is a compounding manufacturer of specialty compounds. For the years ended December 31, 2020, 2019 and 2018, the Company recorded sales of \$4, \$5 and \$13, respectively, to Vinyl Solutions. The amounts receivable from this related party were \$1 and \$2 at December 31, 2020 and 2019, respectively.

Dividends received from equity method investments were \$12, \$11 and \$5 for the years ended December 31, 2020, 2019 and 2018, respectively.

One of the Company's directors serves as Chairman, Chief Executive Officer and President of American Air Liquide Holdings, Inc. and Executive Vice President of the Air Liquide Group ("Air Liquide"). The Company purchased oxygen, nitrogen and utilities and leased cylinders from various affiliates of American Air Liquide Holdings, Inc. including Airgas and subsidiaries that were acquired in 2016 by Air Liquide aggregating approximately \$34, \$32 and \$31 for the years ended December 31, 2020, 2019 and 2018, respectively. The Company also sold certain utilities to Air Liquide aggregating approximately \$7, \$7 and \$7 during the years ended December 31, 2020, 2019 and 2018, respectively. The amounts payable to Air Liquide were \$3 and \$2 at December 31, 2020 and 2019, respectively, and the amounts receivable from Air Liquide were \$1 and \$0 at December 31, 2020 and 2019, respectively.

21. Westlake Chemical Partners LP

In 2014, the Company formed Westlake Partners to operate, acquire and develop ethylene production facilities and related assets. Also in 2014, Westlake Partners completed its initial public offering of 12,937,500 common units.

On March 29, 2019, Westlake Partners purchased an additional 4.5% newly issued limited partner interests in OpCo for approximately \$201 and completed a private placement of 2,940,818 common units at a price of \$21.40 per common unit for total proceeds of approximately \$63. TTWF LP, the Company's principal stockholder and a related party, acquired 1,401,869 units out of the 2,940,818 common units issued in the private placement. At December 31, 2020, Westlake Partners had a 22.8% limited partner interest in OpCo, and the Company retained a 77.2% limited partner interest in OpCo and a significant interest in Westlake Partners through the Company's ownership of Westlake Partners' general partner, 40.1% of the limited partner interests (consisting of 14,122,230 common units) and incentive distribution rights.

On October 4, 2018, Westlake Partners and Westlake Partners GP, the general partner of Westlake Partners, entered into an Equity Distribution Agreement with UBS Securities LLC, Barclays Capital Inc., Citigroup Global Markets Inc., Deutsche Bank Securities Inc., RBC Capital Markets, LLC, Merrill Lynch, Pierce, Fenner & Smith Incorporated and Wells Fargo Securities, LLC to offer and sell Westlake Partners' common units, from time to time, up to an aggregate offering amount of \$50. This Equity Distribution Agreement was amended on February 28, 2020 to reference a new shelf registration for utilization under this agreement. No common units were issued under this program as of December 31, 2020.

WESTLAKE CHEMICAL CORPORATION**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**
(in millions of dollars, except share amounts and per share data)**22. Commitments and Contingencies**

The Company is involved in a number of legal and regulatory matters, principally environmental in nature, that are incidental to the normal conduct of its business, including lawsuits, investigations and claims. The outcome of these matters are inherently unpredictable. The Company believes that, in the aggregate, the outcome of all known legal and regulatory matters will not have a material adverse effect on its consolidated financial statements; however, under certain circumstances, if required to recognize costs in a specific period, when combined with other factors, outcomes with respect to such matters may be material to the Company's consolidated statements of operations in such period. The Company's assessment of the potential impact of environmental matters, in particular, is subject to uncertainty due to the complex, ongoing and evolving process of investigation and remediation of such environmental matters, and the potential for technological and regulatory developments. In addition, the impact of evolving claims and programs, such as natural resource damage claims, industrial site reuse initiatives and state remediation programs creates further uncertainty of the ultimate resolution of these matters. The Company anticipates that the resolution of many legal and regulatory matters, and in particular environmental matters, will occur over an extended period of time.

The Company and other caustic soda producers were named as defendants in multiple purported class action civil lawsuits filed since March 2019 in the U.S. District Court for the Western District of New York. The lawsuits allege the defendants conspired to fix, raise, maintain and stabilize the price of caustic soda, restrict domestic (U.S.) supply of caustic soda and allocate caustic soda customers. The other defendants named in the lawsuits are Olin Corporation, K.A. Steel Chemicals (a wholly-owned subsidiary of Olin), Occidental Petroleum Corporation, Occidental Chemical Corporation d/b/a OxyChem, Shin-Etsu Chemical Co., Ltd., Shintech Incorporated, Formosa Plastics Corporation, and Formosa Plastics Corporation, U.S.A. Each of the lawsuits is filed on behalf of the respective named plaintiff or plaintiffs and a putative class comprised of either direct purchasers or indirect purchasers of caustic soda in the U.S. The plaintiffs seek an unspecified amount of damages and injunctive relief. The defendants' joint motion to dismiss the direct purchaser lawsuits was denied and the cases have proceeded to discovery. Beginning in October 2020, similar class action proceedings were also filed in Canada before the Superior Court of Quebec as well as before the Federal Court. These proceedings seek the certification or authorization of a class action on behalf of all residents of Canada who purchased caustic soda (including, in one of the cases, those who merely purchased products containing caustic soda) from October 1, 2015 through the present or such date deemed appropriate by the court. At this time, the Company is not able to estimate the impact, if any, that these lawsuits could have on the Company's consolidated financial statements either in the current period or in future periods.

Environmental. As of December 31, 2020 and 2019, the Company had reserves for environmental contingencies totaling approximately \$53 and \$47, respectively, most of which was classified as noncurrent liabilities. The Company's assessment of the potential impact of these environmental contingencies is subject to considerable uncertainty due to the complex, ongoing and evolving process of investigation and remediation, if necessary, of such environmental contingencies, and the potential for technological and regulatory developments.

WESTLAKE CHEMICAL CORPORATION**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**
(in millions of dollars, except share amounts and per share data)

Calvert City Proceedings. For several years, the Environmental Protection Agency (the "EPA") has been conducting remedial investigation and feasibility studies at the Company's Calvert City, Kentucky facility pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 ("CERCLA"). As the current owner of the Calvert City facility, the Company was named by the EPA as a potentially responsible party ("PRP") along with Goodrich Corporation ("Goodrich") and its successor-in-interest, Avient Corporation (formerly known as PolyOne Corporation, "Avient"). On November 30, 2017, the EPA published a draft Proposed Plan, incorporating by reference an August 2015 draft Remedial Investigation ("RI") report, an October 2017 draft Feasibility Study ("FS") report and a new Technical Impracticability Waiver document dated December 19, 2017. On June 18, 2018, the EPA published an amendment to its Proposed Plan. The amended Proposed Plan describes a final remedy for the onshore portion of the site comprised of a containment wall, targeted treatment and supplemental hydraulic containment. The amended Proposed Plan also describes an interim approach to address the contamination under the river that would include recovery of any mobile contaminants by an extraction well along with further study of the extent of the contamination and potential treatment options. The EPA's estimated cost of implementation is \$107, with an estimated \$1 to \$3 in annual operation and maintenance ("O&M") costs. In September 2018, the EPA published the Record of Decision ("ROD") for the site, formally selecting the preferred final and interim remedies outlined in the amended Proposed Plan. In October 2018, the EPA issued Special Notice letters to the PRPs for the remedial design phase of work under the ROD. In April 2019, the PRPs and the EPA entered into an administrative settlement agreement and order on consent for remedial design. In October 2019, the PRPs received special notice letters for the remedial action phase of work at the site. The Company, jointly with the other PRPs, submitted a good faith offer response in December 2019. On September 17, 2020, the EPA and the Department of Justice filed a proposed consent decree for the remedial action with the U.S. District Court for the Western District of Kentucky. On November 16, 2020, the Department of Justice filed a motion to approve and enter the consent decree. On January 28, 2021, the Court granted the unopposed motion to enter the consent decree, which became effective the same day. The Company's allocation of liability for remedial and O&M costs at the Calvert City site, if any, is governed by a series of agreements between the Company, Goodrich and Avient. These agreements and the associated litigation are described below.

In connection with the 1990 and 1997 acquisitions of the Goodrich chemical manufacturing complex in Calvert City, Goodrich agreed to indemnify the Company for any liabilities related to preexisting contamination at the complex. For its part, the Company agreed to indemnify Goodrich for post-closing contamination caused by the Company's operations. The soil and groundwater at the complex, which does not include the Company's nearby PVC facility, had been extensively contaminated by Goodrich's operations. In 1993, Goodrich spun off the predecessor of Avient, and that predecessor assumed Goodrich's indemnification obligations relating to preexisting contamination. In 2003, litigation arose among the Company, Goodrich and Avient with respect to the allocation of the cost of remediating contamination at the site. The parties settled this litigation in December 2007 and the case was dismissed. In the settlement, the parties agreed that, among other things: (1) Avient would pay 100% of the costs (with specified exceptions), net of recoveries or credits from third parties, incurred with respect to environmental issues at the Calvert City site from August 1, 2007 forward; and (2) either the Company or Avient might, from time to time in the future (but not more than once every five years), institute an arbitration proceeding to adjust that percentage. In May 2017, Avient filed a demand for arbitration. In this proceeding, Avient sought to readjust the percentage allocation of future costs and to recover approximately \$11 from the Company in reimbursement of previously paid remediation costs. The Company's cross demand for arbitration seeking unreimbursed remediation costs incurred during the relevant period was dismissed from the proceedings when Avient paid such costs in full at the beginning of the arbitration hearing.

On July 10, 2018, Avient sued the Company in the U.S. District Court for the Western District of Kentucky and sought to invalidate the arbitration provisions in the parties' 2007 settlement agreement and enjoin the arbitration it had initiated in 2017. On July 30, 2018, the district court refused to enjoin the arbitration and, on January 15, 2019, the court granted the Company's motion to dismiss Avient's suit. On February 13, 2019, Avient appealed those decisions to the U.S. Court of Appeals for the Sixth Circuit. The court of appeals issued an opinion and final order on September 6, 2019, affirming the district court.

The arbitration hearing began in August 2018 and concluded in December 2018. On May 22, 2019, the arbitration panel issued its final award. It determined that Avient was responsible for 100% of the allocable costs at issue in the proceeding and that Avient would remain responsible for 100% of the costs to operate the existing groundwater remedy at the Calvert City site. In August 2019, Avient filed a motion to vacate before the U.S. District Court for the Western District of Kentucky, seeking to invalidate the final award under the Federal Arbitration Act. On February 11, 2020, the U.S. District Court for the Western District of Kentucky denied Avient's motion to vacate and affirmed the arbitration final award. Avient did not file a notice of appeal before the March 10, 2020 deadline to contest the court's decision. Accordingly, the final award was affirmed, and the arbitration proceeding is fully and finally resolved.

WESTLAKE CHEMICAL CORPORATION**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**
(in millions of dollars, except share amounts and per share data)

At this time, the Company is not able to estimate the impact, if any, that any subsequent arbitration or judicial proceeding could have on the Company's consolidated financial statements either in the current period or in later periods. Any cash expenditures that the Company might incur in the future with respect to the remediation of contamination at the Calvert City complex would likely be spread out over an extended period. As a result, the Company believes it is unlikely that any remediation costs allocable to it will be material in terms of expenditures made in any individual reporting period.

Environmental Remediation: Reasonably Possible Matters. The Company's assessment of the potential impact of environmental contingencies is subject to considerable uncertainty due to the complex, ongoing and evolving process of investigation and remediation, if necessary, of such environmental contingencies, and the potential for technological and regulatory developments. As such, in addition to the amounts currently reserved, the Company may be subject to reasonably possible loss contingencies related to environmental matters in the range of \$65 to \$130.

Other Commitments

The Company has various unconditional purchase obligations, primarily to purchase goods and services, including commitments to purchase various utilities, feedstock, nitrogen, oxygen, product storage and pipeline usage. At December 31, 2020, unrecorded unconditional total purchase obligations were \$4,450, which included approximately \$594 in 2021, \$623 in 2022, \$553 in 2023, \$462 in 2024, \$407 in 2025, and \$1,811 thereafter.

23. Segment and Geographic Information**Segment Information**

The Company operates in two principal operating segments: Vinyls and Olefins. These segments are strategic business units that offer a variety of different products. The Company manages each segment separately as each business requires different technology and marketing strategies.

The Company's Vinyl segment manufactures and markets PVC, VCM, ethylene dichloride ("EDC"), chlor-alkali (chlorine and caustic soda), chlorinated derivative products and ethylene. The Company also manufactures and sells building products fabricated primarily from PVC, including residential siding, trim and mouldings, pipe and fittings for various water, sewer and industrial applications, profiles for windows and doors, decking products, film for various inflatables, wall covering tapes, roofing applications and composite roof tiles. The Company's primary North American chemical manufacturing facilities are located in its Calvert City, Kentucky and Lake Charles, Plaquemine and Geismar, Louisiana sites. The Company also produces chlorine, caustic soda, hydrogen and chlorinated derivative products at its facilities in Natrium, Longview, Washington and Beauharnois, Quebec and PVC resin and PVC compounds at several facilities in Mississippi. In addition to North America, the Company also has manufacturing facilities in Europe and Asia.

As of December 31, 2020, the Company owned 37 building products and PVC compound facilities. The Company primarily uses its chlorine, VCM and PVC production to manufacture its building products.

No single customer accounted for more than 10% of sales in the Vinyls segment for the years ended December 31, 2020, 2019 or 2018.

The Company's Olefins segment manufactures and markets polyethylene, styrene monomer and various ethylene co-products. The Company's ethylene production is used in the Company's polyethylene, styrene and VCM operations. In addition, the Company sells ethylene and ethylene co-products, primarily propylene, crude butadiene, pyrolysis gasoline and hydrogen, to external customers.

No single customer accounted for more than 10% of sales in the Olefins segment for the years ended December 31, 2020, 2019 or 2018.

The accounting policies of the individual segments are the same as those described in Note 1.

WESTLAKE CHEMICAL CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
(in millions of dollars, except share amounts and per share data)

	Year Ended December 31,		
	2020	2019	2018
Net external sales			
Vinyls			
PVC, caustic soda and other	\$ 4,570	\$ 5,068	\$ 5,359
Building products	1,402	1,268	1,257
Total vinyls	<u>5,972</u>	<u>6,336</u>	<u>6,616</u>
Olefins			
Polyethylene	1,226	1,301	1,519
Styrene, feedstock and other	306	481	500
Total olefins	<u>1,532</u>	<u>1,782</u>	<u>2,019</u>
	<u><u>\$ 7,504</u></u>	<u><u>\$ 8,118</u></u>	<u><u>\$ 8,635</u></u>
Intersegment sales			
Vinyls	\$ 1	\$ 1	\$ 2
Olefins	276	324	500
	<u><u>\$ 277</u></u>	<u><u>\$ 325</u></u>	<u><u>\$ 502</u></u>
Income (loss) from operations			
Vinyls	\$ 301	\$ 451	\$ 913
Olefins	160	260	573
Corporate and other	(32)	(55)	(78)
	<u><u>\$ 429</u></u>	<u><u>\$ 656</u></u>	<u><u>\$ 1,408</u></u>
Depreciation and amortization			
Vinyls	\$ 626	\$ 563	\$ 491
Olefins	139	142	138
Corporate and other	8	8	12
	<u><u>\$ 773</u></u>	<u><u>\$ 713</u></u>	<u><u>\$ 641</u></u>
Other income, net			
Vinyls	\$ 30	\$ 18	\$ 35
Olefins	4	5	4
Corporate and other	10	15	13
	<u><u>\$ 44</u></u>	<u><u>\$ 38</u></u>	<u><u>\$ 52</u></u>
Provision for (benefit from) income taxes			
Vinyls	\$ (93)	\$ 40	\$ 212
Olefins	38	60	128
Corporate and other	13	8	(40)
	<u><u>\$ (42)</u></u>	<u><u>\$ 108</u></u>	<u><u>\$ 300</u></u>
Capital expenditures			
Vinyls	\$ 443	\$ 664	\$ 585
Olefins	74	117	110
Corporate and other	8	6	7
	<u><u>\$ 525</u></u>	<u><u>\$ 787</u></u>	<u><u>\$ 702</u></u>

WESTLAKE CHEMICAL CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
(in millions of dollars, except share amounts and per share data)

A reconciliation of total segment income from operations to consolidated income before income taxes is as follows:

	Year Ended December 31,		
	2020	2019	2018
Income from operations for reportable segments	\$ 429	\$ 656	\$ 1,408
Interest expense	(142)	(124)	(126)
Other income, net	44	38	52
Income before income taxes	<u>\$ 331</u>	<u>\$ 570</u>	<u>\$ 1,334</u>

	December 31, 2020		December 31, 2019
	2020	2019	
Total assets			
Vinyls	\$ 10,680	\$ 10,597	
Olefins	1,923	1,991	
Corporate and other	1,232	673	
	<u>\$ 13,835</u>	<u>\$ 13,261</u>	

Geographic Information

	Year Ended December 31,		
	2020	2019	2018
Net sales to external customers ⁽¹⁾			
United States	\$ 5,100	\$ 5,530	\$ 6,114
Foreign			
Canada	601	573	649
Germany	458	478	500
China	173	175	155
Italy	103	119	105
Taiwan	74	84	102
Other	995	1,159	1,010
	<u>\$ 7,504</u>	<u>\$ 8,118</u>	<u>\$ 8,635</u>

	December 31, 2020		December 31, 2019
	2020	2019	
Long-lived assets			
United States	\$ 5,930	\$ 6,012	
Foreign			
Germany	666	588	
Other	324	312	
	<u>\$ 6,920</u>	<u>\$ 6,912</u>	

(1) Net sales are attributed to countries based on location of customer.

WESTLAKE CHEMICAL CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
(in millions of dollars, except share amounts and per share data)

24. Quarterly Financial Information (Unaudited)

	Three Months Ended			
	March 31, 2020	June 30, 2020	September 30, 2020	December 31, 2020
Net sales	\$ 1,932	\$ 1,709	\$ 1,898	\$ 1,965
Gross profit	283	169	248	323
Income from operations	136	36	79	178
Net income	157	24	69	123
Net income attributable to Westlake Chemical Corporation	145	15	57	113
Earnings per common share attributable to Westlake Chemical Corporation: ⁽¹⁾				
Basic	\$ 1.13	\$ 0.11	\$ 0.45	\$ 0.87
Diluted	\$ 1.13	\$ 0.11	\$ 0.45	\$ 0.87
	Three Months Ended			
	March 31, 2019	June 30, 2019	September 30, 2019	December 31, 2019
Net sales	\$ 2,025	\$ 2,144	\$ 2,066	\$ 1,883
Gross profit	299	340	371	250
Income from operations	134	194	226	102
Net income	82	129	166	85
Net income attributable to Westlake Chemical Corporation	72	119	158	72
Earnings per common share attributable to Westlake Chemical Corporation: ⁽¹⁾				
Basic	\$ 0.56	\$ 0.92	\$ 1.22	\$ 0.56
Diluted	\$ 0.55	\$ 0.92	\$ 1.22	\$ 0.56

- (1) Basic and diluted earnings per common share ("EPS") for each quarter is computed using the weighted average shares outstanding during that quarter, while EPS for the year is computed using the weighted average shares outstanding for the year. As a result, the sum of the EPS for each of the four quarters may not equal the EPS for the year.

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

None.

Item 9A. Controls and Procedures

Disclosure, Controls and Procedures

We carried out an evaluation, under the supervision and with the participation of our management, including our President and Chief Executive Officer (our principal executive officer) and our Executive Vice President and Chief Financial Officer (our principal financial officer), of the effectiveness of our disclosure controls and procedures pursuant to Rules 13a-15 and 15d-15 under the Securities Exchange Act of 1934 as of the end of the period covered by this Form 10-K. Based upon that evaluation, our President and Chief Executive Officer and our Executive Vice President and Chief Financial Officer concluded that our disclosure controls and procedures are effective as of December 31, 2020 to provide reasonable assurance that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and is accumulated and communicated to management as appropriate to allow timely decisions regarding required disclosure.

Internal Control Over Financial Reporting

Westlake's management's report on internal control over financial reporting appears on page 49 of this Annual Report on Form 10-K. In addition, PricewaterhouseCoopers LLP, the independent registered public accounting firm that audited the financial statements included in this Annual Report on Form 10-K, has also audited the effectiveness of internal control over financial reporting as of December 31, 2020, as stated in their report that appears on page 50 of this Annual Report on Form 10-K.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting that occurred during the quarter ended December 31, 2020 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

Pursuant to Item 401(b) of Regulation S-K, the information required by this item with respect to our executive officers is set forth in Part I of this Form 10-K.

Item 11. Executive Compensation.

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

Item 13. Certain Relationships and Related Transactions, and Director Independence.

Item 14. Principal Accountant Fees and Services.

The information required by Items 10, 11, 12, 13 and 14 is incorporated by reference to the Proxy Statement, which will be filed with the SEC pursuant to Regulation 14A under the Exchange Act within 120 days of December 31, 2020.

PART IV

Item 15. Exhibits and Financial Statement Schedules

- (a)(1) The financial statements listed in the Index to Consolidated Financial Statements in Item 8 of this Form 10-K are filed as part of this Form 10-K.
- (a)(2) All schedules are omitted because the information is not applicable, not required, or has been furnished in the Consolidated Financial Statements or Notes thereto in Item 8 of this Form 10-K.
- (a)(3) Exhibits

<u>Exhibit No.</u>	<u>Exhibit Index</u>
3.1	<u>Amended and Restated Certificate of Incorporation of Westlake as filed with the Delaware Secretary of State on August 6, 2004 (incorporated by reference to Westlake's Registration Statement on Form S-1/A, filed on August 9, 2004).</u>
3.2	<u>Certificate of Amendment to the Amended and Restated Certificate of Incorporation of Westlake as filed with the Delaware Secretary of State on May 16, 2014 (incorporated by reference to Westlake's Current Report on Form 8-K, filed on May 16, 2014, File No. 001-32260).</u>
3.3	<u>Certificate of Amendment to the Amended and Restated Certificate of Incorporation of Westlake as filed with the Delaware Secretary of State on May 19, 2017 (incorporated by reference to Westlake's Current Report on Form 8-K, filed on May 19, 2017, File No. 001-32260).</u>
3.4	<u>Bylaws of Westlake (incorporated by reference to Westlake's Registration Statement on Form S-1/A, filed on August 9, 2004).</u>
4.1	<u>Description of Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934 (incorporated by reference to Exhibit 4.1 to Westlake's Annual Report on Form 10-K for the year ended December 31, 2019, File No. 1-32260).</u>
4.2	<u>Indenture dated as of January 1, 2006 by and among Westlake, the potential subsidiary guarantors listed therein and JPMorgan Chase Bank, National Association, as trustee (incorporated by reference to Westlake's Current Report on Form 8-K, filed on January 13, 2006, File No. 1-32260).</u>
4.3	<u>Sixth Supplemental Indenture, dated as of July 17, 2012, among the Company, the Subsidiary Guarantors (as defined therein) and The Bank of New York Mellon Trust Company, N.A., as trustee (incorporated by reference to Exhibit 4.2 to the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on July 16, 2012, File No. 1-32260).</u>
4.4	<u>Seventh Supplemental Indenture, dated as of February 12, 2013, among the Company, the Subsidiary Guarantors (as defined therein) and The Bank of New York Mellon Trust Company, N.A., as trustee (incorporated by reference to Exhibit 4.16 to Westlake's Annual Report on Form 10-K for the year ended December 31, 2012, filed on February 22, 2013, File No. 1-32260).</u>
4.5	<u>Eighth Supplemental Indenture (including the form of the Notes), dated as of August 10, 2016, among Westlake Chemical Corporation, the Guarantors (as defined therein) and The Bank of New York Mellon Trust Company, N.A., as trustee (incorporated by reference to Exhibit 4.2 to Westlake's Current Report on Form 8-K, filed on August 10, 2016, File No. 001-32260).</u>
4.6	<u>Tenth Supplemental Indenture (including the form of the Notes), dated as of November 29, 2017, among Westlake Chemical Corporation, the Subsidiary Guarantors (as defined therein) and The Bank of New York Mellon Trust Company, N.A., as trustee (incorporated by reference to Exhibit 4.2 to Westlake's Current Report on Form 8-K, filed on November 28, 2017, File No. 001-32260).</u>
4.7	<u>Eleventh Supplemental Indenture (including the form of the Notes), dated as of November 28, 2017, among Westlake Chemical Corporation, the Subsidiary Guarantors (as defined therein) and The Bank of New York Mellon Trust Company, N.A., as trustee (incorporated by reference to Exhibit 4.3 to Westlake's Current Report on Form 8-K, filed on November 28, 2017, File No. 001-32260).</u>
4.8	<u>Twelfth Supplemental Indenture (including the form of the Notes), dated as of July 17, 2019, between Westlake Chemical Corporation and The Bank of New York Mellon Trust Company, N.A., as trustee (incorporated by reference to Exhibit 4.2 to Westlake's Current Report on Form 8-K filed on July 17, 2019, File No. 1-32260).</u>

<u>Exhibit No.</u>	<u>Exhibit Index</u>
4.9	<u>Thirteenth Supplemental Indenture (including the form of Notes), dated as of June 12, 2020, between Westlake Chemical Corporation and The Bank of New Mellon Trust Company, N.A., as trustee (incorporated by reference to Westlake's Current Report on Form 8-K filed on June 12, 2020, File No. 1-32260).</u>
4.10	<u>Paying Agency Agreement dated as of July 17, 2019, between Westlake Chemical Corporation and The Bank of New York Mellon, London Branch, as paying agent (incorporated by reference to Exhibit 4.4 to Westlake's Current Report on Form 8-K, filed on July 17, 2019, File No. 1-32260).</u>
	Westlake and its subsidiaries are party to other long-term debt instruments not filed herewith under which the total amount of securities authorized does not exceed 10% of the total assets of Westlake and its subsidiaries on a consolidated basis. Pursuant to paragraph 4(iii)(A) of Item 601(b) of Regulation S-K, Westlake agrees to furnish a copy of such instruments to the SEC upon request.
10.1	<u>Amended and Restated Loan Agreement, dated as of November 1, 2017, by and between the Louisiana Local Government Environmental Facilities and Community Development Authority and Westlake Chemical Corporation (incorporated by reference to Exhibit 4.6 to Westlake's Current Report on Form 8-K, filed on November 28, 2017, File No. 001-32260).</u>
10.2	<u>Senior Unsecured Revolving Credit Agreement between Westlake Chemical OpCo LP and Westlake Development Corporation dated as of August 4, 2014 (incorporated by reference to Exhibit 10.9 to Westlake Chemical Partners LP's Current Report on Form 8-K filed on August 8, 2014, File No. 001-36567).</u>
10.3	<u>Amended and Restated Senior Unsecured Revolving Credit Agreement by and among Westlake Chemical OpCo LP, Westlake Polymers LLC and the lenders party thereto, dated as of June 1, 2017 (incorporated by reference to Exhibit 10.9 to Westlake Chemical Partners LP's Annual Report on Form 10-K for the year ended December 31, 2019, filed on February 28, 2020, File No. 001-36567).</u>
10.4	<u>First Amendment to Amended and Restated Senior Unsecured Revolving Credit Agreement (incorporated by reference to Exhibit 10.1 to Westlake Chemical Partners LP's Quarterly Report on Form 10-Q for the quarter ended September 30, 2018 (File No. 001-36567) filed on November 6, 2018.</u>
10.5	<u>Senior Unsecured Revolving Credit Agreement by and among Westlake Chemical Partners LP and Westlake Chemical Finance Corporation, dated as of April 29, 2015 (incorporated by reference to Exhibit 10.1 to Westlake Chemical Partners LP's Current Report on Form 8-K filed on April 30, 2015, File No. 1-36567).</u>
10.6	<u>First Amendment to Senior Unsecured Revolving Credit Agreement by and between Westlake Chemical Partners LP, as borrower, and Westlake Chemical Finance Corporation, as lender, dated as of August 1, 2017 (incorporated by reference to Exhibit 10.1 to Westlake Chemical Partners LP's Quarterly Report on Form 10-Q for the quarter ended June 30, 2017, File No. 01-36567).</u>
10.7	<u>Second Amendment to Senior Unsecured Revolving Credit Agreement by and between Westlake Chemical Partners LP, as borrower, and Westlake Chemical Finance Corporation, as lender, dated as of November 28, 2017 (incorporated herein by reference to Exhibit 10.12 to Westlake's Annual Report on Form 10-K for the year ended December 31, 2017, filed on February 21, 2018, File No. 001-32260).</u>
10.8	<u>Third Amendment to Senior Unsecured Revolving Credit Agreement by and between Westlake Chemical Partners LP, as borrower, and Westlake Chemical Finance Corporation, as lender, dated as of March 19, 2020 (incorporated herein by reference to Exhibit 10.1 to Westlake Chemical Partner LP's Quarterly Report on Form 10-Q for the quarter ended March 31, 2020, filed on May 6, 2020, File No. 001-36567).</u>
10.9	<u>Form of Registration Rights Agreement between Westlake and TTWF LP (incorporated by reference to Westlake's Registration Statement on Form S-1/A, filed on July 2, 2004).</u>
10.10+	<u>Westlake Chemical Corporation 2013 Omnibus Incentive Plan (as amended and restated as of May 19, 2017) (incorporated by reference to Appendix B to Westlake's Definitive Proxy Statement on Schedule 14A filed on April 7, 2017, File No. 1-32260).</u>
10.11+	<u>Westlake Chemical Corporation Amended and Restated Annual Incentive Plan adopted by the Compensation Committee of the Board of Directors on March 24, 2011 (incorporated by reference to Westlake's Quarterly Report on Form 10-Q for the quarter ended March 31, 2011, filed on May 4, 2011, File No. 1-32260).</u>
10.12	<u>Investment Management Agreement among Westlake Chemical Corporation, Westlake Chemical OpCo LP and Westlake Chemical Partners LP, dated as of August 1, 2017 (incorporated herein by reference to Exhibit 10.1 to Westlake's Quarterly Report on Form 10-Q for the quarter ended September 30, 2017, filed on November 7, 2017, File No. 001-32260).</u>

<u>Exhibit No.</u>	<u>Exhibit Index</u>
10.13	Credit Agreement dated as of July 24, 2018, by and among Westlake Chemical Corporation, the lenders from time to time party thereto, the issuing banks party thereto and JPMorgan Chase Bank, National Association, as Administrative Agent, relating to a \$1 billion senior unsecured revolving credit facility (incorporated by reference to Exhibit 10.1 to Westlake's Current Report on Form 8-K filed on July 26, 2018, File No. 001-32260).
10.14+	Form of Long-Term Cash Performance Award Letter for 2015 Executive Officer Awards (incorporated by reference to Exhibit 10.5 to Westlake's Quarterly Report on Form 10-Q for the quarter ended March 31, 2015, File No. 1-32260).
10.15+	Form of Stock Option Award Letter for 2018 Executive Officer Awards (incorporated by reference to Exhibit 10.21 to Westlake's Annual Report on Form 10-K for the year ended December 31, 2017 filed on February 21, 2018, File No. 001-32260).
10.16+	Form of Restricted Stock Unit Award Letter for 2018 Executive Officer Awards (incorporated by reference to Exhibit 10.22 to Westlake's Annual Report on Form 10-K for the year ended December 31, 2017 filed on February 21, 2018, File No. 001-32260).
10.17+	Form of Special Incentive Award Letter for 2018 Executive Officer Awards (incorporated by reference to Exhibit 10.24 to Westlake's Annual Report on Form 10-K for the year ended December 31, 2017 filed on February 21, 2018, File No. 001-32260).
10.18+	Form of Performance Stock Unit Award Letter for 2019 Executive Officer Awards (incorporated by reference to Exhibit 10.25 to Westlake's Annual Report on Form 10-K for the year ended December 31, 2018 filed on February 20, 2019, File No. 001-32260).
10.19+ †	Form of Stock Option Award Letter for 2021 Executive Officer Awards.
10.20+ †	Form of Restricted Stock Unit Award Letter for 2021 Executive Officer Awards.
10.21+ †	Form of Performance Stock Unit Award Letter for 2021 Executive Officer Awards.
21†	Subsidiaries of Westlake.
23.1†	Consent of PricewaterhouseCoopers LLP.
31.1†	Rule 13a-14(a) / 15d-14(a) Certification (Principal Executive Officer).
31.2†	Rule 13a-14(a) / 15d-14(a) Certification (Principal Financial Officer).
32.1††	Section 1350 Certification (Principal Executive Officer and Principal Financial Officer).
101.INS†	XBRL Instance Document-The instance document does not appear in the interactive data file because its XBRL tags are embedded within the Inline XBRL document.
101.SCH†	XBRL Taxonomy Extension Schema Document.
101.CAL†	XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF†	XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB†	XBRL Taxonomy Extension Label Linkbase Document.
101.PRE†	XBRL Taxonomy Extension Presentation Linkbase Document.
104	Cover Page Interactive Data File - The cover page interactive data file does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document and contained in Exhibit 101.

† Filed herewith.

†† Furnished herewith.

+ Management contract, compensatory plan or arrangement.

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.

WESTLAKE CHEMICAL CORPORATION

Date: February 24, 2021

/S/ ALBERT CHAO

Albert Chao, President and Chief 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>Signature</u>	<u>Title</u>	<u>Date</u>
/S/ ALBERT CHAO Albert Chao	President and Chief Executive Officer (Principal Executive Officer)	February 24, 2021
/S/ M. STEVEN BENDER M. Steven Bender	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 24, 2021
/S/ JOHNATHAN S. ZOELLER Johnathan S. Zoeller	Vice President and Chief Accounting Officer (Principal Accounting Officer)	February 24, 2021
/S/ JAMES CHAO James Chao	Chairman of the Board of Directors	February 24, 2021
/S/ ALBERT CHAO Albert Chao	Director	February 24, 2021
/S/ DAVID T. CHAO David T. Chao	Director	February 24, 2021
/S/ JOHN CHAO John Chao	Director	February 24, 2021
/S/ MICHAEL J. GRAFF Michael J. Graff	Director	February 24, 2021
/S/ MARIUS A. HAAS Marius A. Haas	Director	February 24, 2021
/S/ DOROTHY C. JENKINS Dorothy C. Jenkins	Director	February 24, 2021
/S/ KIMBERLY S. LUBEL Kimberly S. Lubel	Director	February 24, 2021
/S/ MARK A. MCCOLLUM Mark A. McCollum	Director	February 24, 2021
/S/ R. BRUCE NORTHCUTT R. Bruce Northcutt	Director	February 24, 2021
/S/ JEFFREY W. SHEETS Jeffrey W. Sheets	Director	February 24, 2021