

OLIN CORP  
Form 10-K  
February 26, 2018  
Table of Contents

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

Form 10-K  
(Mark One)

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

For the fiscal year ended December 31, 2017

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

For the transition period from \_\_\_\_\_ to \_\_\_\_\_  
Commission file number 1-1070

OLIN CORPORATION

(Exact name of registrant as specified in its charter)

Virginia 13-1872319

(State or other jurisdiction of incorporation or organization) (I.R.S. Employer Identification No.)

190 Carondelet Plaza, Suite 1530, Clayton, MO 63105  
(Address of principal executive offices) (Zip code)

Registrant's telephone number, including area code: (314) 480-1400

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

Title of each class	Name of each exchange on which registered
Common Stock,	New York Stock Exchange
par value \$1 per share	

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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post such files).

Yes  No

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act. Large accelerated filer  Accelerated filer  Non-accelerated filer  (Do not check if a smaller reporting company) Smaller reporting company  Emerging growth company

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

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act.)

Yes " No

As of June 30, 2017, the aggregate market value of registrant's common stock, par value \$1 per share, held by non-affiliates of registrant was approximately \$5,008,796,298 based on the closing sale price as reported on the New York Stock Exchange.

As of January 31, 2018, 167,165,736 shares of the registrant's common stock were outstanding.

**DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the following document are incorporated by reference in this Form 10-K as indicated herein:

Document	Part of 10-K into which incorporated
Proxy Statement relating to Olin's Annual Meeting of Shareholders to be held in 2018	Part III

Table of Contents

TABLE OF CONTENTS FOR FORM 10-K		Page
Part I		3
Item 1.	<u>Business</u>	3
Item 1A.	<u>Risk Factors</u>	12
Item 1B.	<u>Unresolved Staff Comments</u>	20
Item 2.	<u>Properties</u>	20
Item 3.	<u>Legal Proceedings</u>	20
Item 4.	<u>Mine Safety Disclosures</u>	20
Part II		21
Item 5.	<u>Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities</u>	21
Item 6.	<u>Selected Financial Data</u>	23
Item 7.	<u>Management’s Discussion and Analysis of Financial Condition and Results of Operations</u>	24
	<u>Business Background</u>	24
	<u>Recent Developments and Highlights</u>	24
	<u>Consolidated Results of Operations</u>	26
	<u>Segment Results</u>	29
	<u>2018 Outlook</u>	32
	<u>Pension and Postretirement Benefits</u>	33
	<u>Environmental Matters</u>	34
	<u>Legal Matters and Contingencies</u>	36
	<u>Liquidity, Investment Activity and Other Financial Data</u>	37
	<u>Liquidity and Other Financing Arrangements</u>	40
	<u>Off-Balance Sheet Arrangements</u>	45
	<u>Critical Accounting Policies and Estimates</u>	46
	<u>New Accounting Pronouncements</u>	48
	<u>Derivative Financial Instruments</u>	50
Item 7A.	<u>Quantitative and Qualitative Disclosures About Market Risk</u>	52
	<u>Cautionary Statement About Forward-Looking Statements</u>	53
Item 8.	<u>Consolidated Financial Statements and Supplementary Data</u>	54
	<u>Management Report on Internal Control Over Financial Reporting</u>	54
	<u>Report of Independent Registered Public Accounting Firm</u>	55
	<u>Consolidated Balance Sheets</u>	57
	<u>Consolidated Statements of Operations</u>	58
	<u>Consolidated Statements of Comprehensive Income (Loss)</u>	59
	<u>Consolidated Statements of Shareholders’ Equity</u>	60
	<u>Consolidated Statements of Cash Flows</u>	61
	<u>Notes to Consolidated Financial Statements</u>	62
Item 9.	<u>Changes in and Disagreements with Accountants on Accounting and Financial Disclosure</u>	120
Item 9A.	<u>Controls and Procedures</u>	120
Item 9B.	<u>Other Information</u>	121
Part III		121
Item 10.	<u>Directors, Executive Officers and Corporate Governance</u>	121
Item 11.	<u>Executive Compensation</u>	121
Item 12.	<u>Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters</u>	121
Item 13.	<u>Certain Relationships and Related Transactions and Director Independence</u>	121

Item 14. <u>Principal Accounting Fees and Services</u>	<u>121</u>
Part IV	<u>122</u>
Item 15. <u>Exhibits and Consolidated Financial Statement Schedules</u>	<u>122</u>
Item 16. <u>Form 10-K Summary</u>	<u>126</u>
<u>SIGNATURES</u>	<u>127</u>

Table of Contents

PART I

Item 1. BUSINESS

GENERAL

Olin Corporation (Olin) is a Virginia corporation, incorporated in 1892, having its principal executive offices in Clayton, MO. We are a manufacturer concentrated in three business segments: Chlor Alkali Products and Vinyls, Epoxy and Winchester. The Chlor Alkali Products and Vinyls segment manufactures and sells chlorine and caustic soda, ethylene dichloride and vinyl chloride monomer, methyl chloride, methylene chloride, chloroform, carbon tetrachloride, perchloroethylene, trichloroethylene and vinylidene chloride, hydrochloric acid, hydrogen, bleach products and potassium hydroxide, which represent 56% of 2017 sales. The Epoxy segment produces and sells a full range of epoxy materials, including allyl chloride, epichlorohydrin, liquid epoxy resins, solid epoxy resins and downstream products such as differentiated epoxy resins and additives, which represent 33% of 2017 sales. The Winchester segment produces and sells sporting ammunition, reloading components, small caliber military ammunition and components, and industrial cartridges, which represent 11% of 2017 sales. See our discussion of our segment disclosures contained in Item 7—“Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

On October 5, 2015 (the Closing Date), we acquired from DowDuPont Inc. (DowDuPont) (f/k/a The Dow Chemical Company) its U.S. Chlor Alkali and Vinyl, Global Chlorinated Organics and Global Epoxy businesses (collectively, the Acquired Business) using a Reverse Morris Trust Structure (collectively, the Acquisition). The Acquired Business’s operating results are included in the accompanying financial statements since the Closing Date of the Acquisition. For segment reporting purposes, the Acquired Business’s Global Epoxy operating results comprise the Epoxy segment and U.S. Chlor Alkali and Vinyl and Global Chlorinated Organics (Acquired Chlor Alkali Business) operating results combined with our former Chlor Alkali Products and Chemical Distribution segments to comprise the Chlor Alkali Products and Vinyls segment.

GOVERNANCE

We maintain an Internet website at [www.olin.com](http://www.olin.com). Our reports on Form 10-K, Form 10-Q and Form 8-K, as well as amendments to those reports, are available free of charge on our website, as soon as reasonably practicable after we file the reports with the Securities and Exchange Commission (SEC). Additionally, a copy of our SEC filings can be accessed from the SEC at their Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549 or by calling that office of the SEC at 1-800-SEC-0330. Also, a copy of our electronically filed materials can be obtained at [www.sec.gov](http://www.sec.gov). Our Principles of Corporate Governance, Committee Charters and Code of Conduct are available on our website at [www.olin.com](http://www.olin.com) in the Governance Section under Governance Documents and Committees.

In May 2017, our Chief Executive Officer executed the annual Section 303A.12(a) CEO Certification required by the New York Stock Exchange (NYSE), certifying that he was not aware of any violation of the NYSE’s corporate governance listing standards by us. Additionally, our Chief Executive Officer and Chief Financial Officer executed the required Sarbanes-Oxley Act of 2002 Sections 302 and 906 certifications relating to this Annual Report on Form 10-K, which are filed with the SEC as exhibits to this Annual Report on Form 10-K.

PRODUCTS, SERVICES AND STRATEGIES

Chlor Alkali Products and Vinyls

Products and Services

We have been involved in the chlor alkali industry for more than 120 years and are a major participant in the global chlor alkali industry. Chlorine, caustic soda and hydrogen are co-produced commercially by the electrolysis of salt. These co-produced products are produced simultaneously, and in a fixed ratio of 1.0 ton of chlorine to 1.1 tons of caustic soda and 0.03 tons of hydrogen. The industry refers to this as an Electrochemical Unit or ECU. With a demonstrated capacity of 5.8 million ECUs as of the end of 2017, we have the largest global chlor alkali capacity, according to data from IHS, Inc. (IHS). IHS is a global information consulting company established in 1959 that provides information to a variety of industries.

## Table of Contents

Chlorine is used as a raw material in the production of thousands of products, including vinyls, urethanes, epoxy, water treatment chemicals and a variety of other organic and inorganic chemicals. A significant portion of chlorine production is consumed in the manufacture of ethylene dichloride (EDC) and vinyl chloride monomer (VCM), both of which Chlor Alkali Products and Vinyls produce. A large portion of our EDC production is utilized in the production of VCM, but we are also one of the largest global participants in merchant EDC sales. EDC and VCM are precursors for polyvinyl chloride (PVC). PVC is a plastic used in applications such as vinyl siding, pipe, pipe fittings and automotive parts.

Our Chlor Alkali Products and Vinyls segment is one of the largest global marketers of caustic soda, including caustic soda produced by DowDuPont in Brazil. The off-take arrangement with DowDuPont in Brazil entitles the Chlor Alkali Products and Vinyls segment the right to market and sell the caustic soda produced at DowDuPont's Aratu, Brazil site. The diversity of caustic soda sourcing allows us to cost effectively supply customers worldwide. Caustic soda has a wide variety of end-use applications, the largest of which includes water treatment, alumina, pulp and paper, urethanes, detergents and soaps and a variety of other organic and inorganic chemicals.

Our Chlor Alkali Products and Vinyls segment also includes our chlorinated organics business which is the largest global producer of chlorinated organic products that include chloromethanes (methyl chloride, methylene chloride, chloroform and carbon tetrachloride) and chloroethenes (perchloroethylene, trichloroethylene, and vinylidene chloride). Chlorinated organics participates in both the solvent segment, as well as the intermediate segment of the global chlorocarbon industry with a focus on sustainable applications and in applications where we can benefit from our cost advantages. Intermediate products are used as feedstocks in the production of fluoropolymers, fluorocarbon refrigerants and blowing agents, silicones, cellulose and agricultural chemicals. Solvent products are sold into end uses such as surface preparation, dry cleaning, pharmaceuticals and regeneration of refining catalysts. This business's unique technology allows us to utilize both hydrochloric acid and chlorinated hydrocarbon byproducts (RCl), produced by our other production processes, as raw materials in an integrated system. These manufacturing facilities also consume chlorine, which generates caustic soda production and sales.

We also manufacture and sell other chlor alkali-related products, including hydrochloric acid, sodium hypochlorite (bleach) and potassium hydroxide, which we refer to as co-products. The production of co-products, chlorinated organics and epoxy generally consume chlorine as a raw material creating downstream applications that upgrade the value of chlorine and enable caustic soda production. As industry leaders in chlorinated organics and epoxy resins, we have nineteen integrated outlets for our captive chlorine.

The Chlor Alkali Products and Vinyls segment's products are delivered by pipeline, marine vessel, deep-water and coastal barge, railcar and truck. Our logistics and terminal infrastructure provides us with geographically advantaged storage capacity and provides us with a private fleet of trucks, tankers and trailers that expands our geographic coverage and enhances our service capabilities. At our largest integrated product sites, our deep-water access enables us to reach global markets.

Our Chlor Alkali Products and Vinyls segment maintains strong relationships with DowDuPont as both a customer and supplier. These relationships are maintained through long-term cost based contracts that provide us with a reliable supply of key raw materials and predictable and consistent demand for our end use products. Key products sold to DowDuPont include chlorine, cell effluent, chlorinated organics and VCM. Key raw materials received from DowDuPont include ethylene and electricity. Ethylene is supplied for the vinyls business under a long-term supply arrangement with DowDuPont whereby we receive ethylene at integrated producer economics.

Electricity, salt and ethylene are the major purchased raw materials for our Chlor Alkali Products and Vinyls segment. Electricity is the single largest raw material component in the production of Chlor Alkali and Vinyls' products. Approximately 77% of our electricity is generated from natural gas or hydroelectric sources. Approximately

77% of our salt requirements are met by internal supply. The high volume nature of this industry places an emphasis on cost management and we believe that our scale, integration and raw material positions make us one of the low cost producers in the industry.



Table of Contents

The following table lists products and services of our Chlor Alkali Products and Vinyls segment, with principal products on the basis of annual sales highlighted in bold face.

Products & Services	Major End Uses	Plants & Facilities	Major Raw Materials & Components for Products/Services
Chlorine/caustic soda	Pulp & paper processing, chemical manufacturing, water purification, manufacture of vinyl chloride, bleach, swimming pool chemicals and urethane chemicals	Becancour, Canada Charleston, TN Freeport, TX McIntosh, AL Niagara Falls, NY Plaquemine, LA St. Gabriel, LA	salt, electricity
Ethylene dichloride/vinyl chloride monomer	Precursor to polyvinyl chloride used in vinyl siding, plumbing and automotive parts	Freeport, TX Plaquemine, LA	chlorine, ethylene
Chlorinated organics intermediates	Used as feedstocks in the production of fluoropolymers, fluorocarbon refrigerants and blowing agents, silicones, cellulose and agricultural chemicals	Freeport, TX Plaquemine, LA Stade, Germany	chlorine, ethylene dichloride, hydrochloric acid, methanol, RCl
Chlorinated organics solvents	Surface preparation, dry cleaning and pharmaceuticals	Freeport, TX Plaquemine, LA Stade, Germany	chlorine, ethylene dichloride, hydrochloric acid, RCl
Sodium hypochlorite (bleach)	Household cleaners, laundry bleaching, swimming pool sanitizers, semiconductors, water treatment, textiles, pulp & paper and food processing	Augusta, GA Becancour, Canada Charleston, TN Freeport, TX Henderson, NV Lemont, IL McIntosh, AL* Niagara Falls, NY*	caustic soda, chlorine

		Santa Fe Springs, CA Tracy, CA	
		Becancour, Canada	
Hydrochloric acid	Steel, oil & gas, plastics, organic chemical synthesis, water & wastewater treatment, brine treatment, artificial sweeteners, pharmaceuticals, food processing and ore & mineral processing	Charleston, TN Freeport, TX McIntosh, AL Niagara Falls, NY	chlorine, hydrogen
Potassium hydroxide	Fertilizer manufacturing, soaps, detergents & cleaners, battery manufacturing, food processing chemicals and deicers	Charleston, TN	electricity, potassium chloride
		Becancour, Canada	
		Charleston, TN	
Hydrogen	Fuel source, hydrogen peroxide and hydrochloric acid	Freeport, TX McIntosh, AL Niagara Falls, NY Plaquemine, LA St. Gabriel, LA	electricity, salt

\* Includes low salt, high strength bleach manufacturing.

### Strategies

**Strengthen Our Role as Preferred Supplier in North America.** Take maximum advantage of our world-scale integrated facilities on the U.S. Gulf Coast, our geographically-advantaged plants across North America and our extensive logistics and terminal network to provide a reliable and preferred supply position to our North American customers.

**Capitalize on Our Low Cost Position.** Our advantaged cost position is derived from low-cost energy, scale, integration, and deep-water ports. We expect to maximize our low cost position to ship caustic soda, chlorinated organics and EDC to customers worldwide.

## Table of Contents

Optimize the Breadth of Products and Pursue Incremental Expansion Opportunities. Fully utilize the portfolio of co-products and integrated derivatives to continually upgrade chlorine and caustic soda to the highest value applications and provide expansion opportunities.

### Epoxy

#### Products and Services

The Epoxy business was one of the first major manufacturers of epoxy products, and has continued to build on a half a century of history through product innovation and technical excellence. According to data from IHS, the Epoxy segment is one of the largest fully integrated global producers of epoxy resins, curing agents and intermediates. The Epoxy segment has a favorable manufacturing cost position which is driven by a combination of scale and integration into low cost feedstocks (including chlorine, caustic soda, allylics and aromatics). With its advantaged cost position, the Epoxy segment is among the lowest cost producers in the world. The Epoxy segment produces and sells a full range of epoxy materials, including upstream products such as allyl chloride (Allyl) and epichlorohydrin (EPI), midstream products such as liquid epoxy resins (LER) and solid epoxy resins (SER) and downstream products such as differentiated epoxy resins and additives.

The Epoxy segment serves a diverse array of applications, including wind energy, electrical laminates, marine coatings, consumer goods and composites, as well as numerous applications in civil engineering and protective coatings. The Epoxy segment has important relationships with established customers, some of which span decades. The Epoxy segment's primary geographies are North America and Western Europe. The segment's product is delivered primarily by marine vessel, deep-water and coastal barge, railcar and truck.

Allyl has use, not only as a feedstock in the production of EPI, but also as a chemical intermediate in multiple industries and applications, including water purification chemicals. EPI is primarily produced as a feedstock for use in the business's epoxy resins, and also sold to epoxy producers globally who produce their own resins for end use segments such as coatings and adhesives. LER is manufactured in liquid form and cures with the addition of a hardener into a thermoset solid material offering a distinct combination of strength, adhesion and chemical resistance that is well-suited to coatings and composites applications. SER is processed further with bisphenol (BisA) to meet specific end market applications. While LER and SER are sold externally, a significant portion of LER production is further converted into differentiated epoxy resins where value-added modifications produce higher margin resins.

Our Epoxy segment maintains strong relationships with DowDuPont as both a customer and supplier. These relationships are maintained through long-term cost based contracts that provide us with a reliable supply of key raw materials. Key products sold to DowDuPont include aromatics and key raw materials received from DowDuPont include benzene and propylene.

The Epoxy segment's production economics benefit from its integration into chlor alkali and aromatics which are key inputs in epoxy production. This fully integrated structure provides both access to low cost materials and significant operational flexibility. The Epoxy segment operates an integrated aromatics production chain producing cumene, phenol, acetone and BisA for internal consumption and sale. The Epoxy segment's consumption of chlorine allows the Chlor Alkali Products and Vinyls segment to generate caustic soda production and sales. Chlorine used in our Epoxy segment is transferred at cost from the Chlor Alkali Products and Vinyls segment.

Table of Contents

The following table lists products and services of our Epoxy segment, with principal products on the basis of annual sales highlighted in bold face.

Products & Services	Major End Uses	Plants & Facilities	Major Raw Materials & Components for Products/Services
Allylics (allyl chloride and epichlorohydrin) & aromatics (acetone, bisphenol, cumene and phenol)	Manufacturers of polymers, resins and other plastic materials, water purification, and pesticides	Freeport, TX Stade, Germany Terneuzen, Netherlands	benzene, caustic soda, chlorine, propylene
Liquid epoxy resin/solid epoxy resin	Adhesives, paint and coatings, composites and flooring	Freeport, TX Guaruja, Brazil Stade, Germany	bisphenol, caustic soda, epichlorohydrin
Differentiated epoxy resins	Electrical laminates, paint and coatings, wind blades, electronics and construction	Baltringen, Germany Freeport, TX Guaruja, Brazil Gumi, South Korea Pisticci, Italy Rheinmunster, Germany Roberta, GA Stade, Germany Zhangjigang, China	liquid epoxy resins, solid epoxy resins

## Strategies

**Continue to Focus on Capturing the Full Value of Our Asset Base.** The Epoxy segment continues to focus on fully utilizing our integrated asset base. We expect to optimize our production capabilities allowing us to more fully benefit from our access to low-cost materials and significant operational flexibility.

**Focus on Upgrading Our Sales Portfolio and Product Mix.** The Epoxy segment will focus on improving product mix to drive more value-added product introductions and modifications that produce higher margin sales. This leverages our leading technology and quality positions.

**Drive Productivity to Sustain Our Cost Advantage.** The Epoxy segment continues to drive productivity cost improvements through the entire supply chain, enhancing reliability and delivering yield improvements.

## Winchester

## Products and Services

In 2018, Winchester is in its 152<sup>nd</sup> year of operation and its 88<sup>th</sup> year as part of Olin. Winchester is a premier developer and manufacturer of small caliber ammunition for sale to domestic and international retailers (commercial customers), law enforcement agencies and domestic and international militaries. We believe we are a leading U.S. producer of ammunition for recreational shooters, hunters, law enforcement agencies and the U.S. Armed Forces.

Winchester also manufactures industrial products that have various applications in the construction industry.

In May 2017, Winchester was awarded, along with one other company, a shared contract to provide small caliber ammunition non-recurring engineering services for the U.S. Army. The contract has the potential to generate approximately \$65 million of sales over the five-year contract.

In January 2017, SIG Sauer, Inc. was awarded a \$580 million, ten-year contract for the modular handgun system pistol contract by the U.S. Army. Winchester will supply the pistol ammunition as a subcontractor to SIG Sauer, Inc.

In February 2016, Winchester was awarded a "Pistol Family Ammunition" contract for 9mm NATO, as well as .38 caliber and .45 caliber ammunition to be used by the U.S. Army. The contract has the potential to generate approximately \$99 million of sales over the five-year contract.

Table of Contents

In January 2016, Winchester was awarded a five-year contract for 5.56mm, 7.62mm and .50 caliber ammunition to be used by the U.S. Army. The contract has the potential to generate approximately \$300 million of sales over the five-year contract.

In March 2015, Winchester was awarded a five-year contract for 5.56mm frangible ammunition to be used for training by the U.S. Navy and U.S. Marine Corp. The contract has the potential to generate approximately \$45 million of sales over the five-year contract.

Our legendary Winchester® product line includes all major gauges and calibers of shotgun shells, rimfire and centerfire ammunition for pistols and rifles, reloading components and industrial cartridges. We believe we are a leading U.S. supplier of small caliber commercial ammunition.

Winchester has strong relationships throughout the sales and distribution chain and strong ties to traditional dealers and distributors. Winchester has also built its business with key high-volume mass merchants and specialty sporting goods retailers. Winchester has consistently developed industry-leading ammunition, which is recognized in the industry for manufacturing excellence, design innovation and consumer value. Winchester's new ammunition products continue to receive awards from major industry publications, with recent awards including: American Hunter magazine's Golden Bullseye Award as "Ammunition Product of the Year" in 2018 and 2016; Guns & Ammo magazine's "Ammunition of the Year" award in 2017; American Rifleman magazine's Golden Bullseye Award as "Ammunition Product of the Year" in 2017 and 2015; Predator Xtreme magazine's "2015 Readers' Choice Gold" award; one of Outdoor Life magazine's "Best New Hunting Loads" in 2015; and Field & Stream magazine's "Best of the Best" award in 2015.

Winchester purchases raw materials such as copper-based strip and ammunition cartridge case cups and lead from vendors based on a conversion charge or premium. These conversion charges or premiums are in addition to the market prices for metal as posted on exchanges such as the Commodity Exchange, or COMEX, and London Metals Exchange, or LME. Winchester's other main raw material is propellant, which is purchased predominantly from one of the U.S.'s largest propellant suppliers.

The following table lists products and services of our Winchester segment, with principal products on the basis of annual sales highlighted in bold face.

Products & Services	Major End Uses	Plants & Facilities	Major Raw Materials & Components for Products/Services
Winchester® sporting ammunition (shotshells, small caliber centerfire & rimfire ammunition)	Hunters & recreational shooters, law enforcement agencies	East Alton, IL Geelong, Australia Oxford, MS	brass, lead, steel, plastic, propellant, explosives
Small caliber military ammunition	Infantry and mounted weapons	East Alton, IL Oxford, MS	brass, lead, propellant, explosives
Industrial products (8 gauge loads & powder-actuated tool loads)	Maintenance applications in power & concrete industries, powder-actuated tools in	East Alton, IL Geelong, Australia	brass, lead, plastic, propellant, explosives

## Strategies

**Maximize Existing Strengths.** Winchester plans to seek new opportunities to fully utilize the legendary Winchester brand name and will continue to offer a full line of ammunition products to the markets we serve, with specific focus on investments that make Winchester ammunition the retail brand of choice.

**Focus on Product Line Growth.** With a long record of pioneering new product offerings, Winchester has built a strong reputation as an industry innovator. This includes the introduction of reduced-lead and non-lead products, which are growing in popularity for use in indoor shooting ranges and for outdoor hunting.

## Table of Contents

Cost Reduction Strategy. Winchester plans to continue to focus on strategies that will lower our costs. During 2016, we completed the relocation of our centerfire pistol and rifle ammunition manufacturing operations from East Alton, IL to Oxford, MS. Our focus will continue to optimize the Oxford facility and maximize production output.

## INTERNATIONAL OPERATIONS

Olin has an international presence, including the geographic regions of Europe, Asia Pacific and Latin America. Approximately 43% of Olin's 2017 sales were generated outside of the U.S., including 34% of our Chlor Alkali Products and Vinyls 2017 segment sales, 69% of our Epoxy 2017 segment sales and 10% of our Winchester 2017 segment sales. See the Note "Segment Information" of the notes to consolidated financial statements contained in Item 8, for geographic segment data. We are incorporating our segment information from that Note into this section of our Form 10-K.

## CUSTOMERS AND DISTRIBUTION

Products we sell to industrial or commercial users or distributors for use in the production of other products constitute a major part of our total sales. We sell some of our products, such as epoxy resins, caustic soda and sporting ammunition, to a large number of users or distributors, while we sell others, such as chlorine and chlorinated organics in substantial quantities to a relatively small number of industrial users. Olin has entered into or has significant relationships with a few customers including DowDuPont, who was our largest customer by revenue in 2017, representing approximately 14% of our total sales. We expect this relationship to continue to be significant to Olin and to represent more than 10% of our annual sales in the future. No other single customer accounted for more than 6% of sales. We discuss the customers for each of our three business segments in more detail above under "Products and Services."

We market most of our products and services primarily through our sales force and sell directly to various industrial customers, mass merchants, retailers, wholesalers, other distributors and the U.S. Government and its prime contractors.

Sales to all U.S. Government agencies and sales under U.S. Government contracting activities in total accounted for approximately 2% of sales in 2017. Because we engage in some government contracting activities and make sales to the U.S. Government, we are subject to extensive and complex U.S. Government procurement laws and regulations. These laws and regulations provide for ongoing government audits and reviews of contract procurement, performance and administration.

Failure to comply, even inadvertently, with these laws and regulations and with laws governing the export of munitions and other controlled products and commodities could subject us or one or more of our businesses to civil and criminal penalties, and under certain circumstances, suspension and debarment from future government contracts and the exporting of products for a specified period of time.

## BACKLOG

The total amount of contracted backlog was approximately \$174.1 million and \$316.7 million as of January 31, 2018 and 2017, respectively. The backlog orders are in our Winchester business. Backlogs in our other businesses are not significant. Backlog is comprised of all open customer orders not yet shipped. Approximately 95% of contracted backlog as of January 31, 2018 is expected to be filled during 2018.

## COMPETITION



We are in active competition with businesses producing or distributing the same or similar products, as well as, in some instances, with businesses producing or distributing different products designed for the same uses.

Chlor alkali manufacturers in North America, with approximately 17 million tons of chlorine and 18 million tons of caustic soda capacity, accounted for approximately 18% of worldwide chlor alkali production capacity. In 2017, according to IHS, we have the largest chlor alkali capacity in North America and globally. While the technologies to manufacture and transport chlorine and caustic soda are widely available, the production facilities require large capital investments, and are subject to significant regulatory and permitting requirements. Approximately 76% of the total North American chlor alkali capacity is located in the U.S. Gulf Coast region. There is a worldwide market for caustic soda, which attracts imports and allows exports depending on market conditions. Other large chlor alkali producers in North America include The Occidental Petroleum Corporation (Oxy) and Westlake Chemical Corporation (Westlake).

We are also a leading integrated global producer of chlorinated organic products with a strong cost position due to our scale and access to chlor alkali feedstocks. This industry includes large diversified producers such as Oxy, Westlake and Solvay S.A., as well as multiple producers located in China.

Table of Contents

We are a major global fully integrated epoxy producer, with access to key low cost feedstocks and a cost advantaged infrastructure. With its advantaged cost position, the Epoxy segment is among the lowest cost producers in the world. The markets in which our Epoxy segment operates are highly competitive and are dependent on significant capital investment, the development of proprietary technology and maintenance of product research and development. Among our competitors are Huntsman Corporation (Huntsman) and Hexion, Inc., as well as multiple producers located in Asia.

We are among the largest manufacturers in the U.S. of commercial small caliber ammunition based on independent market research sponsored by the National Shooting Sports Foundation (NSSF). Formed in 1961, NSSF has a membership of more than 12,000 manufacturers, distributors, firearms retailers, shooting ranges, sportsmen's organizations and publishers. According to NSSF, our Winchester business, Vista Outdoor Inc. (Vista), and Remington Outdoor Company, Inc. (Remington) are the three largest commercial ammunition manufacturers in the U.S. The ammunition industry is highly competitive with us, Vista, Remington, numerous smaller domestic manufacturers and foreign producers competing for sales to the commercial ammunition customers. Many factors influence our ability to compete successfully, including price, delivery, service, performance, product innovation and product recognition and quality, depending on the product involved.

**EMPLOYEES**

As of December 31, 2017, we had approximately 6,400 employees, with 5,300 working in the U.S. and 1,100 working in foreign countries. Various labor unions represent a significant number of our hourly-paid employees for collective bargaining purposes.

The following labor contracts are scheduled to expire in 2018 or early 2019:

Location	Number of Employees	Expiration Date
Lemont (Chlor Alkali Products and Vinyls)	20	March 2018
Becancour (Chlor Alkali Products and Vinyls)	101	April 2018
McIntosh (Chlor Alkali Products and Vinyls)	197	April 2019

While we believe our relations with our employees and their various representatives are generally satisfactory, we cannot assure that we can conclude these labor contracts or any other labor agreements without work stoppages and cannot assure that any work stoppages will not have a material adverse effect on our business, financial condition or results of operations.

**RESEARCH ACTIVITIES; PATENTS**

Our research activities are conducted on a product-group basis at a number of facilities. Company-sponsored research expenditures were \$14.5 million in 2017, \$10.9 million in 2016 and \$4.9 million in 2015.

We own or license a number of patents, patent applications and trade secrets covering our products and processes. We believe that, in the aggregate, the rights under our patents and licenses are important to our operations, but we do not consider any individual patent, license or group of patents and licenses related to a specific process or product to be of material importance to our total business.

**SEASONALITY**

Our sales are affected by the cyclicity of the economy and the seasonality of several industries we serve, including building and construction, coatings, infrastructure, electronics, automotive, bleach, refrigerants and ammunition. The

seasonality of the ammunition business is typically driven by the U.S. fall hunting season. Our chlor alkali businesses generally experience their highest level of activity during the spring and summer months, particularly when construction, refrigerants, coatings and infrastructure activity is higher. The chlor alkali industry is cyclical, both as a result of changes in demand for each of the co-produced products and as a result of the large increments in which new capacity is added and removed. Because chlorine and caustic soda are produced in a fixed ratio, the supply of one product can be constrained both by the physical capacity of the production facilities and/or by the ability to sell the co-produced product. Prices for both products respond rapidly to changes in supply and demand. The cyclicity of the chlor alkali industry has further impacts on

## Table of Contents

downstream products. We have significant diversification of our chlorine outlets, which allow us to better manage the cyclical nature of the industry.

### RAW MATERIALS AND ENERGY

Basic raw materials are processed through an integrated manufacturing process to produce a number of products that are sold at various points throughout the process. We purchase a portion of our raw material requirements and also utilize internal resources, co-products and finished goods as raw materials for downstream products. We believe we have reliable sources of supply for our raw materials under normal market conditions. However, we cannot predict the likelihood or impact of any future raw material shortages.

The principal basic raw materials for our production of Chlor Alkali Products and Vinyls' products are electricity, salt, ethylene and methanol. A portion of our purchases of our raw materials, including ethylene and electricity, are made under long-term supply agreements, while approximately 77% of the salt used in our Chlor Alkali Products and Vinyls segment is produced from internal resources. Methanol is primarily sourced domestically and internationally from large producers.

The Epoxy segment's principal raw materials are chlorine, benzene, propylene and aromatics, which consist of cumene, phenol, acetone and BisA. A portion of our purchases of our raw materials, including benzene, propylene and a portion of our aromatics requirements, are made under long-term supply agreements, while a portion of our aromatics requirements are produced from our integrated production chain. Chlorine is predominately sourced from our Chlor Alkali Products and Vinyls segment.

Lead, brass and propellant are the principal raw materials used in the Winchester business. We typically purchase our ammunition cartridge case cups and copper-based strip, and propellants pursuant to multi-year contracts.

Electricity is the predominant energy source for our manufacturing facilities. Approximately 77% of our electricity is generated from natural gas or hydroelectric sources. We have long-term power supply contracts with DowDuPont in addition to utilizing our own power assets, which allow for cost differentiation at specific U.S. manufacturing sites.

We provide additional information with respect to specific raw materials in the tables set forth under "Products and Services."

### ENVIRONMENTAL AND TOXIC SUBSTANCES CONTROLS

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.

The establishment and implementation of national, state or provincial and local standards to regulate air, water and land quality affect substantially all of our manufacturing locations around the world. Laws providing for regulation of the manufacture, transportation, use and disposal of hazardous and toxic substances, and remediation of contaminated sites have imposed additional regulatory requirements on industry, particularly the chemicals industry. In addition, implementation of environmental laws has required and will continue to require new capital expenditures and will increase operating costs.

We are a party to various governmental and private environmental actions associated with former waste disposal sites and past manufacturing facilities. Charges to income for investigatory and remedial efforts were \$10.3 million, \$9.2 million and \$15.7 million for the years ended December 31, 2017, 2016 and 2015, respectively. These charges may be

material to operating results in future years.

In connection with the Acquisition, DowDuPont retained liabilities relating to releases of hazardous materials and violations of environmental law to the extent arising prior to the Closing Date.

See our discussion of our environmental matters contained in Item 3—“Legal Proceedings” below, the Note “Environmental” of the notes to consolidated financial statements contained in Item 8 and Item 7—“Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

Table of Contents

Item 1A. RISK FACTORS

In addition to the other information in this Form 10-K, the following factors should be considered in evaluating Olin and our business. All of our forward-looking statements should be considered in light of these factors. Additional risks and uncertainties that we are unaware of or that we currently deem immaterial also may become important factors that affect us.

**Sensitivity to Global Economic Conditions and Cyclical—**Our operating results could be negatively affected during economic downturns.

The business of most of our customers, particularly our vinyls, urethanes and pulp and paper customers are, to varying degrees, cyclical and have historically experienced periodic downturns. These economic and industry downturns have been characterized by diminished product demand, excess manufacturing capacity and, in some cases, lower average selling prices. Therefore, any significant downturn in our customers' businesses or in global economic conditions could result in a reduction in demand for our products and could adversely affect our results of operations or financial condition.

Although a majority of our sales are within North America, a large part of our financial performance is dependent upon a healthy economy beyond North America because we have a significant amount of sales abroad and our customers sell their products abroad. As a result, our business is and will continue to be affected by general economic conditions and other factors in Europe, Asia Pacific, particularly China, and Latin America, including fluctuations in interest rates, customer demand, labor and energy costs, currency changes and other factors beyond our control. The demand for our customers' products, and therefore, our products, is directly affected by such fluctuations. In addition, our customers could decide to move some or all of their production to lower cost, offshore locations, and this could reduce demand in North America for our products. We cannot assure you that events having an adverse effect on the industries in which we operate will not occur or continue, such as a downturn in the European, Asia Pacific, particularly Chinese, Latin American, or world economies, increases in interest rates or unfavorable currency fluctuations. Economic conditions in other regions of the world, predominantly Asia and Europe, can increase the amount of caustic soda produced and available for export to North America. The increased caustic soda supply can put downward pressure on our caustic soda prices, negatively impacting our profitability.

**Cyclical Pricing Pressure—**Our profitability could be reduced by declines in average selling prices of our products, particularly declines in ECU netbacks for chlorine and caustic soda.

Our historical operating results reflect the cyclical and sometimes volatile nature of the chemical and ammunition industries. We experience cycles of fluctuating supply and demand in each of our business segments, particularly in our Chlor Alkali Products and Vinyls segment, which result in changes in selling prices. Periods of high demand, tight supply and increasing operating margins tend to result in increases in capacity and production until supply exceeds demand, generally followed by periods of oversupply and declining prices. Another factor influencing demand and pricing for chlorine and caustic soda is the price of natural gas. Higher natural gas prices increase our customers' and competitors' manufacturing costs, and depending on the ratio of crude oil to natural gas prices, could make them less competitive in world markets.

In the chlor alkali industry, price is the major supplier selection criterion. We have little or no ability to influence prices in these large commodity markets. Decreases in the average selling prices of our products could have a material adverse effect on our profitability. While we strive to maintain or increase our profitability by reducing costs through improving production efficiency, emphasizing higher margin products and by controlling transportation, selling and administration expenses, we cannot assure you that these efforts will be sufficient to fully offset the effect of possible decreases in pricing on operating results.

Because of the cyclical nature of our businesses, we cannot assure you that pricing or profitability in the future will be comparable to any particular historical period, including the most recent period shown in our operating results. We cannot assure you that the chlor alkali industry will not experience adverse trends in the future, or that our business, financial condition and results of operations will not be adversely affected by them.

Our Winchester and Epoxy segments are also subject to changes in operating results as a result of cyclical pricing pressures, but to a lesser extent than our Chlor Alkali Products and Vinyls segment. Selling prices of ammunition and

epoxy materials are affected by changes in raw material costs and availability and customer demand, and declines in average selling prices of products of our Winchester and Epoxy segments could adversely affect our profitability.

Table of Contents

**Suppliers**—We rely on a limited number of third-party 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 are unable to meet their obligations under present or any 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, financial condition and results of operations. We have entered into agreements with DowDuPont to provide specified feedstocks and services for a number of our facilities. These facilities are dependent upon DowDuPont's infrastructure for services such as wastewater and ground water treatment. Any failure of DowDuPont to perform its obligations under those agreements could adversely affect the operation of the affected facilities and our business, financial condition and results of operations. Many of the agreements relating to these feedstocks and services have initial terms ranging from several years to 20 years. Most of these agreements are automatically renewable, but may be terminated by us or DowDuPont after specified notice periods. If we are required to obtain an alternate source for these feedstocks or services, we may not be able to obtain pricing on as favorable terms. Additionally, we may be forced to pay additional transportation costs or to invest in capital projects for pipelines or alternate facilities to accommodate railcar or other delivery methods or to replace other services. 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 could materially and adversely affect our business, financial condition and results of operations, as could significant additional requirements from suppliers that we provide them additional security in the form of prepayments or posting letters of credit.

**Raw Materials**—Availability of purchased feedstocks and energy, and the volatility of these costs, impact our operating costs and add variability to earnings.

Purchased feedstock and energy costs account for a substantial portion of our total production costs and operating expenses. We purchase certain raw materials as feedstocks.

Feedstock and energy costs generally follow price trends in crude oil and natural gas, which are sometimes volatile. Ultimately, the ability to pass on underlying cost increases is dependent on market conditions. Conversely, when feedstock and energy costs decline, selling prices generally decline as well. As a result, volatility in these costs could impact our business, financial condition and results of operations.

If the availability of any of our principal feedstocks is limited or we are unable to obtain natural gas or energy from any of our energy sources, we may be unable to produce some of our products in the quantities demanded by our customers, which could have a material adverse effect on plant utilization and our sales of products requiring such raw materials. We have supply contracts with various third parties for certain raw materials, including ethylene, electricity, propylene and benzene. These contracts have initial terms ranging from several years to 20 years. As these contracts expire, we may be unable to renew these contracts or obtain new long-term supply agreements on terms comparable or as favorable to us, depending on market conditions, which may have a material adverse effect on our business, financial condition and results of operations. In addition, many of our long-term contracts contain provisions that allow their suppliers to limit the amount of raw materials shipped to us below the contracted amount in force majeure circumstances. If we are required to obtain alternate sources for raw materials because our suppliers are unwilling or unable to perform under raw material supply agreements or if a supplier terminates its agreements with us, we may not be able to obtain these raw materials from alternative suppliers or obtain new long-term supply agreements on terms comparable or favorable to us.

**Cost Control**—Our profitability could be reduced if we experience increasing raw material, utility, transportation or logistics costs, or if we fail to achieve targeted cost reductions.

Our operating results and profitability are dependent upon our continued ability to control, and in some cases reduce, our costs. If we are unable to do so, or if costs outside of our control, particularly our costs of raw materials, utilities, transportation and similar costs, increase beyond anticipated levels, our profitability will decline.

For example, our chlor alkali product transportation costs, particularly railroad shipment costs, are a portion of our cost of goods sold, and have been increasing over the past several years. If transportation costs continue to increase, and we are unable to control those costs or pass the increased costs on to customers, our profitability in our Chlor Alkali Products and Vinyls and Epoxy segments would be negatively affected. Similarly, costs of commodity metals



and other materials used in our Winchester business, such as copper and lead, can vary. If we experience significant increases in these costs and are unable to raise our prices to offset the higher costs, the profitability in our Winchester business would be negatively affected.

Table of Contents

**Third-Party Transportation**—We rely heavily on third-party transportation, which subjects us to risks and costs that we cannot control, and which risks and costs may have a material adverse effect on our financial position or results of operations.

We rely heavily on railroad, truck, marine vessel, barge and other shipping companies to transport finished products to customers and to transport raw materials to the manufacturing facilities used by each of our businesses. These transport operations are subject to various hazards and risks, including extreme weather conditions, work stoppages and operating hazards, as well as domestic and international transportation and maritime regulations. In addition, the methods of transportation we utilize, including shipping chlorine and other chemicals by railroad and by barge, 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' failure to operate properly, or if there were significant changes in the cost of these services due to new 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, financial position or results of operations. If any third-party railroad which we utilize to transport chlorine and other chemicals ceases to transport toxic-by-inhalation hazardous (TIH) materials, or if there are significant changes in the cost of shipping TIH materials by rail or otherwise, we may not be able to arrange efficient alternatives and timely means to deliver our products or at all, which could result in a material adverse effect on our business, financial position or results of operations.

**Security and Chemicals Transportation**—New regulations on the transportation of hazardous chemicals and/or the security of chemical manufacturing facilities and public policy changes related to transportation safety could result in significantly higher operating costs.

The transportation of our products and feedstocks, including transportation by pipeline, and the security of our chemical manufacturing facilities are subject to extensive regulation. Government authorities at the local, state and federal levels could implement new or stricter regulations that would impact the security of chemical plant locations and the transportation of hazardous chemicals. Our Chlor Alkali Products and Vinyls segment could be adversely impacted by the cost of complying with any new regulations. Our business also could be adversely affected if an incident were to occur at one of our facilities or while transporting products. The extent of the impact would depend on the requirements of future regulations and the nature of an incident, which are unknown at this time.

**Production Hazards**—Our facilities are subject to operating hazards, which may disrupt our business.

We are dependent upon the continued safe operation of our production facilities. Our production facilities are subject to hazards associated with the manufacture, handling, storage and transportation of chemical materials and products and ammunition, including leaks and ruptures, explosions, fires, inclement weather and natural disasters, unexpected utility disruptions or outages, unscheduled downtime, transportation interruptions, transportation accidents involving our chemical products, chemical spills and other discharges or releases of toxic or hazardous substances or gases and environmental hazards. From time to time in the past, we have had incidents that have temporarily shut down or otherwise disrupted our manufacturing, causing production delays and resulting in liability for workplace injuries and fatalities. Some of our products involve the manufacture and/or handling of a variety of explosive and flammable materials. Use of these products by our customers could also result in liability if an explosion, fire, spill or other accident were to occur. We cannot assure you that we will not experience these types of incidents in the future or that these incidents will not result in production delays or otherwise have a material adverse effect on our business, financial condition or results of operations. Major hurricanes have caused significant disruption in our operations on the U.S. Gulf Coast, logistics across the region and the supply of certain raw materials, which have had an adverse impact on volume and cost for some of our products. Due to the substantial presence we have on the U.S. Gulf Coast, similar severe weather conditions or other natural phenomena in the future could negatively affect our results of operations, for which we may not be fully insured.

Table of Contents

Integration of Information Technology Systems—Operation on multiple Enterprise Resource Planning (ERP) information systems, and the conversion from multiple systems to a single system, may negatively impact our operations.

We are highly dependent on our information systems infrastructure in order to process orders, track inventory, ship products in a timely manner, prepare invoices to our customers, maintain regulatory compliance and otherwise carry on our business in the ordinary course. We currently operate on an ERP information system and the Acquired Business operates on a separate ERP system. Since we are required to process and reconcile our information from multiple systems, the chance of errors has increased. Inconsistencies in the information from multiple ERP systems could adversely impact our ability to manage our business efficiently and may result in heightened risk to our ability to maintain our books and records and comply with regulatory requirements. In 2017, we began a multi-year implementation of new enterprise resource planning, manufacturing, and engineering systems. The project includes the required information technology infrastructure (collectively, the Information Technology Project). The project is planned to standardize business processes across the chemicals businesses with the objective of maximizing cost effectiveness, efficiency and control across our global operations. The project is anticipated to be completed during 2020. The transition to a different ERP system involves numerous risks, including:

- diversion of management’s attention away from normal daily business operations;
- loss of, or delays in accessing, data;
- increased demand on our operations support personnel;
- increased costs;
- initial dependence on unfamiliar systems while training personnel to use new systems; and
- increased operating expenses resulting from training, conversion and transition support activities.

Any of the foregoing could result in a material increase in information technology compliance or other related costs, and could materially and negatively impact our business, financial condition or results of operations.

Effects of Regulation—Changes in or failure to comply with legislation or government regulations or policies could have a material adverse effect on our financial position or results of operations.

Legislation that may be passed by Congress or other legislative bodies or new regulations that may be issued by federal and other administrative agencies, including import and export duties and quotas, anti-dumping regulations and related tariffs, could significantly affect the sales, costs and profitability of our business. The chemical and ammunition industries are subject to legislative and regulatory actions, which could have a material adverse effect on our business, financial position or results of operations. Existing and future government regulations and laws may reduce the demand for our products, including certain chlorinated organic products, such as dry cleaning solvents. Any decrease in the demand for chlorinated organic products could result in lower unit sales and lower selling prices for such chlorinated organic products, which would have a material adverse effect on our business, financial condition and results of operations. Our international sales and operations subject us to a wide variety of laws and regulations, including anti-corruption laws and regulations such as the U.S. Foreign Corrupt Practices Act. Failure to comply with these laws and regulations could have a material adverse effect on our business, financial condition and results of operations.

Information Security—A failure of our information technology systems, or an interruption in their operation due to internal or external factors including cyber-attacks, could have a material adverse effect on our business, financial condition or results of operations.

Our operations are dependent on our ability to protect our information systems, computer equipment and information databases from systems failures. We rely on our information technology systems generally to manage the day-to-day operation of our business, operate elements of our manufacturing facilities, manage relationships with our customers, fulfill customer orders and maintain our financial and accounting records. Failure of our information technology systems could be caused by internal or external events, such as incursions by intruders or hackers, computer viruses, cyber-attacks, failures in hardware or software, or power or telecommunication fluctuations or failures. The failure of our information technology systems to perform as anticipated for any reason or any significant breach of security could disrupt our business and result in numerous adverse consequences, including reduced effectiveness and

efficiency of operations, increased costs or loss of important information, any of which could have a material adverse effect on our business, financial condition or results of operations. We have technology and information security processes and disaster recovery plans in place to mitigate our risk to these vulnerabilities. However, these measures may not be adequate to ensure that our operations will not be disrupted, should such an event occur.

Table of Contents

**Imbalance in Demand for Our Chlor Alkali Products**—A loss of a substantial customer for our chlorine or caustic soda could cause an imbalance in customer demand for these products, which could have an adverse effect on our results of operations.

Chlorine and caustic soda are produced simultaneously and in a fixed ratio of 1.0 ton of chlorine to 1.1 tons of caustic soda. The loss of a substantial chlorine or caustic soda customer could cause an imbalance in customer demand for our chlorine and caustic soda products. An imbalance in customer demand may require Olin to reduce production of both chlorine and caustic soda or take other steps to correct the imbalance. Since Olin cannot store large quantities of chlorine, we may not be able to respond to an imbalance in customer demand for these products as quickly or efficiently as some of our competitors. If a substantial imbalance occurred, we would need to reduce prices or take other actions that could have a material adverse impact on our business, results of operations and financial condition.

**Credit Facility**—Weak industry conditions could affect our ability to comply with the financial maintenance covenants in our senior credit facility.

Our senior credit facility includes certain financial maintenance covenants requiring us to not exceed a maximum leverage ratio and to maintain a minimum coverage ratio.

Depending on the magnitude and duration of chlor alkali cyclical downturns, including deterioration in prices and volumes, there can be no assurance that we will continue to be in compliance with these ratios. If we failed to comply with either of these covenants in a future period and were not able to obtain waivers from the lenders, we would need to refinance our current senior credit facilities. However, there can be no assurance that such refinancing would be available to us on terms that would be acceptable to us or at all.

**Pension Plans**—The impact of declines in global equity and fixed income markets on asset values and any declines in interest rates and/or improvements in mortality assumptions used to value the liabilities in our pension plans may result in higher pension costs and the need to fund the pension plans in future years in material amounts.

We sponsor domestic and foreign defined benefit pension plans for eligible employees and retirees. Substantially all domestic defined benefit pension plan participants are no longer accruing benefits. However, a portion of our bargaining hourly employees continue to participate in our domestic qualified defined benefit pension plans under a flat-benefit formula. Our funding policy for the qualified defined benefit pension plans is consistent with the requirements of federal laws and regulations. Our foreign subsidiaries maintain pension and other benefit plans, which are consistent with local statutory practices. The determinations of pension expense and pension funding are based on a variety of rules and regulations. Changes in these rules and regulations could impact the calculation of pension plan liabilities and the valuation of pension plan assets. They may also result in higher pension costs, additional financial statement disclosure, and the need to fund the pension plan.

At December 31, 2017, the projected benefit obligation of \$2,877.5 million exceeded the market value of assets in our qualified defined benefit pension plans by \$630.6 million, as calculated under Accounting Standards Codification (ASC) 715 “Compensation—Retirement Benefits” (ASC 715). During 2016, we made a discretionary cash contribution to our domestic qualified defined benefit pension plan of \$6.0 million. Based on our plan assumptions and estimates, we will not be required to make any cash contributions to the domestic qualified defined benefit pension plan at least through 2018.

We also have several international qualified defined benefit pension plans to which we made cash contributions of \$1.7 million in 2017, \$1.3 million in 2016 and \$0.9 million in 2015, and we anticipate less than \$5 million of cash contributions to international qualified defined benefit pension plans in 2018.

The impact of declines in global equity and fixed income markets on asset values may result in higher pension costs and may increase and accelerate the need to fund the pension plans in future years. For example, holding all other assumptions constant, a 100-basis point decrease or increase in the assumed long-term rate of return on plan assets for our domestic qualified defined benefit pension plan would have decreased or increased, respectively, the 2017 defined benefit pension plan income by approximately \$19.8 million. Holding all other assumptions constant for our domestic qualified defined benefit pension plan, a 50-basis point decrease in the discount rate used to calculate pension income for 2017 and the projected benefit obligation as of December 31, 2017 would have decreased pension income by \$0.4 million and increased the projected benefit obligation by \$162.0 million. A 50-basis point increase in the discount rate used to calculate pension income for 2017 and the projected benefit obligation as of December 31, 2017 for our

domestic qualified defined benefit pension plan would have increased pension income by \$0.6 million and decreased the projected benefit obligation by \$146.0 million.

Table of Contents

**Foreign Exchange Rates**—Fluctuations in foreign currency exchange 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 (USD). Because our consolidated financial statements are presented in USD, we must translate revenues and expenses into USD at the average exchange rate during each reporting period, as well as assets and liabilities into USD at exchange rates in effect at the end of each reporting period. Therefore, increases or decreases in the value of the USD against other major currencies will affect our net revenues, 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, we cannot assure you that fluctuations in foreign currency exchange rates, particularly the strengthening of the USD against major currencies, would not materially adversely affect our financial results.

**Litigation and Claims**—We are subject to litigation and other claims, which could cause us to incur significant expenses. We are a defendant in a number of pending legal proceedings relating to our present and former operations. These include product liability claims relating to ammunition and firearms and proceedings alleging injurious exposure of plaintiffs to various chemicals and other substances (including proceedings based on alleged exposures to asbestos). Frequently, the proceedings alleging injurious exposure involve claims made by numerous plaintiffs against many defendants. Because of the inherent uncertainties of litigation, we are unable to predict the outcome of these proceedings and therefore cannot determine whether the financial impact, if any, will be material to our financial position, cash flows or results of operations.

**Environmental Costs**—We have ongoing environmental costs, which could have a material adverse effect on our financial position or results of operations.

Our operations and assets are subject to extensive environmental, health and safety regulations, including laws and regulations related to air emissions, water discharges, waste disposal and remediation of contaminated sites. The nature of our operations and products, including the raw materials we handle, exposes us to the risk of liabilities, obligations or claims under these laws and regulations due to the production, storage, use, transportation and sale of materials that can cause contamination or personal injury, including, in the case of chemicals, potential releases into the environment. Environmental laws may have a significant effect on the costs of use, transportation and storage of raw materials and finished products, as well as the costs of the storage and disposal of wastes. In addition, we are party to various governmental and private environmental actions associated with past manufacturing facilities and former waste disposal sites. We have incurred, and expect to incur, significant costs and capital expenditures in complying with environmental laws and regulations.

The ultimate costs and timing of environmental liabilities are difficult to predict. Liabilities under environmental laws relating to contaminated sites can be imposed retroactively and on a joint and several basis. One liable party could be held responsible for all costs at a site, regardless of fault, percentage of contribution to the site or the legality of the original disposal. We could incur significant costs, including clean-up costs, natural resource damages, civil or criminal fines and sanctions and third-party lawsuits claiming, for example, personal injury and/or property damage, as a result of past or future violations of, or liabilities under, environmental or other laws.

In addition, future events, such as changes to or more rigorous enforcement of environmental laws, could require us to make additional expenditures, modify or curtail our operations and/or install pollution control equipment. It is possible that regulatory agencies may enact new or more stringent clean-up standards for chemicals of concern, including chlorinated organic products that we manufacture. This could lead to expenditures for environmental remediation in the future that are additional to existing estimates.

Accordingly, it is possible that some of the matters in which we are involved or may become involved may be resolved unfavorably to us, which could materially and adversely affect our business, financial position, cash flows or results of operations. See “Environmental Matters” contained in Item 7—“Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

## Table of Contents

Indebtedness—Our indebtedness could adversely affect our financial condition.

As of December 31, 2017, we had \$3,612.0 million of indebtedness outstanding. Outstanding indebtedness does not include amounts that could be borrowed under our \$600.0 million senior revolving credit facility, under which \$574.9 million was available for borrowing as of December 31, 2017 because we had outstanding borrowings of \$20.0 million and issued \$5.1 million of letters of credit. As of December 31, 2017, our indebtedness represented 56.7% of our total capitalization. On January 19, 2018, Olin issued \$550.0 million aggregate principal amount of 5.00% senior notes due February 1, 2030 (2030 Notes), which were registered under the Securities Act of 1933, as amended. Proceeds from the 2030 Notes were used to redeem \$550.0 million of debt under the \$1,375.0 million term loan facility (Term Loan Facility). This prepayment of the Term Loan Facility eliminates the required quarterly installments under the Term Loan Facility. At December 31, 2017, \$0.7 million of our indebtedness was due within one year. Despite our level of indebtedness, we expect to continue to have the ability to borrow additional debt. Our indebtedness could have important consequences, including but not limited to:

• limiting our ability to fund working capital, capital expenditures, and other general corporate purposes;

• limiting our ability to accommodate growth by reducing funds otherwise available for other corporate purposes and to compete, which in turn could prevent us from fulfilling our obligations under our indebtedness;

• limiting our operational flexibility due to the covenants contained in our debt agreements;

• to the extent that our debt is subject to floating interest rates, increasing our vulnerability to fluctuations in market interest rates;

• limiting our ability to pay cash dividends;

• limiting our flexibility for, or reacting to, changes in our business or industry or economic conditions, thereby limiting our ability to compete with companies that are not as highly leveraged; and

- increasing our vulnerability to economic downturns.

Our ability to generate sufficient cash flow from operations to make scheduled payments on our debt will depend on a range of economic, competitive and business factors, many of which are outside our control. There can be no assurance that our business will generate sufficient cash flow from operations to make these payments. If we are unable to meet our expenses and debt obligations, we may need to refinance all or a portion of our indebtedness before maturity, sell assets or issue additional equity. We may not be able to refinance any of our indebtedness, sell assets or issue additional equity on commercially reasonable terms or at all, which could cause us to default on our obligations and impair our liquidity. Our inability to generate sufficient cash flow to satisfy our debt obligations, or to refinance our debt obligations on commercially reasonable terms, would have a material adverse effect on our business, financial condition and results of operations, as well as on our ability to satisfy our debt obligations.

Integration—Our integration of the Acquired Business may not be successful in fully realizing the anticipated benefits from the Acquisition.

As a result of the addition of the Acquired Business, we have significantly more sales, assets and employees than we did prior to the Closing Date. The integration process requires us to expend capital and significantly expand the scope of our operations and financial systems.

It may not be possible to fully realize the benefits of the increased sales volume and other benefits, including the expected synergies that are expected to result from the addition of the Acquired Business, or realize these benefits within the time frame that is expected. The costs to realize the anticipated synergies, including integration fees and capital spending, may be greater than anticipated. For example, the elimination of duplicative costs may not be fully possible or may take longer than anticipated, or the benefits from the Acquisition may be offset by costs incurred or



delays in integrating the companies. In addition, the quantification of synergies expected to result from the Acquisition is based on significant estimates and assumptions that are subjective in nature and inherently uncertain. The amount of synergies actually realized and the time periods in which such synergies are realized, could differ materially from expectations.

If we are unable to successfully fully realize the anticipated synergies and other benefits of the Acquisition, there could be a material adverse effect on our business, financial condition and results of operations.

Table of Contents

Ability to Attract and Retain Qualified Employees—We must attract, retain and motivate key employees, and the failure to do so may adversely affect our business, financial condition or results of operations.

We feel our success depends on hiring, retaining and motivating key employees, including executive officers. We may have difficulty locating and hiring qualified personnel. In addition, we may have difficulty retaining such personnel once hired, and key people may leave and compete against us. The loss of key personnel or our failure to attract and retain other qualified and experienced personnel could disrupt or materially adversely affect our business, financial condition or results of operations. In addition, our operating results could be adversely affected by increased costs due to increased competition for employees or higher employee turnover, which may result in the loss of significant customer business or increased costs.

Labor Matters—We cannot assure you that we can conclude future labor contracts or any other labor agreements without work stoppages.

Various labor unions represent a significant number of our hourly paid employees for collective bargaining purposes. The following labor contracts are scheduled to expire in 2018 or early 2019:

Location	Number of Employees	Expiration Date
Lemont (Chlor Alkali Products and Vinyls)	20	March 2018
Becancour (Chlor Alkali Products and Vinyls)	101	April 2018
McIntosh (Chlor Alkali Products and Vinyls)	197	April 2019

While we believe our relations with our employees and their various representatives are generally satisfactory, we cannot assure that we can conclude any labor agreements without work stoppages and cannot assure that any work stoppages will not have a material adverse effect on our business, financial condition or results of operations.

Asset Impairment—If our goodwill, other intangible assets or property plant and equipment become impaired in the future, we may be required to record non-cash charges to earnings, which could be significant.

The process of impairment testing for our goodwill involves a number of judgments and estimates made by management including future cash flows, discount rates, profitability assumptions and terminal growth rates with regards to our reporting units. Our internally generated long-range plan includes cyclical assumptions regarding pricing and operating forecasts for the chlor alkali industry. If the judgments and estimates used in our analysis are not realized or are affected by external factors, then actual results may not be consistent with these judgments and estimates, and we may be required to record a goodwill impairment charge in the future, which could be significant and have an adverse effect on our financial position and results of operations.

We review long-lived assets, including property, plant and equipment and identifiable amortizing intangible assets, for impairment whenever changes in circumstances or events may indicate that the carrying amounts are not recoverable.

If the fair value is less than the carrying amount of the asset, an impairment is recognized for the difference. Factors which may cause an impairment of long-lived assets include significant changes in the manner of use of these assets, negative industry or market trends, a significant underperformance relative to historical or projected future operating results, extended period of idleness or a likely sale or disposal of the asset before the end of its estimated useful life. If our property, plant and equipment and identifiable amortizing 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 position and results of operations.

Credit and Capital Market Conditions—Adverse conditions in the credit and capital markets may limit or prevent our ability to borrow or raise capital.

While we believe we have facilities in place that should allow us to borrow funds as needed to meet our ordinary course business activities, adverse conditions in the credit and financial markets could prevent us from obtaining financing, if the need arises. Our ability to invest in our businesses and refinance or repay maturing debt obligations could require access to the credit and capital markets and sufficient bank credit lines to support cash requirements. If we are unable to access the credit and capital markets on commercially reasonable terms, we could experience a material adverse effect on our business, financial position or results of operations.

## Table of Contents

The historical financial information of the Acquired Business may not be representative of its results or financial condition if it had been operated independently of DowDuPont and, as a result, may not be a reliable indicator of its future results.

The financial information of the Acquired Business prior to the Closing Date and included within the unaudited pro forma financial information within this document has been derived from the consolidated financial statements and accounting records of DowDuPont and reflects all direct costs as well as assumptions and allocations made by DowDuPont management. The financial position, results of operations and cash flows of the Acquired Business presented may be different from those that would have resulted had the Acquired Business been operated independently of DowDuPont during the applicable periods or at the applicable dates.

The unaudited pro forma financial information of Olin and the Acquired Business is not intended to reflect what actual results of operations and financial condition would have been had Olin and the Acquired Business been a combined company for the periods presented, and therefore these results may not be indicative of Olin's future operating performance.

The unaudited pro forma financial information presented in this document is for illustrative purposes only and is not intended to, and does not purport to, represent what our actual results or financial condition would have been if the Acquisition had occurred on the relevant date. The unaudited pro forma financial information has been prepared using the acquisition method of accounting. Under the acquisition method of accounting, the purchase price is allocated to the underlying tangible and intangible assets acquired and liabilities assumed based on their respective fair values with any excess purchase price allocated to goodwill.

The unaudited pro forma financial information does not reflect the costs of any integration activities or transaction-related costs or incremental capital spending that Olin management believes are necessary to realize the anticipated synergies from the Acquisition. Accordingly, the unaudited pro forma financial information included in this document does not reflect what our results of operations or operating condition would have been had Olin and the Acquired Business been a consolidated entity during all periods presented, or what our results of operations and financial condition will be in the future.

### Item 1B. UNRESOLVED STAFF COMMENTS

Not applicable.

### Item 2. PROPERTIES

Information concerning our principal locations from which our products and services are manufactured, distributed or marketed are included in the tables set forth under the caption "Products and Services" contained in Item 1—"Business." Generally, these facilities are well maintained, in good operating condition, and suitable and adequate for their use. Our two largest facilities are co-located with DowDuPont. The land in which these facilities are located is leased with a 99 year term, commencing on the Closing Date. Additionally, we lease warehouses, terminals and distribution offices and space for executive and branch sales offices and service departments. We believe our current facilities are adequate to meet the requirements of our present operations.

### Item 3. LEGAL PROCEEDINGS

Saltville

We have completed all work in connection with remediation of mercury contamination at the site of our former mercury cell chlor alkali plant in Saltville, VA required to date. In mid-2003, the Trustees for natural resources in the North Fork Holston River, the Main Stem Holston River and associated floodplains, located in Smyth and Washington Counties in Virginia and in Sullivan and Hawkins Counties in Tennessee notified us of, and invited our participation

in, an assessment of alleged damages to natural resources resulting from the release of mercury. The Trustees also notified us that they have made a preliminary determination that we are potentially liable for natural resource damages in said rivers and floodplains. We agreed to participate in the assessment. We and the Trustees have entered into discussions concerning a resolution of this matter. In light of the ongoing discussions and inherent uncertainties of the assessment, we cannot at this time determine whether the financial impact, if any, of this matter will be material to our financial position or results of operations. See “Environmental Matters” contained in Item 7—“Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

#### Other

As part of the continuing environmental investigation by federal, state and local governments of waste disposal sites, we have entered into a number of settlement agreements requiring us to participate in the investigation and cleanup of a number of sites. Under the terms of such settlements and related agreements, we may be required to manage or perform one or more elements of a site cleanup, or to manage the entire remediation activity for a number of parties, and subsequently seek recovery of some or all of such costs from other Potentially Responsible Parties (PRPs). In many cases, we do not know the ultimate costs of our settlement obligations at the time of entering into particular settlement agreements, and our liability accruals for our obligations under those agreements are often subject to significant management judgment on an ongoing basis. Those cost accruals are provided for in accordance with generally accepted accounting principles and our accounting policies set forth in “Environmental Matters” contained in Item 7—“Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

We, and our subsidiaries, are defendants in various other legal actions (including proceedings based on alleged exposures to asbestos) incidental to our past and current business activities. At December 31, 2017 and 2016, our consolidated balance sheets included liabilities for these legal actions of \$24.8 million and \$13.6 million, respectively. These liabilities do not include costs associated with legal representation and do not include \$8.0 million of insurance recoveries included in receivables, net within the accompanying consolidated balance sheet as of December 31, 2017. Based on our analysis, and considering the inherent uncertainties associated with litigation, we do not believe that it is reasonably possible that these legal actions will materially and adversely affect our financial position, cash flows or results of operations.

In connection with the Acquisition, DowDuPont retained liabilities relating to the Acquired Business for litigation, releases of hazardous materials and violations of environmental law to the extent arising prior to the Closing Date.

#### Item 4. MINE SAFETY DISCLOSURES

Not applicable.

Table of Contents

## PART II

## Item 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

As of January 31, 2018, we had 3,925 record holders of our common stock.

Our common stock is traded on the NYSE.

The high and low sales prices of our common stock during each quarterly period in 2017 and 2016 are listed below. A dividend of \$0.20 per common share was paid during each of the four quarters in 2017 and 2016.

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
2017				
Market price of common stock per NYSE composite transactions				
High	\$33.88	\$33.67	\$34.85	\$37.52
Low	25.43	27.79	28.45	33.34
2016				
Market price of common stock per NYSE composite transactions				
High	\$17.75	\$24.99	\$26.46	\$26.93
Low	12.29	16.55	18.24	19.62

## Issuer Purchases of Equity Securities

Period	Total Number of Shares (or Units) Purchased <sup>(1)</sup>	Average Price Paid per Share (or Unit)	Total Number of Shares (or Units) Purchased as Part of Publicly Announced Plans or Programs	Maximum Number of Shares (or Units) that May Yet Be Purchased Under the Plans or Programs
October 1-31, 2017	—	—	—	
November 1-30, 2017	—	—	—	
December 1-31, 2017	—	—	—	
Total				(1)

On April 24, 2014, we announced a share repurchase program approved by the board of directors for the purchase of up to 8 million shares of common stock that terminated on April 24, 2017. Through December 31, 2017, 1,937,343 shares had been repurchased, and the 6,062,657 shares that remained available for purchase under this program have expired. Under the Merger Agreement relating to the Acquisition, we were restricted from repurchasing shares of our common stock prior to the consummation of the merger. For a period of two years subsequent to the Closing Date, we were subject to certain restrictions on our ability to conduct share repurchases.



Table of Contents

Performance Graph

This graph compares the total shareholder return on our common stock with the cumulative total return of the Standard & Poor's 1000 Index (the S&P 1000 Index) and our current peer group of four companies comprised of: Huntsman, Trinseo S.A., Oxy and Westlake (collectively, the Peer Group).

Data is for the five-year period from December 31, 2012 through December 31, 2017. The cumulative return includes reinvestment of dividends. The Peer Group is weighted in accordance with market capitalization (closing stock price multiplied by the number of shares outstanding) as of the beginning of each of the five years covered by the performance graph. We calculated the weighted return for each year by multiplying (a) the percentage that each corporation's market capitalization represented of the total market capitalization for all corporations in the Peer Group for such year by (b) the total shareholder return for that corporation for such year.

Table of Contents

## Item 6. SELECTED FINANCIAL DATA

## FIVE-YEAR SUMMARY

	2017	2016	2015	2014	2013
Operations	(\$ and shares in millions, except per share data)				
Sales	\$6,268	\$5,551	\$2,854	\$2,241	\$2,515
Cost of goods sold	5,540	4,924	2,487	1,853	2,034
Selling and administration	350	323	186	166	190
Restructuring charges	38	113	3	16	6
Acquisition-related costs	13	49	123	4	—
Other operating income	3	11	46	2	1
Earnings of non-consolidated affiliates	2	2	2	2	3
Interest expense	217	192	97	44	39
Interest income and other income (expense), net	2	3	1	1	—
Income (loss) before taxes from continuing operations	117	(34 )	7	163	250
Income tax (benefit) provision	(432 )	(30 )	8	58	71
Income (loss) from continuing operations	549	(4 )	(1 )	105	179
Discontinued operations, net	—	—	—	1	—
Net income (loss)	\$549	\$(4 )	\$(1 )	\$106	\$179
Financial position					
Cash and cash equivalents and restricted cash	\$218	\$185	\$392	\$257	\$312
Working capital, excluding cash and cash equivalents	527	439	395	182	125
Property, plant and equipment, net	3,576	3,705	3,953	931	988
Total assets	9,218	8,763	9,289	2,689	2,790
Capitalization:					
Short-term debt	1	81	205	16	13
Long-term debt	3,611	3,537	3,644	650	665
Shareholders' equity	2,754	2,273	2,419	1,013	1,101
Total capitalization	\$6,366	\$5,891	\$6,268	\$1,679	\$1,779
Per share data					
Basic:					
Continuing operations	\$3.31	\$(0.02 )	\$(0.01 )	\$1.33	\$2.24
Discontinued operations, net	—	—	—	0.01	—
Net income (loss)	\$3.31	\$(0.02 )	\$(0.01 )	\$1.34	\$2.24
Diluted:					
Continuing operations	\$3.26	\$(0.02 )	\$(0.01 )	\$1.32	\$2.21
Discontinued operations, net	—	—	—	0.01	—
Net income (loss)	\$3.26	\$(0.02 )	\$(0.01 )	\$1.33	\$2.21
Common Cash Dividends	0.80	0.80	0.80	0.80	0.80
Market price of common stock:					
High	\$37.52	\$26.93	\$34.34	\$29.28	\$29.52
Low	25.43	12.29	15.73	20.43	21.29
Year-end	35.58	25.61	17.26	22.77	28.85
Other					
Capital expenditures	\$294	\$278	\$131	\$72	\$91
Depreciation and amortization	559	534	229	139	135
Common dividends paid	133	132	80	63	64
Repurchases of common stock	—	—	—	65	36



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Current ratio	1.8		1.7		1.7		2.2		2.1	
Total debt to total capitalization	56.7	%	61.4	%	61.4	%	39.7	%	38.1	%
Effective tax rate	(368.9)	%	88.6	%	120.9	%	35.5	%	28.6	%
Average common shares outstanding - diluted	168.5		165.2		103.4		79.7		80.9	
Shareholders	3,900		4,200		4,500		3,600		3,900	
Employees	6,400		6,400		6,200		3,900		4,100	

Since October 5, 2015, our Selected Financial Data reflects the operating results of the Acquired Business.

## Table of Contents

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

#### BUSINESS BACKGROUND

We are a leading vertically-integrated global manufacturer and distributor of chemical products and a leading U.S. manufacturer of ammunition. Our operations are concentrated in three business segments: Chlor Alkali Products and Vinyls, Epoxy and Winchester. All of our business segments are capital intensive manufacturing businesses. Chlor Alkali Products and Vinyls operating rates are closely tied to the general economy. Each segment has a commodity element to it, and therefore, our ability to influence pricing is quite limited on the portion of the segment's business that is strictly commodity.

Our Chlor Alkali Products and Vinyls segment is a commodity business where all supplier products are similar and price is the major supplier selection criterion. We have little or no ability to influence prices in the large, global commodity markets. Our Chlor Alkali Products and Vinyls segment produces some of the most widely used chemicals in the world that can be upgraded into a wide variety of downstream chemical products used in many end-markets. Cyclical price swings, driven by changes in supply/demand, can be abrupt and significant and, given capacity in our Chlor Alkali Products and Vinyls segment, can lead to very significant changes in our overall profitability.

The Epoxy segment consumes products manufactured by the Chlor Alkali Products and Vinyls segment. The Epoxy segment's upstream and midstream products are predominately commodity markets. We have little or no ability to influence prices in these large, global commodity markets. While competitive differentiation exists through downstream customization and product development opportunities, pricing is extremely competitive with a broad range of competitors across the globe.

Winchester also has a commodity element to its business, but a majority of Winchester ammunition is sold as a branded consumer product where there are opportunities to differentiate certain offerings through innovative new product development and enhanced product performance. While competitive pricing versus other branded ammunition products is important, it is not the only factor in product selection.

#### RECENT DEVELOPMENTS AND HIGHLIGHTS

##### 2017 Overview

As a result of flooding from Hurricane Harvey, Olin was forced to reduce production at its Freeport, Texas facility from late August through mid-October due to logistics constraints, customer outages and raw material availability. Other Olin plants that supply customers in Texas were also impacted by Hurricane Harvey. Olin's 2017 results were reduced by \$54.7 million associated with Hurricane Harvey representing incremental costs to continue operations, unabsorbed fixed manufacturing costs and reduced profits from lost sales. Chlor Alkali Products and Vinyls 2017 segment earnings were reduced by \$27.0 million and Epoxy 2017 segment earnings were reduced by \$27.7 million associated with Hurricane Harvey.

In 2017, Chlor Alkali Products and Vinyls generated segment income of \$405.8 million compared to \$224.9 million for 2016. Chlor Alkali Products and Vinyls segment income was higher than the prior year due to higher product prices of \$385.5 million, primarily due to caustic soda, and increased volumes. Partially offsetting these increases were higher costs from turnarounds and outages and electricity costs, primarily driven by natural gas prices. Chlor Alkali Products and Vinyls segment results were also negatively impacted by Hurricane Harvey. Chlor Alkali Products and Vinyls segment income included depreciation and amortization expense of \$432.2 million and \$418.1

million in 2017 and 2016, respectively.

Caustic soda price indices increased since April 2016 and created positive product price momentum entering 2017. Improved supply and demand dynamics in 2017 resulted in additional price increases throughout 2017. During 2017, North America caustic soda price contract indices increased \$140 per ton and the caustic soda export price index increased approximately \$260 per ton. During November 2017, a caustic soda price increase of \$100 per ton was announced. This price increase is in the process of being implemented and while the extent to which this price increase is achieved is uncertain, the majority of the benefits, if realized, would impact first and second quarters 2018 results.

In 2017, Epoxy generated segment loss of \$11.8 million compared to segment income of \$15.4 million for 2016. Epoxy segment results are lower than the prior year period primarily due to increased raw material costs, primarily benzene and propylene, partially offset by higher product prices and increased volumes. Epoxy segment results were also negatively impacted by Hurricane Harvey. Epoxy segment income included depreciation and amortization expense of \$94.3 million and \$90.0 million in 2017 and 2016, respectively.

## Table of Contents

Winchester reported segment income of \$72.4 million for 2017 compared to \$120.9 million for 2016. Winchester segment income declined from the prior year primarily due to a lower level of commercial demand for shotshell, pistol and rifle ammunition, a less favorable product mix and increased commodity and other material costs, partially offset by increased shipments to military customers and law enforcement agencies. Winchester segment income included depreciation and amortization expense of \$19.5 million and \$18.5 million in 2017 and 2016, respectively.

The U.S. Tax Cuts and Jobs Act (the 2017 Tax Act) was enacted on December 22, 2017 and included a broad range of provisions impacting the taxation of businesses. Included within the provisions, the 2017 Tax Act reduces the U.S. federal corporate tax rate from 35% to 21%, requires companies to pay a one-time transition tax on unremitted earnings of foreign subsidiaries that were previously tax deferred and transitions the U.S. from a worldwide tax system to a modified territorial tax system. In connection with our initial analysis of the 2017 Tax Act, we recognized a provisional deferred tax benefit of \$437.9 million. The impact of the 2017 Tax Act includes: (1) a provisional \$315.8 million deferred tax benefit to reflect the reduction of the U.S. corporate tax rate from 35% to 21% and (2) a provisional \$122.1 million deferred tax benefit to reflect an estimated reduction of \$162.6 million in our deferred tax liability on unremitted foreign earnings partially offset by an estimate of the one-time transition tax of \$40.5 million. We expect to utilize existing U.S. federal net operating loss carryforwards and foreign tax credits to fully offset the cash tax impact of the one-time transition tax liability.

At December 31, 2017, we have not completed our accounting for the tax effects of the 2017 Tax Act. The impact of the 2017 Tax Act is expected to require further adjustments in 2018 due to anticipated additional guidance from the U.S. Department of the Treasury, changes in our assumptions, completion of 2017 U.S. and foreign tax returns and further information and interpretations that become available. However, we have made and recorded reasonable estimates of significant items including: (1) the effects on our existing deferred tax balances, (2) the remeasurement of deferred taxes on foreign unremitted earnings and (3) the one-time transition tax. We will make adjustments to these provisional estimates as new information becomes available during the one year measurement period. Our analyses of the 2017 Tax Act will continue throughout 2018 and will be completed when we file all U.S. and foreign tax returns.

## Financing

For the year ended December 31, 2017, our long-term debt repayments, net were \$2.4 million, which included \$51.6 million under the required quarterly installments of the \$1,375.0 million Term Loan Facility and the remaining \$12.2 million due under the SunBelt Notes.

On March 9, 2017, we entered into a new five-year, \$1,975.0 million senior credit facility (Senior Credit Facility) consisting of a \$600.0 million senior revolving credit facility (Senior Revolving Credit Facility), which replaced our previous \$500.0 million senior revolving credit facility, and a \$1,375.0 million Term Loan Facility. The Senior Credit Facility will mature in March 2022. On March 9, 2017, Olin also issued \$500.0 million aggregate principal amount of 5.125% senior notes due September 15, 2027 (2027 Notes), which were registered under the Securities Act of 1933, as amended. The proceeds of the Term Loan Facility and the 2027 Notes were used to redeem the remaining balance of the existing \$1,350.0 million term loan facility and the \$800.0 million Sumitomo term loan facility (Sumitomo Credit Facility).

## Subsequent Event

On January 19, 2018, Olin issued \$550.0 million aggregate principal amount of 5.00% senior notes due February 1, 2030 (2030 Notes), which were registered under the Securities Act of 1933, as amended. Proceeds from the 2030 Notes were used to redeem \$550.0 million of debt under the \$1,375.0 million Term Loan Facility. This prepayment of the Term Loan Facility eliminates the required quarterly installments under the Term Loan Facility.



Table of Contents

## CONSOLIDATED RESULTS OF OPERATIONS

	Years ended December 31,		
	2017	2016	2015
	(\$ in millions, except per share data)		
Sales	\$6,268.4	\$5,550.6	\$2,854.4
Cost of goods sold	5,539.6	4,923.7	2,486.8
Gross margin	728.8	626.9	367.6
Selling and administration	350.7	323.2	186.3
Restructuring charges	37.6	112.9	2.7
Acquisition-related costs	12.8	48.8	123.4
Other operating income	3.3	10.6	45.7
Operating income	331.0	152.6	100.9
Earnings of non-consolidated affiliates	1.8	1.7	1.7
Interest expense	217.4	191.9	97.0
Interest income	1.8	3.4	1.1
Income (loss) before taxes	117.2	(34.2 )	6.7
Income tax (benefit) provision	(432.3 )	(30.3 )	8.1
Net income (loss)	\$549.5	\$(3.9 )	\$(1.4 )
Net income (loss) per common share:			
Basic	\$3.31	\$(0.02 )	\$(0.01 )
Diluted	\$3.26	\$(0.02 )	\$(0.01 )

## 2017 Compared to 2016

Sales for 2017 were \$6,268.4 million compared to \$5,550.6 million in 2016, an increase of \$717.8 million, or 13%. Chlor Alkali Products and Vinyls sales increased by \$501.5 million primarily due to higher caustic soda and EDC product prices and increased volumes. Epoxy sales increased by \$264.4 million primarily due to higher product prices and increased volumes. Both Chlor Alkali Products and Vinyls and Epoxy sales volumes were negatively impacted by Hurricane Harvey. Winchester sales decreased by \$48.1 million primarily due to decreased shipments to commercial customers, partially offset by increased shipments to military customers and law enforcement agencies.

Gross margin increased \$101.9 million, or 16%, from 2016. Chlor Alkali Products and Vinyls gross margin increased by \$183.6 million, primarily due to higher caustic soda and EDC product prices and increased volumes. Partially offsetting these increases were higher electricity costs, primarily driven by higher natural gas prices, compared to 2016. Epoxy gross margin decreased \$26.6 million primarily due to increased raw material costs, primarily benzene and propylene, partially offset by higher product prices and increased volumes. Both Chlor Alkali Products and Vinyls and Epoxy gross margins were also negatively impacted by higher maintenance costs, unabsorbed fixed manufacturing costs and reduced profit from lost sales associated with turnarounds and outages and Hurricane Harvey. Winchester gross margin decreased \$52.9 million primarily due to lower commercial volumes, a less favorable product mix and increased commodity and other material costs. Gross margin as a percentage of sales increased to 12% in 2017 from 11% in 2016.

Selling and administration expenses in 2017 increased \$27.5 million, or 9%, from 2016. The increase was primarily due to higher consulting and contract services of \$10.5 million, which include transition service fees, and higher stock-based compensation expense of \$8.2 million, which includes mark-to-market adjustments. Selling and administration expenses for 2017 also included costs associated with the Information Technology Project of \$5.3 million. Selling and administration expenses as a percentage of sales were 6% in both 2017 and 2016.

Restructuring charges in 2017 and 2016 were primarily associated with the March 2016 closure of 433,000 tons of chlor alkali capacity across three separate locations. For the year ended December 31, 2016, \$76.6 million of these charges were non-cash asset impairment charges for equipment and facilities. Restructuring charges for the years ended December 31, 2017 and 2016 were also associated with permanently closing a portion of the Becancour, Canada chlor alkali facility in 2014 and the relocation of our Winchester centerfire ammunition manufacturing operations from East Alton, IL to Oxford, MS which was completed during 2016.

## Table of Contents

Acquisition-related costs for the years ended December 31, 2017 and 2016 were related to the integration of the Acquired Business, and consisted of advisory, legal, accounting and other professional fees.

Other operating income in 2017 included a gain of \$3.3 million from the sale of a former manufacturing facility. Other operating income in 2016 included an \$11.0 million insurance recovery for property damage and business interruption related to a 2008 chlor alkali facility incident.

Interest expense increased by \$25.5 million in 2017 primarily due to higher interest rates, \$3.9 million of accretion expense related to the 2020 ethylene payment discount and the write-off of unamortized deferred debt issuance costs of \$2.7 million associated with the redemption of the Sumitomo Credit Facility and the \$1,850.0 million senior credit facility.

The effective tax rate for 2017 was favorably impacted by (1) the 2017 Tax Act, (2) an agreement with the Internal Revenue Service on prior period tax examinations, (3) stock based compensation, (4) U.S. federal tax credits, (5) changes to prior year tax positions and (6) a reduction to the deferred tax liability on unremitted foreign earnings. The effective tax rate was also unfavorably impacted by a net increase in the valuation allowance, primarily related to foreign net operating losses and remeasurement of deferred taxes due to an increase in our state effective tax rates. These factors resulted in a net \$452.3 million tax benefit of which \$437.9 million was a provisional benefit from the 2017 Tax Act. After giving consideration to these items, the effective tax rate for 2017 of 17.1% was lower than the 35% U.S. federal statutory rate, primarily due to favorable permanent salt depletion deductions. The effective tax rate for 2016 was favorably impacted by return to provision adjustments, primarily related to salt depletion and non-deductible acquisition costs, and the remeasurement of deferred taxes due to a decrease in our state effective tax rates. The effective tax rate was also unfavorably impacted by a change in prior year uncertain tax positions. These factors resulted in a net \$3.9 million tax benefit. After giving consideration to these items, the effective tax rate for 2016 of 77.2% was higher than the 35% U.S. federal statutory rate, primarily due to favorable permanent salt depletion deductions in combination with a pretax loss.

### 2016 Compared to 2015

Sales for 2016 were \$5,550.6 million compared to \$2,854.4 million in 2015, an increase of \$2,696.2 million, or 94%. The sales increase was primarily due to the inclusion of a full year of the Acquired Business of \$2,735.1 million. Chlor Alkali Products and Vinyls sales generated from legacy businesses decreased \$56.8 million due to lower product prices and volumes. The lower volumes were primarily due to hydrochloric acid and potassium hydroxide volumes, partially offset by increased chlorine and caustic soda volumes. The lower product prices were primarily due to caustic soda, hydrochloric acid and potassium hydroxide prices, partially offset by increased chlorine prices. Winchester sales increased by \$17.9 million from 2015 due to increased shipments to commercial customers and law enforcement agencies, partially offset by decreased shipments to industrial and military customers.

Gross margin increased \$259.3 million, or 71%, from 2015 primarily due to the inclusion of a full year of the Acquired Business of \$264.2 million which includes the fourth quarter of 2015 impact of additional costs of goods sold related to the fair value adjustment related to the purchase accounting for inventory of \$24.0 million. Chlor Alkali Products and Vinyls gross margin generated from legacy businesses decreased \$16.1 million primarily due to lower product prices and insurance recoveries recognized in 2015, partially offset by lower freight costs, primarily driven by the realization of synergies. The insurance recoveries represented reimbursement of costs incurred and expensed in prior periods, primarily related to the portion of the Becancour, Canada chlor alkali facility that has been shut down since late June 2014. Winchester gross margin increased \$7.6 million primarily due to lower commodity and other material costs and increased volumes, partially offset by lower product prices and higher operating costs. Gross margin was also impacted by lower environmental costs of \$6.5 million. Gross margin as a percentage of sales decreased to 11% in 2016 from 13% in 2015.



Selling and administration expenses in 2016 increased \$136.9 million, or 73%, from 2015, primarily due to the inclusion of a full year of the Acquired Business's selling and administration costs of \$100.6 million, increased consulting fees of \$11.6 million, increased legal and legal-related settlement expenses of \$7.3 million, increased stock-based compensation expense of \$6.8 million, which includes mark-to-market adjustments, and increased non-income tax expense of \$4.0 million. Selling and administration expenses as a percentage of sales were 6% in 2016 and 7% in 2015.

Restructuring charges in 2016 of \$112.9 million were primarily associated with the March 2016 closure of 433,000 tons of chlor alkali capacity across three separate locations, of which \$76.6 million were non-cash asset impairment charges. Restructuring charges for 2016 and 2015 were also associated with permanently closing a portion of the Becancour, Canada chlor alkali facility in 2014 and the relocation of our Winchester centerfire ammunition manufacturing operations from East Alton, IL to Oxford, MS which was completed during 2016.

Table of Contents

Acquisition-related costs for the years ended December 31, 2016 and 2015 were associated with the integration of the Acquired Business, and consisted of advisory, legal, accounting and other professional fees. For the year ended December 31, 2015, acquisition-related costs also included \$47.1 million of costs incurred as a result of the change in control, which created a mandatory acceleration of expenses under deferred compensation plans.

Other operating income in 2016 included an \$11.0 million insurance recovery for property damage and business interruption related to a 2008 chlor alkali facility incident. Other operating income in 2015 included insurance recoveries for property damage and business interruption of \$42.3 million related to the portion of the Becancour, Canada chlor alkali facility that has been shut down since late June 2014 and \$3.7 million related to the McIntosh, AL chlor alkali facility.

Interest expense increased by \$94.9 million in 2016 due to a higher level of debt outstanding due to the financing of the Acquisition and higher interest rates. These increases were partially offset by acquisition financing expenses incurred in 2015 of \$30.5 million primarily for the Bridge Financing associated with the Acquisition.

The effective tax rate for 2016 was favorably impacted by return to provision adjustments, primarily related to salt depletion and non-deductible acquisition costs, and the remeasurement of deferred taxes due to a decrease in our state effective tax rates. The effective tax rate was also unfavorably impacted by a change in prior year uncertain tax positions. These factors resulted in a net \$3.9 million tax benefit. After giving consideration to these items, the effective tax rate for 2016 of 77.2% was higher than the 35% U.S. federal statutory rate, primarily due to favorable permanent salt depletion deductions in combination with a pretax loss. The effective tax rate for 2015 was unfavorably impacted by non-deductible acquisition costs which was partially offset by a benefit for salt depletion deductions. The net impact of these factors was a net \$6.3 million tax expense. After giving consideration to these items, the effective tax rate for 2015 of 26.9% was lower than the 35% U.S. federal statutory rate, primarily due to favorable permanent tax deduction items, such as the domestic manufacturing deduction and tax deductible dividends paid to the Contributing Employee Ownership Plan.

Table of Contents

## SEGMENT RESULTS

We define segment results as income (loss) before interest expense, interest income, other operating income, other income (expense) and income taxes, and include the results of non-consolidated affiliates. Consistent with the guidance in ASC 280 "Segment Reporting," we have determined it is appropriate to include the operating results of non-consolidated affiliates in the relevant segment financial results. We have three operating segments: Chlor Alkali Products and Vinyls, Epoxy and Winchester. The three operating segments reflect the organization used by our management for purposes of allocating resources and assessing performance. Chlorine used in our Epoxy segment is transferred at cost from the Chlor Alkali Products and Vinyls segment. Sales and profits are recognized in the Chlor Alkali Products and Vinyls segment for all caustic soda generated and sold by Olin.

	Years ended December 31,		
	2017	2016	2015
Sales:	(\$ in millions)		
Chlor Alkali Products and Vinyls	\$3,500.8	\$2,999.3	\$1,713.4
Epoxy	2,086.4	1,822.0	429.6
Winchester	681.2	729.3	711.4
Total sales	\$6,268.4	\$5,550.6	\$2,854.4
Income (loss) before taxes:			
Chlor Alkali Products and Vinyls <sup>(1)</sup>	\$405.8	\$224.9	\$115.5
Epoxy	(11.8 )	15.4	(7.5 )
Winchester	72.4	120.9	115.6
Corporate/Other:			
Pension income <sup>(2)</sup>	42.7	53.6	35.2
Environmental expense	(8.5 )	(9.2 )	(15.7 )
Other corporate and unallocated costs <sup>(3)</sup>	(120.7 )	(100.2 )	(60.1 )
Restructuring charges <sup>(4)</sup>	(37.6 )	(112.9 )	(2.7 )
Acquisition-related costs <sup>(5)</sup>	(12.8 )	(48.8 )	(123.4 )
Other operating income <sup>(6)</sup>	3.3	10.6	45.7
Interest expense <sup>(7)</sup>	(217.4 )	(191.9 )	(97.0 )
Interest income	1.8	3.4	1.1
Income (loss) before taxes	\$117.2	\$(34.2 )	\$6.7

Earnings of non-consolidated affiliates are included in the Chlor Alkali Products and Vinyls segment results consistent with management's monitoring of the operating segment. The earnings from non-consolidated affiliates were \$1.8 million for the year ended December 31, 2017 and \$1.7 million for both the years ended December 31, 2016 and 2015.

The service cost and the amortization of prior service cost components of pension expense related to the employees of the operating segments are allocated to the operating segments based on their respective estimated census data. All other components of pension costs are included in corporate/other and include items such as the expected return on plan assets, interest cost and recognized actuarial gains and losses.

Other corporate and unallocated costs for the year ended December 31, 2017 included costs associated with the implementation of the Information Technology Project of \$5.3 million.

Restructuring charges for the years ended December 31, 2017 and 2016 were primarily associated with the March 2016 closure of 433,000 tons of chlor alkali capacity across three separate locations. For the year ended December 31, 2016, \$76.6 million of these charges were non-cash asset impairment charges for equipment and facilities.

Restructuring charges for the years ended December 31, 2017, 2016 and 2015 also included costs associated with the relocation of our Winchester centerfire ammunition manufacturing operations from East Alton, IL to Oxford, MS which was completed during 2016 and permanently closing a portion of the Becancour, Canada chlor alkali facility in 2014.

- (5) Acquisition-related costs for the years ended December 31, 2017, 2016 and 2015 were related to the integration of the Acquired Business and consisted of advisory, legal, accounting and other professional fees. For the year ended

Table of Contents

December 31, 2015 acquisition-related costs also included \$47.1 million of costs incurred as a result of the change in control, which created a mandatory acceleration of expenses under deferred compensation plans.

Other operating income for the year ended December 31, 2017 included a gain of \$3.3 million from the sale of a former manufacturing facility. Other operating income for the year ended December 31, 2016 included an \$11.0 million insurance recovery for property damage and business interruption related to a 2008 chlor alkali facility (6) incident. Other operating income for the year ended December 31, 2015 included insurance recoveries for property damage and business interruption of \$42.3 million related to the portion of the Becancour, Canada chlor alkali facility that has been shut down since late June 2014 and \$3.7 million related to the McIntosh, AL chlor alkali facility.

Interest expense for the year ended December 31, 2017 included \$3.9 million of accretion expense related to the (7) 2020 ethylene payment discount. Interest expense was reduced by capitalized interest of \$3.0 million, \$1.9 million and \$1.1 million for the years ended December 31, 2017, 2016 and 2015, respectively. Interest expense for the year ended December 31, 2015 included acquisition financing expenses of \$30.5 million.

Chlor Alkali Products and Vinyls

2017 Compared to 2016

Chlor Alkali Products and Vinyls sales for 2017 were \$3,500.8 million compared to \$2,999.3 million for 2016, an increase of \$501.5 million, or 17%. The sales increase was primarily due to higher product prices (\$385.5 million) and increased volumes (\$116.0 million). The higher product prices and increased volumes were primarily related to caustic soda and EDC. Chlor Alkali Products and Vinyls sales volumes were negatively impacted by Hurricane Harvey.

Chlor Alkali Products and Vinyls generated segment income of \$405.8 million for 2017 compared to \$224.9 million for 2016, an increase of \$180.9 million, or 80%. Chlor Alkali Products and Vinyls segment income was higher due to higher product prices (\$385.5 million) and increased volumes and a more favorable product mix (\$8.7 million). The higher product prices and increased volumes were primarily related to caustic soda and EDC. These increases were partially offset by higher maintenance costs, unabsorbed fixed manufacturing costs and reduced profit from lost sales associated with turnarounds and outages (\$102.5 million) and incremental costs to continue operations, unabsorbed fixed manufacturing costs and reduced profit from lost sales associated with Hurricane Harvey (\$27.0 million). Electricity costs, primarily driven by higher natural gas prices (\$51.6 million), and operating costs (\$32.2 million) were also higher compared to 2016. Chlor Alkali Products and Vinyls segment income included depreciation and amortization expense of \$432.2 million and \$418.1 million in 2017 and 2016, respectively.

2016 Compared to 2015

Chlor Alkali Products and Vinyls sales for 2016 were \$2,999.3 million compared to \$1,713.4 million for 2015, an increase of \$1,285.9 million, or 75%. Sales of the Acquired Chlor Alkali Business were \$1,715.7 million compared to \$373.0 million for 2015, an increase of \$1,342.7 million, which was primarily due to the inclusion of a full year of the Acquired Chlor Alkali Business. Chlor Alkali Products and Vinyls sales generated from legacy businesses decreased \$56.8 million from 2015. The decrease was primarily due to lower product prices (\$35.3 million) and lower volumes (\$21.5 million). The lower product prices were primarily due to caustic soda, hydrochloric acid and potassium hydroxide prices, partially offset by increased chlorine prices. The lower volumes were primarily due to hydrochloric acid and potassium hydroxide volumes, partially offset by increased chlorine and caustic soda volumes.

Chlor Alkali Products and Vinyls generated segment income of \$224.9 million for 2016 compared to \$115.5 million for 2015, an increase of \$109.4 million, or 95%. Chlor Alkali Products and Vinyls segment income was higher primarily due to the inclusion of a full year of the Acquired Chlor Alkali Business (\$127.2 million) which included the fourth quarter of 2015 impact of additional costs of goods sold related to the fair value adjustment related to the purchase accounting for inventory (\$6.7 million). Chlor Alkali Products and Vinyls segment income generated from legacy businesses decreased \$17.8 million primarily due to lower product prices (\$35.3 million), insurance recoveries recognized in 2015 (\$11.4 million), and lower volumes (\$0.3 million). The lower product prices were primarily due to caustic soda, hydrochloric acid and potassium hydroxide prices, partially offset by increased chlorine prices. The insurance recoveries represented reimbursement of costs incurred and expensed in prior periods, primarily related to the portion of the Becancour, Canada chlor alkali facility that has been shut down since late June 2014. These decreases were partially offset by lower freight costs, primarily driven by the realization of synergies (\$24.2 million) and lower operating and material costs (\$5.0 million). Chlor Alkali Products and Vinyls segment income included depreciation and amortization expense of \$418.1 million and \$186.1 million in 2016 and 2015, respectively.

Table of Contents

Epoxy

2017 Compared to 2016

Epoxy sales were \$2,086.4 million for 2017 compared to \$1,822.0 million for 2016, an increase of \$264.4 million, or 15%. The sales increase was primarily due to higher product prices (\$211.7 million) and increased volumes and a more favorable product mix (\$52.7 million). Epoxy sales volumes were negatively impacted by Hurricane Harvey.

Epoxy reported a segment loss of \$11.8 million for 2017 compared to segment income of \$15.4 million for 2016, a decrease of \$27.2 million. Epoxy segment results were negatively impacted by incremental costs to continue operations, unabsorbed fixed manufacturing costs and reduced profit from lost sales associated with Hurricane Harvey (\$27.7 million) and higher maintenance costs, unabsorbed fixed manufacturing costs and reduced profit from lost sales associated with turnarounds and outages (\$15.3 million). Epoxy segment results were also impacted by increased raw material costs (\$227.8 million), primarily benzene and propylene, and higher operating costs (\$1.7 million). These decreases impacting segment results were partially offset by higher product prices (\$211.7 million) and increased volumes and a more favorable product mix (\$33.6 million). Epoxy segment results included depreciation and amortization expense of \$94.3 million and \$90.0 million in 2017 and 2016, respectively.

2016 Compared to 2015

Epoxy sales were \$1,822.0 million for 2016 compared to \$429.6 million for 2015, an increase of \$1,392.4 million, or 324%. Epoxy sales were higher than 2015 primarily due to the inclusion of a full year of the Acquired Business.

Epoxy reported segment income of \$15.4 million for 2016 compared to a segment loss of \$7.5 million for 2015, an increase of \$22.9 million. The fourth quarter of 2015 was impacted by the recognition of additional costs of goods sold related to the fair value adjustment related to the purchase accounting for inventory (\$17.3 million). Additionally, Epoxy segment income was higher than 2015 due to the inclusion of a full year of the Acquired Business. Epoxy segment results included depreciation and amortization expense of \$90.0 million and \$20.9 million in 2016 and 2015, respectively.

Winchester

2017 Compared to 2016

Winchester sales were \$681.2 million for 2017 compared to \$729.3 million for 2016, a decrease of \$48.1 million, or 7%. The sales decrease was primarily due to lower ammunition sales to commercial customers (\$89.4 million), partially offset by increased shipments to military customers and law enforcement agencies (\$41.3 million). The decrease in commercial sales primarily reflects lower demand in shotshell, pistol and rifle ammunition.

Winchester reported segment income of \$72.4 million for 2017 compared to \$120.9 million for 2016, a decrease of \$48.5 million, or 40%. The decrease in segment income in 2017 compared to 2016 was due to lower volumes and a less favorable product mix (\$35.0 million), increased commodity and other material costs (\$10.6 million) and lower product prices (\$8.0 million). These decreases were partially offset by the impact of lower operating costs (\$5.1 million). Winchester segment income included depreciation and amortization expense of \$19.5 million and \$18.5 million in 2017 and 2016, respectively.

2016 Compared to 2015

Winchester sales were \$729.3 million for 2016 compared to \$711.4 million for 2015, an increase of \$17.9 million, or 3%. The sales increase was primarily due to increased shipments of ammunition to commercial customers (\$19.7 million) and law enforcement agencies (\$1.3 million). These increases were partially offset by decreased shipments to military (\$2.6 million) and industrial customers (\$0.5 million).

Winchester reported segment income of \$120.9 million for 2016 compared to \$115.6 million for 2015, an increase of \$5.3 million, or 5%. The increase in segment income in 2016 compared to 2015 reflected the impact of lower commodity and other material costs (\$15.8 million) and increased volumes (\$13.4 million). These increases were partially offset by the impact of lower selling prices (\$13.8 million) and higher operating costs (\$10.1 million). Winchester segment income included depreciation and amortization expense of \$18.5 million and \$17.4 million in 2016 and 2015, respectively.



## Table of Contents

### Corporate/Other

#### 2017 Compared to 2016

For 2017, pension income included in corporate/other, was \$42.7 million compared to \$53.6 million for 2016. On a total company basis, defined benefit pension income was \$26.4 million compared to \$37.1 million for 2016.

Charges to income for environmental investigatory and remedial activities were \$8.5 million for 2017 compared to \$9.2 million for 2016. These charges related primarily to expected future investigatory and remedial activities associated with past manufacturing operations and former waste disposal sites.

For 2017, other corporate and unallocated costs were \$120.7 million compared to \$100.2 million for 2016, an increase of \$20.5 million, or 20%. The increase was primarily due to higher stock-based compensation expense of \$8.2 million, which includes mark-to-market adjustments, increased consulting charges of \$7.3 million and costs associated with the implementation of the Information Technology Project of \$5.3 million.

#### 2016 Compared to 2015

For 2016, pension income included in corporate/other, was \$53.6 million compared to \$35.2 million for 2015, which excludes the impact of the change in control, which created a mandatory acceleration of expenses under deferred compensation plans associated with the Acquisition. On a total company basis, defined benefit pension income was \$37.1 million compared to an expense of \$18.7 million for 2015, which includes the impact of the change in control which created a mandatory acceleration of expenses under deferred compensation plans of \$47.1 million associated with the Acquisition, and was included in acquisition-related costs. On a total company basis, defined benefit pension income without this charge, was \$28.4 million for 2015. The increase in pension income from 2015 was primarily due to the change in approach used to measure service and interest costs for our defined benefit pension plans.

Charges to income for environmental investigatory and remedial activities were \$9.2 million for 2016 compared to \$15.7 million for 2015. These charges related primarily to expected future investigatory and remedial activities associated with past manufacturing operations and former waste disposal sites.

For 2016, other corporate and unallocated costs were \$100.2 million compared to \$60.1 million for 2015, an increase of \$40.1 million, or 67%. The increase was primarily due to increased corporate infrastructure costs of \$21.4 million, such as personnel, consulting and professional fees, that are necessary to support the Acquired Business, higher stock-based compensation expense of \$6.9 million, which includes mark-to-market adjustments, increased legal and legal-related settlement expenses of \$7.0 million and increased non-income tax expense of \$4.3 million.

### Restructurings

On March 21, 2016, we announced that we had made the decision to close a combined total of 433,000 tons of chlor alkali capacity across three separate locations. Associated with this action, we have permanently closed our Henderson, NV chlor alkali plant with 153,000 tons of capacity and have reconfigured the site to manufacture bleach and distribute caustic soda and hydrochloric acid. Also, the capacity of our Niagara Falls, NY chlor alkali plant has been reduced from 300,000 tons to 240,000 tons and the chlor alkali capacity at our Freeport, TX facility was reduced by 220,000 tons. This 220,000 ton reduction was entirely from diaphragm cell capacity. For the years ended December 31, 2017 and 2016, we recorded pretax restructuring charges of \$32.6 million and \$111.3 million for the write-off of equipment and facility costs, lease and other contract termination costs, employee severance and related benefit costs, employee relocation costs and facility exit costs related to these actions. We expect to incur additional restructuring charges through 2020 of approximately \$22 million related to these capacity reductions.

## 2018 OUTLOOK

Net income in 2018 is projected to be in the \$1.40 to \$1.95 per diluted share range, which includes estimated pretax restructuring charges totaling approximately \$20 million. Net income in 2017 was \$3.26 per diluted share, which included pretax restructuring charges of \$37.6 million and pretax acquisition-related integration costs of \$12.8 million.

We currently expect the first quarter 2018 to have the lowest earnings per diluted share amount during 2018 due to the timing of planned maintenance turnaround expenses.

## Table of Contents

Chlor Alkali Products and Vinyls 2018 segment income is expected to increase compared to 2017 segment income of \$405.8 million reflecting higher caustic soda, chlorine, and chlorine-derivatives pricing and expected benefits due to lower ethylene costs associated with the acquisition of additional cost based ethylene from DowDuPont in late September 2017. Partially offsetting these increases are expected lower ethylene dichloride pricing compared to 2017 and higher anticipated ethane costs.

Epoxy 2018 segment income is expected to improve from the 2017 segment loss of \$11.8 million as increased volumes and higher product pricing are expected to more than offset higher raw material costs, primarily benzene and propylene, and higher maintenance turnaround expense.

Winchester 2018 segment income is expected to be higher than the \$72.4 million of segment income achieved during 2017 primarily driven by higher levels of commercial and military demand, partially offset by increased commodity and other material costs.

Other Corporate and Unallocated costs in 2018 are expected to be higher than 2017 Other Corporate and Unallocated costs of \$120.7 million due to higher costs associated with the Information Technology Project, increased stock-based compensation and the timing of legal and litigation costs. Costs associated with the Information Technology Project are estimated to be approximately \$50 million in 2018 compared to \$5.3 million in 2017.

During 2018, we anticipate environmental expenses in the \$15 million to \$20 million range compared to \$8.5 million in 2017. We do not believe that there will be recoveries of environmental costs incurred and expensed in prior periods during 2018.

We expect qualified defined benefit pension plan income in 2018 to be lower than the 2017 level by approximately \$10 million primarily due to higher Pension Benefit Guaranty Corporation fees associated with our domestic qualified defined benefit plan and increased amortization of deferred pension actuarial losses. Based on our plan assumptions and estimates, we will not be required to make any cash contributions to our domestic qualified defined benefit pension plan in 2018. We have several international qualified defined benefit pension plans which we anticipate cash contributions of less than \$5 million in 2018.

In 2018, we currently expect our capital spending to be in the \$375 million to \$425 million range, including the investment associated with the Information Technology Project of approximately \$100 million. We expect 2018 depreciation and amortization expense to be in the \$560 million to \$570 million range.

We currently believe the 2018 effective tax rate will be approximately 25%, including the impact of the 2017 Tax Act.

## PENSION AND POSTRETIREMENT BENEFITS

Under ASC 715, we recorded an after-tax charge of \$21.6 million (\$27.3 million pretax) to shareholders' equity as of December 31, 2017 for our pension and other postretirement plans. This charge primarily reflected a 50-basis point decrease in the domestic pension plans' discount rate, partially offset by favorable performance on plan assets during 2017. In 2016, we recorded an after-tax charge of \$37.5 million (\$61.0 million pretax) to shareholders' equity as of December 31, 2016 for our pension and other postretirement plans. This charge primarily reflected a 30-basis point decrease in the domestic pension plans' discount rate, partially offset by favorable performance on plan assets during 2016. In 2015, we recorded an after-tax charge of \$78.8 million (\$125.3 million pretax) to shareholders' equity as of December 31, 2015 for our pension and other postretirement plans. This charge reflected unfavorable performance on plan assets during 2015, partially offset by a 50-basis point increase in the domestic pension plans' discount rate. These non-cash charges to shareholders' equity do not affect our ability to borrow under our senior credit facility.

During 2016, we made a discretionary cash contribution to our domestic qualified defined benefit pension plan of \$6.0 million. Based on our plan assumptions and estimates, we will not be required to make any cash contributions to the domestic qualified defined benefit pension plan at least through 2018.

In connection with international qualified defined benefit pension plans, we made cash contributions of \$1.7 million, \$1.3 million and \$0.9 million in 2017, 2016, and 2015, respectively, and we anticipate less than \$5 million of cash contributions to international qualified defined benefit pension plans in 2018.

At December 31, 2017, the projected benefit obligation of \$2,877.5 million exceeded the market value of assets in our qualified defined benefit pension plans by \$630.6 million, as calculated under ASC 715.

Table of Contents

Components of net periodic benefit (income) costs were:

	Years ended December 31,		
	2017	2016	2015
	(\$ in millions)		
Pension (benefits) costs	\$(26.4)	\$(37.1)	\$18.7
Other postretirement benefit costs	2.5	2.5	6.7

For the year ended December 31, 2015, pension costs included \$47.1 million of costs incurred as a result of the change in control, which created a mandatory acceleration of expenses under our domestic non-qualified pension plan as a result of the Acquisition. These charges were included in acquisition-related costs.

For the year ended December 31, 2015, we recorded a curtailment charge of \$0.2 million associated with permanently closing a portion of the Becancour, Canada chlor alkali facility that has been shut down since late June 2014. This charge was included in restructuring charges.

The service cost and the amortization of prior service cost components of pension expense related to employees of the operating segments are allocated to the operating segments based on their respective estimated census data.

## ENVIRONMENTAL MATTERS

	Years ended December 31,		
	2017	2016	2015
	(\$ in millions)		
Cash outlays:			
Remedial and investigatory spending (charged to reserve)	\$16.5	\$10.3	\$14.1
Capital spending	1.7	3.5	2.0
Plant operations (charged to cost of goods sold)	199.7	192.6	71.9
Total cash outlays	\$217.9	\$206.4	\$88.0

Cash outlays for remedial and investigatory activities associated with former waste sites and past operations were not charged to income but instead were charged to reserves established for such costs identified and expensed to income in prior years. Cash outlays for normal plant operations for the disposal of waste and the operation and maintenance of pollution control equipment and facilities to ensure compliance with mandated and voluntarily imposed environmental quality standards were charged to income.

Total environmental-related cash outlays in 2016 were higher than 2015 primarily due to environmental spending for plant operations related to the Acquired Business. In connection with the Acquisition, DowDuPont retained liabilities relating to releases of hazardous materials and violations of environmental law to the extent arising prior to the Closing Date. Total environmental-related cash outlays for 2018 are estimated to be approximately \$220 million, of which approximately \$20 million is expected to be spent on investigatory and remedial efforts, approximately \$2 million on capital projects and approximately \$198 million on normal plant operations. Remedial and investigatory spending is anticipated to be higher in 2018 than 2017 due to the timing of continuing remedial action plans and investigations. Historically, we have funded our environmental capital expenditures through cash flow from operations and expect to do so in the future.

Annual environmental-related cash outlays for site investigation and remediation, capital projects and normal plant operations are expected to range between \$200 million to \$220 million over the next several years, \$15 million to \$25 million of which is for investigatory and remedial efforts, which are expected to be charged against reserves recorded

on our consolidated balance sheet. While we do not anticipate a material increase in the projected annual level of our environmental-related cash outlays for site investigation and remediation, there is always the possibility that such an increase may occur in the future in view of the uncertainties associated with environmental exposures.

Table of Contents

Our liabilities for future environmental expenditures were as follows:

	December 31,		
	2017	2016	2015
	(\$ in millions)		
Beginning balance	\$137.3	\$138.1	\$138.3
Charges to income	10.3	9.2	15.7
Remedial and investigatory spending	(16.5 )	(10.3 )	(14.1 )
Currency translation adjustments	0.5	0.3	(1.8 )
Ending balance	\$131.6	\$137.3	\$138.1

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.

The establishment and implementation of national, state or provincial and local standards to regulate air, water and land quality affect substantially all of our manufacturing locations around the world. Laws providing for regulation of the manufacture, transportation, use and disposal of hazardous and toxic substances, and remediation of contaminated sites, have imposed additional regulatory requirements on industry, particularly the chemicals industry. In addition, implementation of environmental laws has required and will continue to require new capital expenditures and will increase plant operating costs. We employ waste minimization and pollution prevention programs at our manufacturing sites.

We are party to various governmental and private environmental actions associated with past manufacturing facilities and former waste disposal sites. Associated costs of investigatory and remedial activities are provided for in accordance with generally accepted accounting principles governing probability and the ability to reasonably estimate future costs. Our ability to estimate future costs depends on whether our investigatory and remedial activities are in preliminary or advanced stages. With respect to unasserted claims, we accrue liabilities for costs that, in our experience, we expect to incur to protect our interests against those unasserted claims. Our accrued liabilities for unasserted claims amounted to \$7.9 million at December 31, 2017. With respect to asserted claims, we accrue liabilities based on remedial investigation, feasibility study, remedial action and operation, maintenance and monitoring (OM&M) expenses that, in our experience, we expect to incur in connection with the asserted claims. Required site OM&M expenses are estimated and accrued in their entirety for required periods not exceeding 30 years, which reasonably approximates the typical duration of long-term site OM&M.

Environmental provisions charged to income, which are included in cost of goods sold, were as follows:

	Years ended		
	December 31,		
	2017	2016	2015
	(\$ in millions)		
Charges to income	\$10.3	\$9.2	\$15.7
Recoveries from third parties of costs incurred and expensed	(1.8 )	—	—
Environmental expense	\$8.5	\$9.2	\$15.7

These charges relate primarily to remedial and investigatory activities associated with past manufacturing operations and former waste disposal sites and may be material to operating results in future years.





## Table of Contents

Our total estimated environmental liability at the end of 2017 was attributable to 59 sites, 15 of which were United States Environmental Protection Agency National Priority List sites. Nine sites accounted for 78% of our environmental liability and, of the remaining 50 sites, no one site accounted for more than 3% of our environmental liability. At four of the nine sites, part of the site is subject to a remedial investigation and another part is in the long-term OM&M stage. At one of the nine sites, a remedial action plan is being developed for part of the site and at another part a remedial design is being developed. At one of the nine sites, part of the site is subject to a remedial investigation and another part a remedial design is being developed. At one of these nine sites, a remedial investigation is being performed. At one of the nine sites, a remedial action plan is being developed for part of the site and another part is in the long-term OM&M stage. The one remaining site is in long-term OM&M. All nine sites are either associated with past manufacturing operations or former waste disposal sites. None of the nine largest sites represents more than 22% of the liabilities reserved on our consolidated balance sheet at December 31, 2017 for future environmental expenditures.

Our consolidated balance sheets included liabilities for future environmental expenditures to investigate and remediate known sites amounting to \$131.6 million at December 31, 2017, and \$137.3 million at December 31, 2016, of which \$111.6 million and \$120.3 million, respectively, were classified as other noncurrent liabilities. Our environmental liability amounts do not take into account any discounting of future expenditures or any consideration of insurance recoveries or advances in technology. These liabilities are reassessed periodically to determine if environmental circumstances have changed and/or remediation efforts and our estimate of related costs have changed. As a result of these reassessments, future charges to income may be made for additional liabilities. Of the \$131.6 million included on our consolidated balance sheet at December 31, 2017 for future environmental expenditures, we currently expect to utilize \$76.2 million of the reserve for future environmental expenditures over the next 5 years, \$14.0 million for expenditures 6 to 10 years in the future, and \$41.4 million for expenditures beyond 10 years in the future. These estimates are subject to a number of risks and uncertainties, as described in “Environmental Costs” contained in Item 1A—“Risk Factors.”

Environmental exposures are difficult to assess for numerous reasons, including the identification of new sites, developments at sites resulting from investigatory studies, advances in technology, changes in environmental laws and regulations and their application, changes in regulatory authorities, the scarcity of reliable data pertaining to identified sites, the difficulty in assessing the involvement and financial capability of other PRPs, our ability to obtain contributions from other parties and the lengthy time periods over which site remediation occurs. It is possible that some of these matters (the outcomes of which are subject to various uncertainties) may be resolved unfavorably to us, which could materially adversely affect our financial position or results of operations. At December 31, 2017, we estimate it is reasonably possible that we may have additional contingent environmental liabilities of \$60 million in addition to the amounts for which we have already recorded as a reserve.

## LEGAL MATTERS AND CONTINGENCIES

We, and our subsidiaries, are defendants in various legal actions (including proceedings based on alleged exposures to asbestos) incidental to our past and current business activities. We describe some of these matters in Item 3—“Legal Proceedings.” At December 31, 2017 and 2016, our consolidated balance sheets included liabilities for these legal actions of \$24.8 million and \$13.6 million, respectively. These liabilities do not include costs associated with legal representation and do not include \$8.0 million of insurance recoveries included in receivables, net within the accompanying consolidated balance sheet as of December 31, 2017. Based on our analysis, and considering the inherent uncertainties associated with litigation, we do not believe that it is reasonably possible that these legal actions will materially and adversely affect our financial position, cash flows or results of operations. In connection with the Acquisition, DowDuPont retained liabilities related to litigation to the extent arising prior to the Closing Date.

During the ordinary course of our business, contingencies arise resulting from an existing condition, situation or set of circumstances involving an uncertainty as to the realization of a possible gain contingency. In certain instances such as environmental projects, we are responsible for managing the clean-up and remediation of an environmental site. There exists the possibility of recovering a portion of these costs from other parties. We account for gain contingencies in accordance with the provisions of ASC 450 "Contingencies" and therefore do not record gain contingencies and recognize income until it is earned and realizable.

For the year ended December 31, 2016, we recognized an insurance recovery of \$11.0 million in other operating income for property damage and business interruption related to a 2008 chlor alkali facility incident.

For the year ended December 31, 2015, we recognized insurance recoveries of \$57.4 million for property damage and business interruption related to the Becancour, Canada and McIntosh, AL chlor alkali facilities. Cost of goods sold was

Table of Contents

reduced by \$10.5 million and selling and administration was reduced by \$0.9 million for the reimbursement of costs incurred and expensed in prior periods and other operating income included a gain of \$46.0 million.

## LIQUIDITY, INVESTMENT ACTIVITY AND OTHER FINANCIAL DATA

## Cash Flow Data

	Years ended December		
	31,		
	2017	2016	2015
	(\$ in millions)		
Provided by (used for)			
Net operating activities	\$648.8	\$603.2	\$217.1
Capital expenditures	(294.3 )	(278.0 )	(130.9 )
Business acquired and related transactions, net of cash acquired	—	(69.5 )	(408.1 )
Payments under long-term supply contracts	(209.4 )	(175.7 )	—
Proceeds from sale/leaseback of equipment	—	40.4	—
Proceeds from disposition of property, plant and equipment	5.2	0.5	26.2
Net investing activities	(498.5 )	(473.5 )	(504.0 )
Long-term debt (repayments) borrowings, net	(2.4 )	(205.3 )	544.3
Stock options exercised	29.8	0.5	2.2
Dividends paid	(133.0 )	(132.1 )	(79.5 )
Debt and equity issuance costs	(11.2 )	(1.0 )	(45.2 )
Net financing activities	(116.8 )	(337.5 )	422.2

## Operating Activities

For 2017, cash provided by operating activities increased by \$45.6 million from 2016, primarily due to an increase in our operating results. For 2017, working capital decreased \$9.8 million compared to a decrease of \$80.9 million in 2016. Receivables increased from December 31, 2016 by \$49.9 million primarily as a result of higher sales in the fourth quarter of 2017 compared to the fourth quarter of 2016, partially offset by additional receivables sold under the accounts receivable factoring arrangement. In 2017, inventories increased by \$37.8 million and accounts payable and accrued liabilities increased by \$100.0 million. The increase in inventories and accounts payable and accrued liabilities were primarily due to an increase in raw material costs, primarily benzene and propylene.

For 2016, cash provided by operating activities increased by \$386.1 million from 2015, primarily due to an increase in our operating results. Our net loss for 2016 included \$76.6 million of non-cash impairment charges for equipment and facilities and a \$304.6 million increase in depreciation and amortization as compared to 2015. For 2016, working capital decreased \$80.9 million compared to a decrease of \$25.1 million in 2015. Receivables decreased from December 31, 2015 by \$38.5 million primarily as a result of receivables sold under the accounts receivable factoring arrangements, which was partially offset by higher sales in the fourth quarter of 2016 compared with the fourth quarter of 2015.

## Capital Expenditures

Capital spending was \$294.3 million, \$278.0 million and \$130.9 million in 2017, 2016 and 2015, respectively. The increased capital spending in 2016 was primarily due to capital spending of the Acquired Business of \$187.8 million. Capital spending in 2017 and 2016 included approximately \$45 million and \$35 million, respectively, of synergy-related capital we believe was necessary to realize the anticipated synergies. Capital spending was 63%, 64% and 66% of depreciation in 2017, 2016 and 2015, respectively.

During 2017, we began a multi-year implementation of the Information Technology Project. The project is planned to standardize business processes across the chemicals businesses with the objective of maximizing cost effectiveness, efficiency and control across our global operations. The project is anticipated to be completed during 2020. Total capital spending is forecast to be \$250 million and associated expenses are forecast to be \$100 million. Our results for 2017 include \$35.8 million of capital spending and \$5.3 million of expenses associated with this project.

In 2018, we expect our capital spending to be in the \$375 million to \$425 million range, which includes approximately \$100 million of capital spending related to the Information Technology Project.

## Table of Contents

### Investing Activities

In 2017, a payment of \$209.4 million was made associated with long-term supply contracts to reserve additional ethylene at producer economics. In 2016, payments of \$175.7 million were made related to arrangements for the long-term supply of low cost electricity.

In 2017, proceeds from disposition of property, plant and equipment of \$5.2 million was primarily due from the sale of a former manufacturing facility. In 2015, proceeds from disposition of property, plant and equipment included \$25.8 million of insurance recoveries for property damage related to the portion of the Becancour, Canada chlor alkali facility that has been shut down since late June 2014 and our McIntosh, AL chlor alkali facility.

In 2016, payments of \$69.5 million were made related to the Acquisition for certain acquisition-related liabilities including the final working capital adjustment. In 2015, as part of the Acquisition, we paid cash of \$408.1 million, net of \$25.4 million of cash acquired.

In 2016, we entered into sale/leaseback transactions for railcars that we acquired in connection with the Acquisition. We received proceeds from the sales of \$40.4 million.

In both 2016 and 2015, we received \$8.8 million from the October 2013 sale of a bleach joint venture.

### Financing Activities

For the year ended December 31, 2017, our long-term debt repayments, net were \$2.4 million, which included \$51.6 million under the required quarterly installments of the \$1,375.0 million Term Loan Facility and the remaining \$12.2 million due under the SunBelt Notes.

On March 9, 2017, we entered into a new five-year, \$1,975.0 million Senior Credit Facility consisting of a \$600.0 million Senior Revolving Credit Facility, which replaced our previous \$500.0 million senior revolving credit facility, and a \$1,375.0 million Term Loan Facility. The proceeds of the \$1,375.0 million Term Loan Facility were used to redeem the remaining balance of the existing \$1,350.0 million term loan facility and a portion of the Sumitomo Credit Facility. The Senior Credit Facility will mature in March 2022.

On March 9, 2017, Olin issued \$500.0 million aggregate principal amount of 5.125% senior notes due September 15, 2027, which were registered under the Securities Act of 1933, as amended. Interest on the 2027 Notes began accruing from March 9, 2017 and is paid semi-annually beginning on September 15, 2017. Proceeds from the 2027 Notes were used to redeem the remaining balance of the Sumitomo Credit Facility.

On December 20, 2016, we entered into a three year, \$250.0 million Receivables Financing Agreement with PNC Bank, National Association, as administrative agent (Receivables Financing Agreement). Under the Receivables Financing Agreement, our eligible trade receivables are used for collateralized borrowings and continue to be serviced by us. As of December 31, 2017 and 2016, \$340.9 million and \$282.3 million, respectively, of our trade receivables were pledged as collateral and we had \$249.7 million and \$210.0 million, respectively, drawn under the agreement. For the year ended December 31, 2016, the proceeds of the Receivables Financing Agreement were used to repay \$210.0 million of the Sumitomo Credit Facility.

On the Closing Date, Blue Cube Spinco Inc. (Spinco) issued \$720.0 million aggregate principal amount of 9.75% senior notes due October 15, 2023 (2023 Notes) and \$500.0 million aggregate principal amount of 10.00% senior notes due October 15, 2025 (2025 Notes and, together with the 2023 Notes, the Notes) to DowDuPont. DowDuPont

transferred the Notes to certain unaffiliated securityholders in satisfaction of existing debt obligations of DowDuPont held or acquired by those unaffiliated securityholders. On October 5, 2015, certain initial purchasers purchased the Notes from the unaffiliated securityholders. During 2016, the Notes were registered under the Securities Act of 1933, as amended. Interest on the Notes began accruing from October 1, 2015 and is paid semi-annually beginning on April 15, 2016. The Notes are not redeemable at any time prior to October 15, 2020. Neither Olin nor Spinco received any proceeds from the sale of the Notes. Upon the consummation of the Acquisition, Olin became guarantor of the Notes.

On June 23, 2015, Spinco entered into a five-year delayed-draw term loan facility of up to \$1,050.0 million. As of the Closing Date, Spinco drew \$875.0 million to finance the cash portion of the distributions of cash and debt instruments of Spinco with an aggregate value of \$2,095.0 million (Cash and Debt Distribution). Also on June 23, 2015, Olin and Spinco

Table of Contents

entered into a five-year \$1,850.0 million senior credit facility consisting of a \$500.0 million senior revolving credit facility, which replaced Olin's \$265.0 million senior revolving credit facility on the Closing Date, and a \$1,350.0 million delayed-draw term loan facility. As of the Closing Date, we drew an additional \$475.0 million under this term loan facility which was used to pay fees and expenses of the Acquisition, obtain additional funds for general corporate purposes and refinance Olin's existing senior term loan facility due in 2019 of \$146.3 million. Subsequent to the Closing Date, these senior credit facilities were consolidated into a single \$1,850.0 million senior credit facility. For the year ended December 31, 2016, we repaid \$67.5 million under the required quarterly installments of the \$1,350.0 million term loan facility. The \$1,850.0 million senior credit facility was refinanced in its entirety by the Senior Credit Facility during 2017. We recognized interest expense of \$1.2 million for the write-off of unamortized deferred debt issuance costs related to this action during 2017.

On August 25, 2015, Olin entered into a Credit Agreement (the Credit Agreement) with a syndicate of lenders and Sumitomo Mitsui Banking Corporation, as administrative agent, in connection with the Acquisition. The Credit Agreement provided for a term credit facility under which Olin obtained term loans in an aggregate amount of \$600.0 million. On November 3, 2015, we entered into an amendment to the Sumitomo Credit Facility which increased the aggregate amount of term loans available by \$200.0 million. On the Closing Date, \$600.0 million of loans under the Credit Agreement were made available and borrowed upon and on November 5, 2015, \$200.0 million of loans under the Credit Agreement were made available and borrowed upon. The term loans under the Sumitomo Credit Facility were set to mature on October 5, 2018 and had no scheduled amortization payments. The proceeds of the Sumitomo Credit Facility were used to refinance existing Spinco indebtedness at the Closing Date of \$569.0 million, to pay fees and expenses in connection with the Acquisition and for general corporate purposes. During 2016, \$210.0 million was repaid under the Sumitomo Credit Facility using proceeds from the Receivables Financing Agreement. During 2017, the remaining balance of \$590.0 million was repaid using proceeds from the Senior Credit Facility and the 2027 Notes. We recognized interest expense of \$1.5 million related to the write-off of unamortized deferred debt issuance costs related to this action in 2017.

In December 2017, 2016 and 2015, we repaid \$12.2 million due under the annual requirements of the SunBelt Notes. At December 31, 2017, all amounts due under the SunBelt Notes have been repaid.

In June 2016, we also repaid \$125.0 million of 6.75% senior notes (2016 Notes), which became due.

On June 24, 2014, we entered into a five-year \$415.0 million senior credit facility consisting of a \$265.0 million senior revolving credit facility, which replaced our previous \$265.0 million senior revolving credit facility, and a \$150.0 million delayed-draw term loan facility. In August 2014, we drew the entire \$150.0 million of the term loan and used the proceeds to redeem our \$150.0 million 2019 Notes, which would have matured on August 15, 2019. In 2015, we repaid \$2.8 million under the required quarterly installments of the \$150.0 million term loan facility and, on the Closing Date of the Acquisition, the remaining \$146.3 million term loan facility was refinanced using the proceeds of the \$1,850.0 million senior credit facility. We recognized interest expense of \$0.5 million for the write-off of unamortized deferred debt issuance costs related to this action in conjunction with the Acquisition in 2015.

In 2017, 2016 and 2015, we issued 1.7 million, 0.3 million and 0.1 million shares, respectively, with a total value of \$32.4 million, \$4.1 million and \$3.1 million, respectively, representing stock options exercised.

In 2017, we paid debt issuance costs of \$11.2 million relating to the Senior Credit Facility and the 2027 Notes. In 2016, we paid debt issuance costs of \$1.0 million for the registration of the Notes. In 2015, we paid debt issuance costs of \$13.3 million relating to the Notes, the Sumitomo Credit Facility and the \$1,850.0 million senior credit facility and we paid \$1.9 million of equity issuance costs for the issuance of approximately 87.5 million shares.

On March 26, 2015, we and certain financial institutions executed commitment letters pursuant to which the financial institutions agreed to provide \$3,354.5 million of financing to Spinco to finance the amount of the Cash and Debt Distribution and to provide financing, if needed, to Olin to refinance certain of our existing debt (the Bridge Financing), in each case on the terms and conditions set forth in the commitment letters. The Bridge Financing was not drawn on to facilitate the Acquisition, and the commitments for the Bridge Financing were terminated as of the Closing Date. For the year ended December 31, 2015, we paid debt issuance costs of \$30.0 million associated with the Bridge Financing, which are included in interest expense.

The percent of total debt to total capitalization decreased to 56.7% at December 31, 2017 compared to 61.4% at December 31, 2016, resulting from higher shareholders' equity primarily due to our operating results partially offset by the payment of dividends. The percent of total debt to total capitalization of 61.4% was consistent at December 31, 2016 and 2015 as a result of a lower level of long-term debt at December 31, 2016 resulting from the repayments of maturing debt, offset by lower shareholders' equity primarily due to the payment of dividends.



## Table of Contents

Dividends per common share were \$0.80 in 2017, 2016 and 2015. Total dividends paid on common stock amounted to \$133.0 million, \$132.1 million and \$79.5 million in 2017, 2016 and 2015, respectively. On January 26, 2018, our board of directors declared a dividend of \$0.20 per share on our common stock, payable on March 9, 2018 to shareholders of record on February 9, 2018.

The payment of cash dividends is subject to the discretion of our board of directors and will be determined in light of then-current conditions, including our earnings, our operations, our financial condition, our capital requirements and other factors deemed relevant by our board of directors. In the future, our board of directors may change our dividend policy, including the frequency or amount of any dividend, in light of then-existing conditions.

## LIQUIDITY AND OTHER FINANCING ARRANGEMENTS

Our principal sources of liquidity are from cash and cash equivalents, cash flow from operations and short-term borrowings under our Senior Revolving Credit Facility, accounts receivable factoring arrangement and Receivables Financing Agreement. Additionally, we believe that we have access to the debt and equity markets.

On January 19, 2018, Olin issued \$550.0 million aggregate principal amount of 5.00% senior notes due February 1, 2030, which were registered under the Securities Act of 1933, as amended. Interest on the 2030 Notes began accruing from January 19, 2018 and is paid semi-annually beginning on August 1, 2018. Proceeds from the 2030 Notes were used to redeem \$550.0 million of debt under the \$1,375.0 million Term Loan Facility. This prepayment of the Term Loan Facility eliminates the required quarterly installments under the Term Loan Facility.

The overall cash increase of \$33.9 million in 2017 primarily reflects our operating results, partially offset by our capital spending and payments associated with long-term supply contracts. We believe, based on current and projected levels of cash flow from our operations, together with our cash and cash equivalents on hand and the availability to borrow under our Senior Revolving Credit Facility, we have sufficient liquidity to meet our short-term and long-term needs to make required payments of interest on our debt, fund our operating needs, fund working capital and capital expenditure requirements and comply with the financial ratios in our debt agreements.

On March 9, 2017, we entered into a new five-year, \$1,975.0 million Senior Credit Facility consisting of a \$600.0 million Senior Revolving Credit Facility, which replaced our previous \$500.0 million senior revolving credit facility, and a \$1,375.0 million Term Loan Facility. The proceeds of the Term Loan Facility were used to redeem the remaining balance of the existing \$1,350.0 million term loan facility and a portion of the Sumitomo Credit Facility. The Senior Credit Facility will mature in March 2022. The \$600.0 million Senior Revolving Credit Facility includes a \$100.0 million letter of credit subfacility. The \$1,375.0 million Term Loan Facility includes amortization payable in equal quarterly installments at a rate of 5.0% per annum for the first two years, increasing to 7.5% per annum for the following year and to 10.0% per annum for the last two years. At December 31, 2017, we had \$574.9 million available under our \$600.0 million Senior Revolving Credit Facility because we had outstanding borrowings of \$20.0 million and issued \$5.1 million of letters of credit.

Under the Senior Credit Facility, we may select various floating rate borrowing options. The actual interest rate paid on borrowings under the Senior Credit Facility is based on a pricing grid which is dependent upon the leverage ratio as calculated under the terms of the applicable facility for the prior fiscal quarter. The facility includes various customary restrictive covenants, including restrictions related to the ratio of debt to earnings before interest expense, taxes, depreciation and amortization (leverage ratio) and the ratio of earnings before interest expense, taxes, depreciation and amortization to interest expense (coverage ratio). Compliance with these covenants is determined quarterly based on the operating cash flows. We were in compliance with all covenants and restrictions under all our outstanding credit agreements as of December 31, 2017 and 2016, and no event of default had occurred that would permit the lenders under our outstanding credit agreements to accelerate the debt if not cured. In the future, our ability

to generate sufficient operating cash flows, among other factors, will determine the amounts available to be borrowed under these facilities. As of December 31, 2017, there were no covenants or other restrictions that would have limited our ability to borrow under these facilities.

For the year ended December 31, 2017, our long-term debt repayments, net were \$2.4 million, which included \$51.6 million under the required quarterly installments of the \$1,375.0 million Term Loan Facility and the remaining \$12.2 million due under the SunBelt Notes.

On March 9, 2017, Olin issued \$500.0 million aggregate principal amount of 5.125% senior notes due September 15, 2027, which were registered under the Securities Act of 1933, as amended. Interest on the 2027 Notes began accruing from March 9, 2017 and is paid semi-annually beginning on September 15, 2017. Proceeds from the 2027 Notes were used to redeem the remaining balance of the Sumitomo Credit Facility.

Table of Contents

In connection with the Acquisition, Olin and DowDuPont entered into arrangements for the long-term supply of ethylene by DowDuPont to Olin, pursuant to which, among other things, Olin made upfront payments of \$433.5 million on the Closing Date in order to receive ethylene at producer economics and for certain reservation fees and for the option to obtain additional ethylene at producer economics. During 2016, we exercised one of the options to reserve additional ethylene at producer economics. In September 2017, DowDuPont's new Texas 9 ethylene cracker in Freeport, TX became operational. As a result, during 2017, a payment of \$209.4 million was made in connection with this option. On February 27, 2017, we exercised the remaining option to obtain additional ethylene at producer economics from DowDuPont. In connection with the exercise of this option, we also secured a long-term customer arrangement. As a result, an additional payment will be made to DowDuPont of between \$440 million and \$465 million on or about the fourth quarter of 2020.

During 2016, Olin entered into arrangements to increase our supply of low cost electricity. These arrangements improve manufacturing flexibility at our Freeport, TX and Plaquemine, LA facilities, reduce our overall electricity cost and accelerate the realization of cost synergies available from the Acquired Business. In conjunction with these arrangements, Olin made payments of \$175.7 million during 2016.

On December 20, 2016, we entered into a three year, \$250.0 million Receivables Financing Agreement with PNC Bank, National Association, as administrative agent. Under the Receivables Financing Agreement, our eligible trade receivables are used for collateralized borrowings and continue to be serviced by us. As of December 31, 2017 and 2016, \$340.9 million and \$282.3 million, respectively, of our trade receivables were pledged as collateral and we had \$249.7 million and \$210.0 million, respectively, drawn under the agreement. For the year ended December 31, 2017, we borrowed \$40.0 million under the Receivables Financing Agreement and used the proceeds to fund a portion of the payment to DowDuPont associated with a long-term ethylene supply contract to reserve additional ethylene at producer economics. For the year ended December 31, 2016, the proceeds of the Receivables Financing Agreement were used to repay \$210.0 million of the Sumitomo Credit Facility. As of December 31, 2017, we had \$0.3 million additional borrowing capacity under the Receivables Financing Agreement. In addition, the Receivables Financing Agreement incorporates the leverage and coverage covenants that are contained in the Senior Revolving Credit Facility.

On June 29, 2016, we entered into a trade accounts receivable factoring arrangement and, on December 22, 2016, we entered into a separate trade accounts receivable factoring arrangement, which were both subsequently amended (collectively the AR Facilities). Pursuant to the terms of the AR Facilities, certain of our subsidiaries may sell their accounts receivable up to a maximum of \$294.0 million. We will continue to service such accounts. These receivables qualify for sales treatment under ASC 860 "Transfers and Servicing" and, accordingly, the proceeds are included in net cash provided by operating activities in the consolidated statements of cash flows. The gross amount of receivables sold for the years ended December 31, 2017 and 2016 totaled \$1,655.2 million and \$533.6 million, respectively. The factoring discount paid under the AR Facilities is recorded as interest expense on the consolidated statements of operations. The factoring discount for the years ended December 31, 2017 and 2016 was \$3.7 million and \$1.1 million, respectively. The agreements are without recourse and therefore no recourse liability has been recorded as of December 31, 2017. As of December 31, 2017 and 2016, \$182.3 million and \$126.1 million, respectively, of receivables qualifying for sales treatment were outstanding and will continue to be serviced by us.

The aggregate purchase price of the Acquired Business was \$5,136.7 million, after the final post-closing adjustments. The \$5,136.7 million consisted of \$2,095.0 million of cash and debt transferred to DowDuPont and approximately 87.5 million shares of Olin common stock valued at \$1,527.4 million, plus the assumption of pension liabilities of \$442.3 million and long-term debt of \$569.0 million. During 2016, payments of \$69.5 million were made related to certain acquisition related liabilities including the final working capital adjustment. The value of the common stock was based on the closing stock price on the last trading day prior to the Closing Date of \$17.46.

Debt that was issued in the fourth quarter of 2015 relating to the Acquisition totaled \$3,370.0 million, consisting of \$1,350.0 million of term loans under senior credit facilities, an \$800.0 million term loan under the Sumitomo Credit Facility and \$1,220.0 million under the Notes. The debt was used for the cash and debt transferred to DowDuPont, refinancing existing Spinco indebtedness at the Closing Date of the Acquisition, refinancing our existing senior term loan facility due in 2019, paying fees and expenses in connection with the Acquisition and for general corporate purposes.

Table of Contents

On the Closing Date, Spinco issued \$720.0 million aggregate principal amount of the 2023 Notes and \$500.0 million aggregate principal amount of the 2025 Notes to DowDuPont. DowDuPont transferred the Notes to certain unaffiliated securityholders in satisfaction of existing debt obligations of DowDuPont held or acquired by those unaffiliated securityholders. On October 5, 2015, certain initial purchasers purchased the Notes from the unaffiliated securityholders. During 2016, the Notes were registered under the Securities Act of 1933, as amended. Interest on the Notes began accruing from October 1, 2015 and are paid semi-annually beginning on April 15, 2016. The Notes are not redeemable at any time prior to October 15, 2020. Neither Olin nor Spinco received any proceeds from the sale of the Notes. Upon the consummation of the Acquisition, Olin became guarantor of the Notes.

On June 23, 2015, Spinco entered into a five-year delayed-draw term loan facility of up to \$1,050.0 million. As of the Closing Date, Spinco drew \$875.0 million to finance the cash portion of the Cash and Debt Distribution. Also on June 23, 2015, Olin and Spinco entered into a five-year \$1,850.0 million senior credit facility consisting of a \$500.0 million senior revolving credit facility, which replaced Olin's \$265.0 million senior revolving credit facility at the Closing Date, and a \$1,350.0 million delayed-draw term loan facility. As of the Closing Date, an additional \$475.0 million was drawn by Olin under this term loan facility which was used to pay fees and expenses of the Acquisition, obtain additional funds for general corporate purposes and refinance Olin's existing senior term loan facility due in 2019. As of the Closing Date, total borrowings under the term loan facilities were \$1,350.0 million. Subsequent to the Closing Date, these senior credit facilities were consolidated into a single \$1,850.0 million senior credit facility. For the year ended December 31, 2016, we repaid \$67.5 million under the required quarterly installments of the \$1,350.0 million term loan facility. This \$1,850.0 million senior credit facility was refinanced in its entirety by the Senior Credit Facility during 2017.

On August 25, 2015, Olin entered into a Credit Agreement with a syndicate of lenders and Sumitomo Mitsui Banking Corporation, as administrative agent, in connection with the Acquisition. Olin obtained term loans in an aggregate amount of \$600.0 million under the Sumitomo Credit Facility. On November 3, 2015, we entered into an amendment to the Sumitomo Credit Facility which increased the aggregate amount of term loans available by \$200.0 million. On the Closing Date, \$600.0 million of loans under the Credit Agreement were made available and borrowed upon and on November 5, 2015, \$200.0 million of loans under the Credit Agreement were made available and borrowed upon. The term loans under the Sumitomo Credit Facility were set to mature on October 5, 2018 and had no scheduled amortization payments. The proceeds of the Sumitomo Credit Facility were used to refinance existing Spinco indebtedness at the Closing Date, to pay fees and expenses in connection with the Acquisition and for general corporate purposes. The Credit Agreement contained customary representations, warranties and affirmative and negative covenants which are substantially similar to those included in the \$1,850.0 million senior credit facility. During 2016, \$210.0 million was repaid under the Sumitomo Credit Facility using proceeds from the Receivables Financing Agreement. During 2017, the remaining balance of \$590.0 million was repaid using proceeds from the Senior Credit Facility and the 2027 Notes.

Cash flow from operations is variable as a result of both the seasonal and the cyclical nature of our operating results, which have been affected by seasonal and economic cycles in many of the industries we serve, such as the vinyls, urethanes, bleach, ammunition and pulp and paper. Cash flow from operations is affected by changes in chlorine, caustic soda and EDC selling prices caused by the changes in the supply/demand balance of these products, resulting in the Chlor Alkali Products and Vinyls segment having significant leverage on our earnings and cash flow. For example, assuming all other costs remain constant, internal consumption remains approximately the same and we are operating at full capacity, a \$10 selling price change per ton of chlorine equates to an approximate \$10 million annual change in our revenues and pretax profit, a \$10 selling price change per ton of caustic soda equates to an approximate \$30 million annual change in our revenues and pretax profit, and a \$0.01 selling price change per pound of EDC equates to an approximate \$20 million annual change in our revenues and pretax profit.

For 2017, cash provided by operating activities increased by \$45.6 million from 2016, primarily due to an increase in our operating results. For 2017, working capital decreased \$9.8 million compared to a decrease of \$80.9 million in 2016. Receivables increased from December 31, 2016 by \$49.9 million primarily as a result of higher sales in the fourth quarter of 2017 compared to the fourth quarter of 2016, partially offset by additional receivables sold under the accounts receivable factoring arrangement. In 2017, inventories increased by \$37.8 million and accounts payable and accrued liabilities increased by \$100.0 million. The increase in inventories and accounts payable and accrued liabilities were primarily due to an increase in raw material costs, primarily benzene and propylene.

Capital spending was \$294.3 million, \$278.0 million and \$130.9 million in 2017, 2016 and 2015, respectively. Capital spending in 2017 and 2016 included approximately \$45 million and \$35 million, respectively, of synergy-related capital we believe was necessary to realize the anticipated synergies. Capital spending was 63%, 64% and 66% of depreciation in 2017, 2016 and 2015, respectively.

Table of Contents

During 2017, we began a multi-year implementation of the Information Technology Project. The project is planned to standardize business processes across the chemicals businesses with the objective of maximizing cost effectiveness, efficiency and control across our global operations. The project is anticipated to be completed during 2020. Total capital spending is forecast to be \$250 million and associated expenses are forecast to be \$100 million. Our results for the total year 2017 include \$35.8 million of capital spending and \$5.3 million of expenses associated with this project.

In 2018, we expect our capital spending to be in the \$375 million to \$425 million range, which includes approximately \$100 million of capital spending related to the Information Technology Project.

On April 24, 2014, our board of directors authorized a share repurchase program for up to 8 million shares of common stock that terminated on April 24, 2017. For the year ended December 31, 2017 and 2016, no shares were purchased and retired. We repurchased a total of 1.9 million shares under the April 2014 program, and the 6.1 million shares that remained authorized to be purchased have expired. Related to the Acquisition, for a period of two years subsequent to the Closing Date, we were subject to certain restrictions on our ability to conduct share repurchases.

On June 24, 2014, we entered into a five-year \$415.0 million senior credit facility consisting of a \$265.0 million senior revolving credit facility, which replaced our previous \$265.0 million senior revolving credit facility, and a \$150.0 million delayed-draw term loan facility. In August 2014, we drew the entire \$150.0 million of the term loan and used the proceeds to redeem our 2019 Notes. In 2015, we repaid \$2.8 million under the required quarterly installments of the \$150.0 million term loan facility and, on the Closing Date of the Acquisition, the remaining \$146.3 million was refinanced using the proceeds of the \$1,850.0 million senior credit facility. We recognized interest expense of \$0.5 million for the write-off of unamortized deferred debt issuance costs related to this action in conjunction with the Acquisition in 2015.

Pursuant to a note purchase agreement dated December 22, 1997, SunBelt sold \$97.5 million of Guaranteed Senior Secured Notes due 2017, Series O, and \$97.5 million of Guaranteed Senior Secured Notes due 2017, Series G. We refer to these notes as the SunBelt Notes. The SunBelt Notes bear interest at a rate of 7.23% per annum, payable semi-annually in arrears on each June 22 and December 22. Beginning on December 22, 2002 and each year through 2017, SunBelt was required to repay \$12.2 million of the SunBelt Notes, of which \$6.1 million is attributable to the Series O Notes and of which \$6.1 million is attributable to the Series G Notes. In December 2017, 2016 and 2015, \$12.2 million was repaid on these SunBelt Notes. At December 31, 2017, all amounts due under the SunBelt Notes have been repaid.

In June 2016, we repaid \$125.0 million of the 2016 Notes, which became due.

At December 31, 2017, we had total letters of credit of \$72.8 million outstanding, of which \$5.1 million were issued under our Senior Revolving Credit Facility. The letters of credit were used to support certain long-term debt, certain workers compensation insurance policies, certain plant closure and post-closure obligations and certain international pension funding requirements.

Our current debt structure is used to fund our business operations. As of December 31, 2017, we had long-term borrowings, including the current installment and capital lease obligations, of \$3,612.0 million, of which \$1,749.0 million was at variable rates. Annual maturities of long-term debt, including capital lease obligations, are \$0.7 million in 2018, \$0.7 million in 2019, \$251.3 million in 2020, \$0.3 million in 2021, \$993.7 million in 2022 and a total of \$2,426.0 million thereafter. The long-term debt obligations reflects the issuance of the \$550.0 million 2030 Notes and related prepayment of the \$1,375.0 million Term Loan Facility in January 2018. Commitments from banks under our Senior Revolving Credit Facility and AR Facilities are an additional source of liquidity. Included within the \$3,612.0 million of long-term borrowings on the consolidated balance sheet as of December 31, 2017 were deferred debt

issuance costs and deferred losses on fair value interest rate swaps of \$60.7 million.

In April 2016, we entered into three tranches of forward starting interest rate swaps whereby we agreed to pay fixed rates to the counterparties who, in turn, pay us floating rates on \$1,100.0 million, \$900.0 million, and \$400.0 million of our underlying floating-rate debt obligations. Each tranche's term length is for twelve months beginning on December 31, 2016, December 31, 2017, and December 31, 2018, respectively. The counterparties to the agreements are SMBC Capital Markets, Inc., Wells Fargo Bank, N.A. (Wells Fargo), PNC Bank, National Association and Toronto-Dominion Bank. These counterparties are large financial institutions; however, the risk of loss to us in the event of nonperformance by a counterparty could be significant to our financial position or results of operations. We have designated the swaps as cash flow hedges of the risk of changes in interest payments associated with our variable-rate borrowings. Accordingly, the swap agreements have been recorded at their fair market value of \$10.5 million and are included in other current assets and other assets on the accompanying consolidated balance sheet, with the corresponding gain deferred as a component of other comprehensive loss.



Table of Contents

For the year ended December 31, 2017, \$3.1 million of income was recorded to interest expense on the accompanying consolidated statement of operations related to these swap agreements.

In April 2016, we entered into interest rate swaps on \$250.0 million of our underlying fixed-rate debt obligations, whereby we agreed to pay variable rates to the counterparties who, in turn, pay us fixed rates. The counterparties to these agreements are Toronto-Dominion Bank and SMBC Capital Markets, Inc., both of which are major financial institutions.

In October 2016, we entered into interest rate swaps on an additional \$250.0 million of our underlying fixed-rate debt obligations, whereby we agreed to pay variable rates to the counterparties who, in turn, pay us fixed rates. The counterparties to these agreements are PNC Bank, National Association and Wells Fargo, both of which are major financial institutions.

We have designated the April 2016 and October 2016 interest rate swap agreements as fair value hedges of the risk of changes in the value of fixed rate debt due to changes in interest rates for a portion of our fixed rate borrowings. Accordingly, the swap agreements have been recorded at their fair market value of \$28.1 million and are included in other long-term liabilities on the accompanying consolidated balance sheet, with a corresponding decrease in the carrying amount of the related debt. For the years ended December 31, 2017 and 2016, \$2.9 million and \$2.6 million, respectively, of income has been recorded to interest expense on the accompanying consolidated statement of operations related to these swap agreements.

We have registered an undetermined amount of securities with the SEC, so that, from time-to-time, we may issue debt securities, preferred stock and/or common stock and associated warrants in the public market under that registration statement.

Table of Contents

## OFF-BALANCE SHEET ARRANGEMENTS

Our operating lease commitments are primarily for railroad cars but also include distribution, warehousing and office space and data processing and office equipment. Virtually none of our lease agreements contain escalation clauses or step rent provisions.

Our long-term contractual commitments, including the on and off-balance sheet arrangements, consisted of the following:

Contractual Obligations	Payments Due by Period				
	Total	Less than 1 Year	1-3 Years	3-5 Years	More than 5 Years
	(\$ in millions)				
Debt obligations, including capital lease obligations <sup>(a)</sup>	\$3,672.7	\$0.7	\$252.0	\$994.0	\$2,426.0
Interest payments under debt obligations and interest rate swap agreements <sup>(b)</sup>	1,597.0	213.1	436.6	404.9	542.4
Contingent tax liability	37.5	5.7	9.3	5.1	17.4
Domestic qualified pension plan contributions <sup>(c)</sup>	—	—	—	—	—
International qualified pension plan contributions <sup>(d)</sup>	226.9	5.0	10.6	13.4	197.9
Non-qualified pension plan payments	5.8	0.5	1.2	0.9	3.2
Postretirement benefit payments	50.8	4.3	7.6	6.2	32.7
Long-term supply contracts	441.0	—	441.0	—	—
Off-Balance Sheet Commitments:					
Non-cancelable operating leases	355.1	87.9	118.9	60.8	87.5
Purchasing commitments:					
Raw materials	7,744.0	688.1	1,275.7	1,416.0	4,364.2
Capital expenditures	4.1	4.1	—	—	—
Utilities	1.6	0.5	0.8	0.3	—
Total	\$14,136.5	\$1,009.9	\$2,553.7	\$2,901.6	\$7,671.3

Excludes debt issuance costs and deferred losses on fair value interest rate swaps of \$60.7 million at December 31, (a)2017. The debt obligations reflects the issuance of the \$550.0 million 2030 Notes and related prepayment of the \$1,375.0 million term loan facility in January 2018.

For the purposes of this table, we have assumed for all periods presented that there are no changes in the rates from (b)those in effect at December 31, 2017 which ranged from 1.27% to 10.00% and excludes \$47.9 million of accretion expense related to the 2020 ethylene payment discount.

Given the inherent uncertainty as to actual minimum funding requirements for qualified defined benefit pension plans, no amounts are included in this table for any period beyond one year. Based on the current funding (c)requirements, we will not be required to make any cash contributions to the domestic qualified defined benefit pension plan at least through 2018. During 2016, we made a discretionary cash contribution to our domestic qualified defined benefit pension plan of \$6.0 million.

(d)These amounts are only estimated payments assuming for our foreign qualified pension plans a weighted average annual expected rate of return on pension plan assets of 5.6% and a discount rate on pension plan obligations of 2.2%. These estimated payments are subject to significant variation and the actual payments may be more than the amounts estimated. In connection with international qualified defined benefit pension plans we made cash

contributions of \$1.7 million and \$1.3 million in 2017 and 2016, respectively, and we anticipate less than \$5 million of cash contributions to international qualified defined benefit pension plans in 2018.

## Table of Contents

Non-cancelable operating leases and purchasing commitments are utilized in our normal course of business for our projected needs. We have supply contracts with various third parties for certain raw materials, including ethylene, electricity, propylene and benzene. These contracts have initial terms ranging from several to 20 years. For losses that we believe are probable and which are estimable, we have accrued for such amounts in our consolidated balance sheets. In addition to the table above, we have various commitments and contingencies including: defined benefit and postretirement healthcare plans (as described below), environmental matters (see discussion above under “Environmental Matters”) and litigation claims (see Item 3—“Legal Proceedings”).

We have several defined benefit and defined contribution pension plans, as described in the “Pension Plans” note in the notes to consolidated financial statements contained in Item 8. We fund the defined benefit pension plans based on the minimum amounts required by law plus such amounts we deem appropriate. We have postretirement healthcare plans that provide health and life insurance benefits to certain retired employees and their beneficiaries, as described in the “Postretirement Benefits” note in the notes to consolidated financial statements contained in Item 8. These other postretirement plans are not pre-funded and expenses are paid by us as incurred.

We also have standby letters of credit of \$72.8 million of which \$5.1 million have been issued through our Senior Revolving Credit Facility. At December 31, 2017, we had \$574.9 million available under our Senior Revolving Credit Facility because we had outstanding borrowings of \$20.0 million and issued \$5.1 million of letters of credit.

## CRITICAL ACCOUNTING POLICIES AND ESTIMATES

Our discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, sales and expenses, and related disclosure of contingent assets and liabilities. Significant estimates in our consolidated financial statements include goodwill recoverability, environmental, restructuring and other unusual items, litigation, income tax reserves including deferred tax asset valuation allowances, pension, postretirement and other benefits and allowance for doubtful accounts. We base our estimates on prior experience, current facts and circumstances and other assumptions. Actual results may differ from these estimates.

We believe the following critical accounting policies affect the more significant judgments and estimates used in the preparation of the consolidated financial statements.

### Goodwill

Goodwill is not amortized, but is reviewed for impairment annually in the fourth quarter and/or when circumstances or other events indicate that impairment may have occurred. ASC 350 “Intangibles—Goodwill and Other” (ASC 350) permits entities to make a qualitative assessment of whether it is more likely than not that a reporting unit’s fair value is less than its carrying amount before applying the two-step goodwill impairment test. Circumstances that are considered as part of the qualitative assessment and could trigger the two-step impairment test include, but are not limited to: a significant adverse change in the business climate; a significant adverse legal judgment; adverse cash flow trends; an adverse action or assessment by a government agency; unanticipated competition; decline in our stock price; and a significant restructuring charge within a reporting unit. We define reporting units at the business segment level or one level below the business segment level. For purposes of testing goodwill for impairment, goodwill has been allocated to our reporting units to the extent it relates to each reporting unit. Based upon our qualitative assessment, it is more likely than not that the fair value of our reporting units are greater than their carrying amounts as of December 31, 2017. No impairment charges were recorded for 2017, 2016 or 2015.

It is our practice, at a minimum, to perform a quantitative goodwill impairment test in the fourth quarter every three years. In the fourth quarter of 2016, we performed our triennial quantitative goodwill impairment test for our reporting units. We use a discounted cash flow approach to develop the estimated fair value of a reporting unit when a quantitative review is performed. Management judgment is required in developing the assumptions for the discounted cash flow model. We also corroborate our discounted cash flow analysis by evaluating a market-based approach that considers earnings before interest, taxes, depreciation and amortization (EBITDA) multiples from a representative sample of comparable public companies. As a further indicator that each reporting unit has been valued appropriately using a discounted cash flow model, the aggregate fair value of all reporting units is reconciled to the total market value of Olin. An impairment would be recorded if the carrying amount of a reporting unit exceeded the estimated fair value. Based on the aforementioned analysis, the estimated fair value of our reporting units substantially exceeded the carrying value of the reporting units.

## Table of Contents

The discount rate, profitability assumptions and terminal growth rate of our reporting units and the cyclical nature of the chlor alkali industry were the material assumptions utilized in the discounted cash flow model used to estimate the fair value of each reporting unit. The discount rate reflects a weighted-average cost of capital, which is calculated based on observable market data. Some of this data (such as the risk free or treasury rate and the pretax cost of debt) are based on the market data at a point in time. Other data (such as the equity risk premium) are based upon market data over time for a peer group of companies in the chemical manufacturing or distribution industries with a market capitalization premium added, as applicable.

The discounted cash flow analysis requires estimates, assumptions and judgments about future events. Our analysis uses our internally generated long-range plan. Our discounted cash flow analysis uses the assumptions in our long-range plan about terminal growth rates, forecasted capital expenditures and changes in future working capital requirements to determine the implied fair value of each reporting unit. The long-range plan reflects management judgment, supplemented by independent chemical industry analyses which provide multi-year chlor alkali industry operating and pricing forecasts.

We believe the assumptions used in our goodwill impairment analysis are appropriate and result in reasonable estimates of the implied fair value of each reporting unit. However, given the economic environment and the uncertainties regarding the impact on our business, there can be no assurance that our estimates and assumptions, made for purposes of our goodwill impairment testing, will prove to be an accurate prediction of the future. If our assumptions regarding future performance are not achieved, we may be required to record goodwill impairment charges in future periods. It is not possible at this time to determine if any such future impairment charge would result or, if it does, whether such charge would be material.

## Environmental

Accruals (charges to income) for environmental matters are recorded when it is probable that a liability has been incurred and the amount of the liability can be reasonably estimated, based upon current law and existing technologies. These amounts, which are not discounted and are exclusive of claims against third parties, are adjusted periodically as assessments and remediation efforts progress or additional technical or legal information becomes available. Environmental costs are capitalized if the costs increase the value of the property and/or mitigate or prevent contamination from future operations. Environmental costs and recoveries are included in costs of goods sold.

Environmental exposures are difficult to assess for numerous reasons, including the identification of new sites, developments at sites resulting from investigatory studies, advances in technology, changes in environmental laws and regulations and their application, changes in regulatory authorities, the scarcity of reliable data pertaining to identified sites, the difficulty in assessing the involvement and financial capability of other PRPs and our ability to obtain contributions from other parties and the lengthy time periods over which site remediation occurs. It is possible that some of these matters (the outcomes of which are subject to various uncertainties) may be resolved unfavorably to us, which could materially adversely affect our financial position, cash flows or results of operations.

## Pension and Postretirement Plans

We account for our defined benefit pension plans and non-pension postretirement benefit plans using actuarial models required by ASC 715. These models use an attribution approach that generally spreads the financial impact of changes to the plan and actuarial assumptions over the average remaining service lives of the employees in the plan. Changes in liability due to changes in actuarial assumptions such as discount rate, rate of compensation increases and mortality, as well as annual deviations between what was assumed and what was experienced by the plan are treated as actuarial gains or losses. The principle underlying the required attribution approach is that employees render service over their average remaining service lives on a relatively smooth basis and, therefore, the

accounting for benefits earned under the pension or non-pension postretirement benefits plans should follow the same relatively smooth pattern. Substantially all domestic defined benefit pension plan participants are no longer accruing benefits; therefore, actuarial gains and losses are amortized based upon the remaining life expectancy of the inactive plan participants. For both the years ended December 31, 2017 and 2016, the average remaining life expectancy of the inactive participants in the domestic defined benefit pension plan was 19 years.

One of the key assumptions for the net periodic pension calculation is the expected long-term rate of return on plan assets, used to determine the “market-related value of assets.” The “market-related value of assets” recognizes differences between the plan’s actual return and expected return over a five year period. The required use of an expected long-term rate of return on the market-related value of plan assets may result in recognized pension income that is greater or less than the actual returns of those plan assets in any given year. Over time, however, the expected long-term returns are designed to approximate the actual long-term returns and, therefore, result in a pattern of income and expense recognition that more closely matches the pattern of the services provided by the employees. As differences between actual and expected returns are recognized over five

## Table of Contents

years, they subsequently generate gains and losses that are subject to amortization over the average remaining life expectancy of the inactive plan participants, as described in the preceding paragraph.

We use long-term historical actual return information, the mix of investments that comprise plan assets, and future estimates of long-term investment returns and inflation by reference to external sources to develop the expected long-term rate of return on plan assets as of December 31.

The discount rate assumptions used for pension and non-pension postretirement benefit plan accounting reflect the rates available on high-quality fixed-income debt instruments on December 31 of each year. The rate of compensation increase is based upon our long-term plans for such increases. For retiree medical plan accounting, we review external data and our own historical trends for healthcare costs to determine the healthcare cost trend rates.

Effective as of the Closing Date, we changed the approach used to measure service and interest costs for our defined benefit pension plans and on December 31, 2015 changed this approach for our other postretirement benefits. Prior to the Closing Date, we measured service and interest costs utilizing a single weighted-average discount rate derived from the yield curve used to measure the plan obligations. Subsequent to the Closing Date for our defined benefit pension plans and beginning in 2016 for our other postretirement benefits, we elected to measure service and interest costs by applying the specific spot rates along the yield curve to the plans' estimated cash flows. We believe the new approach provides a more precise measurement of service and interest costs by aligning the timing of the plans' liability cash flows to the corresponding spot rates on the yield curve. This change does not affect the measurement of our plan obligations. We have accounted for this change as a change in accounting estimate and, accordingly, have accounted for it on a prospective basis.

Changes in pension costs may occur in the future due to changes in these assumptions resulting from economic events. For example, holding all other assumptions constant, a 100-basis point decrease or increase in the assumed long-term rate of return on plan assets for our domestic qualified defined benefit pension plan would have decreased or increased, respectively, the 2017 defined benefit pension plan income by approximately \$19.8 million. Holding all other assumptions constant for our domestic qualified defined benefit pension plan, a 50-basis point decrease in the discount rate used to calculate pension income for 2017 and the projected benefit obligation as of December 31, 2017 would have decreased pension income by \$0.4 million and increased the projected benefit obligation by \$162.0 million. A 50-basis point increase in the discount rate used to calculate pension income for 2017 and the projected benefit obligation as of December 31, 2017 for our domestic qualified defined benefit pension plan would have increased pension income by \$0.6 million and decreased the projected benefit obligation by \$146.0 million. For additional information on long-term rates of return, discount rates and projected healthcare costs projections, see "Pension Plans" and "Postretirement Benefits" in the notes to the consolidated financial statements contained in Item 8.

## NEW ACCOUNTING PRONOUNCEMENTS

In February 2018, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2018-02, "Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income" which amends ASC 220 "Income Statement—Reporting Comprehensive Income." This update allows a reclassification from accumulated other comprehensive income (AOCI) to retained earnings for the stranded tax effects resulting from the 2017 Tax Act during each fiscal year or quarter in which the effect of the lower tax rate is recorded. The update is effective for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years, with earlier application permitted. We are currently evaluating the effect of this update on our consolidated financial statements; however, we expect the provisional deferred gain to be reclassified from AOCI to retained earnings to be approximately \$85 million upon adoption.



SEC Staff Accounting Bulletin No. 118, “Income Tax Accounting Implications of the Tax Cuts and Jobs Act” (SAB 118), has provided guidance for companies that have not completed their accounting for the income tax effects of the 2017 Tax Act in the period of enactment, allowing for a measurement period of up to one year after the enactment date to finalize the recording of the related tax impacts. We recognized a provisional deferred tax benefit of \$437.9 million, which is included as a component of income tax (benefit) provision. At December 31, 2017, we have not completed our accounting for the tax effects of enactment of the 2017 Tax Act as the income tax benefit may require further adjustments in 2018 due to anticipated additional guidance from the U.S. Department of the Treasury, changes in Olin’s assumptions, completion of 2017 tax returns, and further information and interpretations that become available; however, we have made a reasonable estimate of the effects on our existing deferred tax balances and of the one-time transition tax. Additional revisions to our estimates through the measurement period may have a material impact on our consolidated financial statements.

In August 2017, the FASB issued ASU 2017-12, “Targeted Improvements to Accounting for Hedge Activities” which amends ASC 815 “Derivatives and Hedging” (ASC 815). This update is intended to more closely align hedge accounting with

## Table of Contents

companies' risk management strategies, simplify the application of hedge accounting guidance, and increase transparency as to the scope and results of hedge programs. The update is effective for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years, with earlier application permitted. We are currently evaluating the effect of this update on our consolidated financial statements.

In March 2017, the FASB issued ASU 2017-07, "Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost" which amends ASC 715. This update requires the presentation of the service cost component of net periodic benefit income (costs) in the same income statement line item as other employee compensation costs arising from services rendered during the period. The update requires the presentation of the other components of the net periodic benefit income (costs) separately from the line item that includes the service cost and outside of any subtotal of operating income. The update is effective for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. The guidance in this update is applied on a retrospective basis with earlier application permitted. The adoption of ASU 2017-07 will result in a change in our net periodic benefit income (costs) within operating income, which will be offset by a corresponding change in non-operating income (expense) to reflect the impact of presenting the interest cost, expected return on plan assets and amortization of prior service cost and net actuarial loss components of net periodic benefit income (costs) outside of operating income. We have adopted this update on January 1, 2018 using the retrospective method reflecting the aforementioned reclassification on our consolidated statements of operations in the period of adoption. The adoption of this update did not have a material impact on our consolidated balance sheets or our consolidated statements of cash flows.

In January 2017, the FASB issued ASU 2017-04, "Simplifying the Test for Goodwill Impairment" which amends ASC 350. This update will simplify the measurement of goodwill impairment by eliminating Step 2 from the goodwill impairment test. This update will require an entity to perform its annual, or interim, goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount and recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value. The update does not modify the option to perform the qualitative assessment for a reporting unit to determine if the quantitative impairment test is necessary. This update is effective for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years. The guidance in this update is applied on a prospective basis with earlier application permitted. We plan to adopt this update on January 1, 2020 and do not expect the update to have a material impact on our consolidated financial statements.

In August 2016, the FASB issued ASU 2016-15, "Classification of Certain Cash Receipts and Cash Payments" which amends ASC 230 "Statement of Cash Flows." This update will make eight targeted changes to how cash receipts and cash payments are presented and classified in the statement of cash flows. The update is effective for fiscal years beginning after December 15, 2017. The update will require adoption on a retrospective basis unless it is impracticable to apply, in which case it would be required to apply the amendments prospectively as of the earliest date practicable. We adopted this update on January 1, 2018. The adoption of this update did not have a material impact on our consolidated financial statements.

In March 2016, the FASB issued ASU 2016-09 "Improvements to Employee Share-Based Payment Accounting" which amends ASC 718 "Compensation—Stock Compensation." This update will simplify the income tax consequences, accounting for forfeitures and classification on the statements of cash flows of share-based payment arrangements. This update is effective for fiscal years beginning after December 15, 2016, and interim periods within those fiscal years, with earlier application permitted. We adopted this update on January 1, 2017, which was applied prospectively; therefore, prior periods have not been retrospectively adjusted. The adoption of this update did not have a material impact on our consolidated financial statements.

In February 2016, the FASB issued ASU 2016-02 "Leases," which supersedes ASC 840 "Leases" and creates a new topic, ASC 842 "Leases." Subsequent to the issuance of ASU 2016-02, ASC 842 was amended by various updates that amend

and clarify the impact and implementation of the aforementioned update. These updates require lessees to recognize a lease liability and a lease asset for all leases, including operating leases, with a term greater than 12 months on its balance sheet. These updates also expand the required quantitative and qualitative disclosures surrounding leases. These updates are effective for fiscal years beginning after December 15, 2018 and interim periods within those fiscal years, with earlier application permitted. These updates will be applied using a modified retrospective transition approach for leases existing at, or entered into after, the beginning of the earliest comparative period presented in the financial statements. We are currently evaluating the effect of these updates on our consolidated financial statements.

In July 2015, the FASB issued ASU 2015-11 “Simplifying the Measurement of Inventory,” which amends ASC 330 “Inventory.” This update requires entities to measure inventory at the lower of cost and net realizable value. Net realizable value is the estimated selling prices in the ordinary course of business, less reasonable predictable costs of completion, disposal and transportation. This update simplifies the current guidance under which an entity must measure inventory at the lower of cost or market. This update does not impact inventory measured using LIFO. This update is effective for fiscal years beginning after December 15, 2016. We adopted this update on January 1, 2017, which was applied prospectively; therefore,

Table of Contents

prior periods have not been retrospectively adjusted. The adoption of this update did not have a material impact on our consolidated financial statements.

In May 2014, the FASB issued ASU 2014-09 “Revenue from Contracts with Customers” (ASU 2014-09), which amends ASC 605 “Revenue Recognition” and creates a new topic, ASC 606 “Revenue from Contracts with Customers” (ASC 606). Subsequent to the issuance of ASU 2014-09, ASC 606 was amended by various updates that amend and clarify the impact and implementation of the aforementioned update. These updates provide guidance on how an entity should recognize revenue to depict the transfer of control of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. Upon initial application, the provisions of these updates are required to be applied retrospectively to each prior reporting period presented or retrospectively with the cumulative effect of initially applying this update recognized at the date of initial application. These updates also expand the disclosure requirements surrounding revenue recorded from contracts with customers. These updates are effective for fiscal years, and interim periods within those years, beginning after December 15, 2017. We adopted these updates on January 1, 2018 using the modified retrospective transition method. The cumulative effect of applying the updates will be recorded to retained earnings as of the date of adoption. The most significant impact the updates will have will be on our accounting policies and disclosures on revenue recognition. The adoption of these updates did not have a material impact on our consolidated financial statements. Expanded disclosures regarding revenue recognition will be included within our consolidated financial statements in the period of adoption.

## DERIVATIVE FINANCIAL INSTRUMENTS

We are exposed to market risk in the normal course of our business operations due to our purchases of certain commodities, our ongoing investing and financing activities and our operations that use foreign currencies. The risk of loss can be assessed from the perspective of adverse changes in fair values, cash flows and future earnings. We have established policies and procedures governing our management of market risks and the use of financial instruments to manage exposure to such risks. ASC 815 requires an entity to recognize all derivatives as either assets or liabilities in the consolidated balance sheets and measure those instruments at fair value. In accordance with ASC 815, we designate derivative contracts as cash flow hedges of forecasted purchases of commodities and forecasted interest payments related to variable-rate borrowings and designate certain interest rate swaps as fair value hedges of fixed-rate borrowings. We do not enter into any derivative instruments for trading or speculative purposes.

Energy costs, including electricity and natural gas, and certain raw materials used in our production processes are subject to price volatility. Depending on market conditions, we may enter into futures contracts, forward contracts, commodity swaps and put and call option contracts in order to reduce the impact of commodity price fluctuations. The majority of our commodity derivatives expire within one year. Those commodity contracts that extend beyond one year correspond with raw material purchases for long-term fixed-price sales contracts.

For derivative instruments that are designated and qualify as a cash flow hedge, the change in fair value of the derivative is recognized as a component of other comprehensive income (loss) until the hedged item is recognized into earnings. Gains and losses on the derivatives representing hedge ineffectiveness are recognized currently in earnings.

We use cash flow hedges for certain raw material and energy costs such as copper, zinc, lead, electricity and natural gas to provide a measure of stability in managing our exposure to price fluctuations associated with forecasted purchases of raw materials and energy used in our manufacturing process. Settlements on derivative contracts resulted in gains of \$1.5 million in 2017 and losses of \$5.8 million and \$9.7 million in 2016 and 2015, respectively, which were included in cost of goods sold. At December 31, 2017, we had open derivative notional contract positions through 2022 totaling \$92.8 million (2016—\$101.6 million). If all open futures contracts had been settled on December 31, 2017, we would have recognized a pretax gain of \$7.5 million.

If commodity prices were to remain at December 31, 2017 levels, approximately \$1.7 million of deferred gains, net of tax, would be reclassified into earnings during the next twelve months. The actual effect on earnings will be dependent on actual commodity prices when the forecasted transactions occur.

Table of Contents

We use interest rate swaps as a means of minimizing significant unanticipated earnings fluctuations that may arise from volatility in interest rates of our variable-rate borrowings. In April 2016, we entered into three tranches of forward starting interest rate swaps whereby we agreed to pay fixed rates to the counterparties who, in turn, pay us floating rates on \$1,100.0 million, \$900.0 million and \$400.0 million of our underlying floating-rate debt obligations. Each tranche's term length is for twelve months beginning on December 31, 2016, December 31, 2017 and December 31, 2018, respectively. The counterparties to the agreements are SMBC Capital Markets, Inc., Wells Fargo, PNC Bank, National Association, and Toronto-Dominion Bank. These counterparties are large financial institutions; however, the risk of loss to us in the event of nonperformance by a counterparty could be significant to our financial position or results of operations. We have designated the swaps as cash flow hedges of the risk of changes in interest payments associated with our variable-rate borrowings. Accordingly, the swap agreements have been recorded at their fair market value of \$10.5 million and are included in other current assets and other assets on the accompanying consolidated balance sheet, with the corresponding gain deferred as a component of other comprehensive loss. For the year ended December 31, 2017, \$3.1 million of income was recorded to interest expense on the accompanying consolidated statement of operations related to these swap agreements. If all open futures contracts had been settled on December 31, 2017, we would have recognized a pretax gain of \$10.5 million.

If interest rates were to remain at December 31, 2017 levels, \$5.2 million of deferred gains would be reclassified into earnings during the next twelve months. The actual effect on earnings will be dependent on actual interest rates when the forecasted transactions occur.

We also use interest rate swaps as a means of managing interest expense and floating interest rate exposure to optimal levels. For derivative instruments that are designated and qualify as a fair value hedge, the gain or loss on the derivative as well as the offsetting loss or gain on the hedged item attributable to the hedged risk are recognized in current earnings. We include the gain or loss on the hedged items (fixed-rate borrowings) in the same line item, interest expense, as the offsetting loss or gain on the related interest rate swaps. As of both December 31, 2017 and 2016, the total notional amounts of our interest rate swaps designated as fair value hedges were \$500.0 million.

We have designated these interest rate swap agreements as fair value hedges of the risk of changes in the value of fixed rate debt due to changes in interest rates for a portion of our fixed rate borrowings. Accordingly, the swap agreements have been recorded at their fair market value of \$28.1 million and are included in other long-term liabilities on the accompanying consolidated balance sheet, with a corresponding decrease in the carrying amount of the related debt. For the years ended December 31, 2017 and 2016, \$2.9 million and \$2.6 million, respectively, of income has been recorded to interest expense on the accompanying consolidated statement of operations related to these swap agreements.

We actively manage currency exposures that are associated with net monetary asset positions, currency purchases and sales commitments denominated in foreign currencies and foreign currency denominated assets and liabilities created in the normal course of business. We enter into forward sales and purchase contracts to manage currency to offset our net exposures, by currency, related to the foreign currency denominated monetary assets and liabilities of our operations. At December 31, 2017, we had outstanding forward contracts to buy foreign currency with a notional value of \$135.5 million and to sell foreign currency with a notional value of \$97.7 million. All of the currency derivatives expire within one year and are for USD equivalents. The counterparties to the forward contracts are large financial institutions; however, the risk of loss to us in the event of nonperformance by a counterparty could be significant to our financial position or results of operations. At December 31, 2016, we had outstanding forward contracts to buy foreign currency with a notional value of \$73.2 million and to sell foreign currency with a notional value of \$100.8 million.

Our foreign currency forward contracts and certain commodity derivatives did not meet the criteria to qualify for hedge accounting. The effect on operating results of items not qualifying for hedge accounting was a gain of \$1.8

million in 2017 and losses of \$11.5 million and \$2.1 million in 2016 and 2015, respectively.

Table of Contents

The fair value of our derivative asset and liability balances were:

	December 31, 2017 2016 (\$ in millions)	
Other current assets	\$19.2	\$13.5
Other assets	3.6	7.7
Total derivative asset	\$22.8	\$21.2
Current installments of long-term debt	\$—	\$0.1
Accrued liabilities	3.8	1.2
Other liabilities	28.1	28.5
Total derivative liability	\$31.9	\$29.8

The ineffective portion of changes in fair value resulted in zero charged or credited to earnings for the years ended December 31, 2017, 2016 and 2015.

#### Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to market risk in the normal course of our business operations due to our purchases of certain commodities, our ongoing investing and financing activities and our operations that use foreign currencies. The risk of loss can be assessed from the perspective of adverse changes in fair values, cash flows and future earnings. We have established policies and procedures governing our management of market risks and the use of financial instruments to manage exposure to such risks.

Energy costs, including electricity and natural gas, and certain raw materials used in our production processes are subject to price volatility. Depending on market conditions, we may enter into futures contracts, forward contracts, commodity swaps and put and call option contracts in order to reduce the impact of commodity price fluctuations. As of December 31, 2017, we maintained open positions on commodity contracts with a notional value totaling \$92.8 million (\$101.6 million at December 31, 2016). Assuming a hypothetical 10% increase in commodity prices, which are currently hedged, as of December 31, 2017, we would experience a \$9.3 million (\$10.2 million at December 31, 2016) increase in our cost of inventory purchased, which would be substantially offset by a corresponding increase in the value of related hedging instruments.

We transact business in various foreign currencies other than the USD which exposes us to movements in exchange rates which may impact revenue and expenses, assets and liabilities and cash flows. Our significant foreign currency exposure is denominated with European currencies, primarily the Euro, although exposures also exist in other currencies of Asia Pacific, Latin America, Middle East and Africa. For all derivative positions, we evaluated the effects of a 10% shift in exchange rates between those currencies and the USD, holding all other assumptions constant. Unfavorable currency movements of 10% would negatively affect the fair values of the derivatives held to hedge currency exposures by \$20.2 million. These unfavorable changes would generally have been offset by favorable changes in the values of the underlying exposures.

We are exposed to changes in interest rates primarily as a result of our investing and financing activities. Our current debt structure is used to fund business operations, and commitments from banks under our Senior Revolving Credit Facility are a source of liquidity. As of December 31, 2017, we had long-term borrowings, including current installments of long-term debt and capital lease obligations, of \$3,612.0 million (\$3,617.6 million at December 31, 2016) of which \$1,749.0 million (\$2,238.4 million at December 31, 2016) was issued at variable rates.



In April 2016, we entered into three tranches of forward starting interest rate swaps whereby we agreed to pay fixed rates to the counterparties who, in turn, pay us floating rates on \$1,100.0 million, \$900.0 million and \$400.0 million of our underlying floating-rate debt obligations. Each tranche's term length is for twelve months beginning on December 31, 2016, December 31, 2017 and December 31, 2018, respectively. The counterparties to the agreements are SMBC Capital Markets, Inc., Wells Fargo, PNC Bank, National Association, and Toronto-Dominion Bank. These counterparties are large financial institutions; however, the risk of loss to us in the event of nonperformance by a counterparty could be significant to our financial position or results of operations.

In April 2016, we entered into interest rate swaps on \$250.0 million of our underlying fixed-rate debt obligations, whereby we agreed to pay variable rates to the counterparties, who, in turn, pay us fixed rates. The counterparties to these agreements are Toronto-Dominion Bank and SMBC Capital Markets, Inc., both of which are major financial institutions.

Table of Contents

In October 2016, we entered into interest rate swaps on an additional \$250.0 million of our underlying fixed-rate debt obligations, whereby we agreed to pay variable rates to the counterparties who, in turn, pay us fixed rates. The counterparties to these agreements are PNC Bank, National Association and Wells Fargo, both of which are major financial institutions.

Assuming no changes in the \$1,749.0 million of variable-rate debt levels from December 31, 2017, we estimate that a hypothetical change of 100-basis points in the LIBOR interest rates from 2017 would impact annual interest expense by \$17.5 million. A portion of this hypothetical change would be offset by our interest rate swaps.

Our interest rate swaps reduced interest expense by \$6.1 million, \$3.7 million and \$2.8 million in 2017, 2016 and 2015, respectively.

If the actual changes in commodities, foreign currency, or interest pricing is substantially different than expected, the net impact of commodity risk, foreign currency risk, or interest rate risk on our cash flow may be materially different than that disclosed above.

We do not enter into any derivative financial instruments for speculative purposes.

CAUTIONARY STATEMENT ABOUT FORWARD-LOOKING STATEMENTS

This report includes forward-looking statements. These statements relate to analyses and other information that are based on management's beliefs, certain assumptions made by management, forecasts of future results and current expectations, estimates and projections about the markets and economy in which we and our various segments operate. The statements contained in this report that are not statements of historical fact may include forward-looking statements that involve a number of risks and uncertainties.

We have used the words "anticipate," "intend," "may," "expect," "believe," "should," "plan," "estimate," "project," "forecast," and variations of such words and similar expressions in this report to identify such forward-looking statements. These statements are not guarantees of future performance and involve certain risks, uncertainties and assumptions, which are difficult to predict and many of which are beyond our control. Therefore, actual outcomes and results may differ materially from those matters expressed or implied in such forward-looking statements. We undertake no obligation to update publicly any forward-looking statements, whether as a result of future events, new information or otherwise.

The risks, uncertainties, and assumptions involved in our forward-looking statements include those discussed under Item 1A—"Risk Factors." You should consider all of our forward-looking statements in light of these factors. In addition, other risks and uncertainties not presently known to us or that we consider immaterial could affect the accuracy of our forward-looking statements.

Table of Contents

Item 8. CONSOLIDATED FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

MANAGEMENT REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

The management of Olin Corporation is responsible for establishing and maintaining adequate internal control over financial reporting. Olin's internal control system was designed to provide reasonable assurance to the company's management and board of directors regarding the preparation and fair presentation of published financial statements.

All internal control systems, no matter how well designed, have inherent limitations. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation, and may not prevent or detect all misstatements.

The management of Olin Corporation has assessed the effectiveness of the company's internal control over financial reporting as of December 31, 2017. In making this assessment, we used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control—Integrated Framework (2013) to guide our analysis and assessment. Based on our assessment as of December 31, 2017, the company's internal control over financial reporting was effective based on those criteria.

Our independent registered public accountants, KPMG LLP, have audited and issued a report on our internal control over financial reporting, which appears in this Form 10-K.

/s/ John E. Fischer  
Chairman, President and Chief Executive Officer

/s/ Todd A. Slater  
Vice President and Chief Financial Officer

Table of Contents

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and Board of Directors of Olin Corporation:

Opinions on the Consolidated Financial Statements and Internal Control Over Financial Reporting

We have audited the accompanying consolidated balance sheets of Olin Corporation and subsidiaries (the Company) as of December 31, 2017 and 2016, the related consolidated statements of operations, comprehensive income (loss), shareholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2017, and the related notes (collectively, the consolidated financial statements). We also have audited the Company's internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

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, 2017 and 2016, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2017, in conformity with U.S. generally accepted accounting principles. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

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 Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's consolidated financial statements and an opinion 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 (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) 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 (3) 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.

Table of Contents

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

/s/ KPMG LLP

We have served as the Company's auditor since 1954.

St. Louis, Missouri

February 26, 2018

56

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Table of Contents

## CONSOLIDATED BALANCE SHEETS

December 31

(In millions, except per share data)

Assets	2017	2016
Current assets:		
Cash and cash equivalents	\$218.4	\$184.5
Receivables, net	733.2	675.0
Income taxes receivable	16.9	25.5
Inventories, net	682.6	630.4
Other current assets	48.1	30.8
Total current assets	1,699.2	1,546.2
Property, plant and equipment, net	3,575.8	3,704.9
Deferred income taxes	36.4	119.5
Other assets	1,208.4	644.4
Intangible assets, net	578.5	629.6
Goodwill	2,120.0	2,118.0
Total assets	\$9,218.3	\$8,762.6
Liabilities and Shareholders' Equity		
Current liabilities:		
Current installments of long-term debt	\$0.7	\$80.5
Accounts payable	669.8	570.8
Income taxes payable	9.4	7.5
Accrued liabilities	274.4	263.8
Total current liabilities	954.3	922.6
Long-term debt	3,611.3	3,537.1
Accrued pension liability	635.9	638.1
Deferred income taxes	511.2	1,032.5
Other liabilities	751.9	359.3
Total liabilities	6,464.6	6,489.6
Commitments and contingencies		
Shareholders' equity:		
Common stock, par value \$1 per share:		
Authorized, 240.0 shares;		
Issued and outstanding, 167.1 shares (165.4 in 2016)	167.1	165.4
Additional paid-in capital	2,280.9	2,243.8
Accumulated other comprehensive loss	(484.6 )	(510.0 )
Retained earnings	790.3	373.8
Total shareholders' equity	2,753.7	2,273.0
Total liabilities and shareholders' equity	\$9,218.3	\$8,762.6

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

Table of Contents

## CONSOLIDATED STATEMENTS OF OPERATIONS

Years ended December 31

(In millions, except per share data)

	2017	2016	2015
Sales	\$6,268.4	\$5,550.6	\$2,854.4
Operating expenses:			
Cost of goods sold	5,539.6	4,923.7	2,486.8
Selling and administration	350.7	323.2	186.3
Restructuring charges	37.6	112.9	2.7
Acquisition-related costs	12.8	48.8	123.4
Other operating income	3.3	10.6	45.7
Operating income	331.0	152.6	100.9
Earnings of non-consolidated affiliates	1.8	1.7	1.7
Interest expense	217.4	191.9	97.0
Interest income	1.8	3.4	1.1
Income (loss) before taxes	117.2	(34.2 )	6.7
Income tax (benefit) provision	(432.3 )	(30.3 )	8.1
Net income (loss)	\$549.5	\$(3.9 )	\$(1.4 )
Net income (loss) per common share:			
Basic	\$3.31	\$(0.02 )	\$(0.01 )
Diluted	\$3.26	\$(0.02 )	\$(0.01 )
Average common shares outstanding:			
Basic	166.2	165.2	103.4
Diluted	168.5	165.2	103.4

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



Table of Contents

## CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

Years ended December 31

(In millions)

	2017	2016	2015
Net income (loss)	\$549.5	\$(3.9 )	\$(1.4 )
Other comprehensive income (loss), net of tax:			
Foreign currency translation adjustments, net	31.7	(12.0 )	(9.8 )
Unrealized (losses) gains on derivative contracts, net	(1.7 )	19.7	(2.7 )
Pension and postretirement liability adjustments, net	(21.6 )	(37.5 )	(78.8 )
Amortization of prior service costs and actuarial losses, net	17.0	12.3	41.9
Total other comprehensive income (loss), net of tax	25.4	(17.5 )	(49.4 )
Comprehensive income (loss)	\$574.9	\$(21.4 )	\$(50.8)

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

Table of Contents

## CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

(In millions, except per share data)

	Common Stock Shares Issued	Par Value	Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Retained Earnings	Total Shareholders' Equity
Balance at January 1, 2015	77.4	\$77.4	\$788.3	\$ (443.1 )	\$ 590.7	\$ 1,013.3
Net loss	—	—	—	—	(1.4 )	(1.4 )
Other comprehensive loss	—	—	—	(49.4 )	—	(49.4 )
Dividends paid:						
Common stock (\$0.80 per share)	—	—	—	—	(79.5 )	(79.5 )
Common stock issued for:						
Stock options exercised	0.1	0.1	3.0	—	—	3.1
Other transactions	0.1	0.1	2.2	—	—	2.3
Business acquired in purchase transaction, net of issuance costs	87.5	87.5	1,438.0	—	—	1,525.5
Stock-based compensation	—	—	4.9	—	—	4.9
Balance at December 31, 2015	165.1	165.1	2,236.4	(492.5 )	509.8	2,418.8
Net loss	—	—	—	—	(3.9 )	(3.9 )
Other comprehensive loss	—	—	—	(17.5 )	—	(17.5 )
Dividends paid:						
Common stock (\$0.80 per share)	—	—	—	—	(132.1 )	(132.1 )
Common stock issued for:						
Stock options exercised	0.3	0.3	3.8	—	—	4.1
Other transactions	—	—	(0.8 )	—	—	(0.8 )
Stock-based compensation	—	—	4.4	—	—	4.4
Balance at December 31, 2016	165.4	165.4	2,243.8	(510.0 )	373.8	2,273.0
Net income	—	—	—	—	549.5	549.5
Other comprehensive income	—	—	—	25.4	—	25.4
Dividends paid:						
Common stock (\$0.80 per share)	—	—	—	—	(133.0 )	(133.0 )
Common stock issued for:						
Stock options exercised	1.7	1.7	30.7	—	—	32.4
Other transactions	—	—	(0.9 )	—	—	(0.9 )
Stock-based compensation	—	—	7.3	—	—	7.3
Balance at December 31, 2017	167.1	\$167.1	\$2,280.9	\$ (484.6 )	\$ 790.3	\$ 2,753.7

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

Table of Contents

## CONSOLIDATED STATEMENTS OF CASH FLOWS

Years ended December 31

(In millions)

	2017	2016	2015
Operating Activities			
Net income (loss)	\$549.5	\$(3.9 )	\$(1.4 )
Adjustments to reconcile net income (loss) to net cash and cash equivalents provided by (used for) operating activities:			
Earnings of non-consolidated affiliates	(1.8 )	(1.7 )	(1.7 )
Losses (gains) on disposition of property, plant and equipment	(3.1 )	0.7	(25.2 )
Stock-based compensation	9.1	7.5	7.6
Depreciation and amortization	558.9	533.5	228.9
Deferred income taxes	(452.7 )	(32.7 )	5.6
Write-off of equipment and facility included in restructuring charges	1.4	76.6	0.5
Qualified pension plan contributions	(1.7 )	(7.3 )	(0.9 )
Qualified pension plan income	(26.9 )	(37.5 )	(32.0 )
Change in assets and liabilities:			
Receivables	(49.9 )	38.5	(115.1 )
Income taxes receivable/payable	9.6	10.7	(12.6 )
Inventories	(37.8 )	23.9	(1.7 )
Other current assets	(12.1 )	20.9	(30.6 )
Accounts payable and accrued liabilities	100.0	(13.1 )	185.1
Other assets	5.8	(4.3 )	37.6
Other noncurrent liabilities	(5.9 )	(12.1 )	(32.5 )
Other operating activities	6.4	3.5	5.5
Net operating activities	648.8	603.2	217.1
Investing Activities			
Capital expenditures	(294.3 )	(278.0 )	(130.9 )
Business acquired and related transactions, net of cash acquired	—	(69.5 )	(408.1 )
Payments under long-term supply contracts	(209.4 )	(175.7 )	—
Proceeds from sale/leaseback of equipment	—	40.4	—
Proceeds from disposition of property, plant and equipment	5.2	0.5	26.2
Proceeds from disposition of affiliated companies	—	8.8	8.8
Net investing activities	(498.5 )	(473.5 )	(504.0 )
Financing Activities			
Long-term debt:			
Borrowings	2,035.5	230.0	1,275.0
Repayments	(2,037.9 )	(435.3 )	(730.7 )
Stock options exercised	29.8	0.5	2.2
Excess tax benefits from stock-based compensation	—	0.4	0.4
Dividends paid	(133.0 )	(132.1 )	(79.5 )
Debt and equity issuance costs	(11.2 )	(1.0 )	(45.2 )
Net financing activities	(116.8 )	(337.5 )	422.2
Effect of exchange rate changes on cash and cash equivalents	0.4	0.3	(0.1 )
Net increase (decrease) in cash and cash equivalents	33.9	(207.5 )	135.2
Cash and cash equivalents, beginning of year	184.5	392.0	256.8
Cash and cash equivalents, end of year	\$218.4	\$184.5	\$392.0
Cash paid for interest and income taxes:			
Interest, net	\$200.9	\$200.8	\$32.3

Income taxes, net of refunds \$18.0    \$(2.6 ) \$5.3

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

61

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Table of Contents

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

DESCRIPTION OF BUSINESS

Olin Corporation (Olin) is a Virginia corporation, incorporated in 1892, having its principal executive offices in Clayton, MO. We are a manufacturer concentrated in three business segments: Chlor Alkali Products and Vinyls, Epoxy and Winchester. The Chlor Alkali Products and Vinyls segment manufactures and sells chlorine and caustic soda, ethylene dichloride and vinyl chloride monomer, methyl chloride, methylene chloride, chloroform, carbon tetrachloride, perchloroethylene, trichloroethylene and vinylidene chloride, hydrochloric acid, hydrogen, bleach products and potassium hydroxide. The Epoxy segment produces and sells a full range of epoxy materials, including allyl chloride, epichlorohydrin, liquid epoxy resins, solid epoxy resins and downstream products such as differentiated epoxy resins and additives. The Winchester segment produces and sells sporting ammunition, reloading components, small caliber military ammunition and components, and industrial cartridges.

On October 5, 2015 (the Closing Date), we acquired from DowDuPont Inc. (DowDuPont) (f/k/a The Dow Chemical Company) its U.S. Chlor Alkali and Vinyl, Global Chlorinated Organics and Global Epoxy businesses (collectively, the Acquired Business), whose operating results are included in the accompanying financial statements since the Closing Date. For segment reporting purposes, a portion of the Acquired Business's operating results comprise the Epoxy segment with the remaining operating results combined with Olin's Chlor Alkali Products and Chemical Distribution segments to comprise the Chlor Alkali Products and Vinyls segment.

ACCOUNTING POLICIES

The preparation of the consolidated financial statements requires estimates and assumptions that affect amounts reported and disclosed in the financial statements and related notes. Actual results could differ from those estimates.

Basis of Presentation

The consolidated financial statements include the accounts of Olin and all majority-owned subsidiaries. Investment in our affiliates are accounted for on the equity method. Accordingly, we include only our share of earnings or losses of these affiliates in consolidated net income (loss). Certain reclassifications were made to prior year amounts to conform to the 2017 presentation.

Revenue Recognition

Revenues are recognized on sales of product at the time the goods are shipped and the risks of ownership have passed to the customer. Shipping and handling fees billed to customers are included in sales. Allowances for estimated returns, discounts and rebates are recognized when sales are recorded and are based on various market data, historical trends and information from customers. Actual returns, discounts and rebates have not been materially different from estimates.

Cost of Goods Sold and Selling and Administration Expenses

Cost of goods sold includes the costs of inventory sold, related purchasing, distribution and warehousing costs, costs incurred for shipping and handling, depreciation and amortization expense related to these activities and environmental remediation costs and recoveries. Selling and administration expenses include personnel costs associated with sales, marketing and administration, research and development, legal and legal-related costs, consulting and professional services fees, advertising expenses, depreciation expense related to these activities, foreign currency translation and other similar costs.

#### Acquisition-related Costs

Acquisition-related costs include advisory, legal, accounting and other professional fees incurred in connection with the purchase and integration of our acquisitions. Acquisition-related costs also may include costs which arise as a result of acquisitions, including contractual change in control provisions, contract termination costs, compensation payments related to the acquisition or pension and other postretirement benefit plan settlements. Acquisition-related costs for the years ended December 31, 2017, 2016 and 2015 of \$12.8 million, \$48.8 million and \$123.4 million, respectively, were related to the integration of the Acquired Business.

Table of Contents

## Other Operating Income

Other operating income consists of miscellaneous operating income items, which are related to our business activities, and gains (losses) on disposition of property, plant and equipment.

Included in other operating income were the following:

	Years Ended December 31,		
	2017	2016	2015
	(\$ in millions)		
Gains (losses) on disposition of property, plant and equipment, net	\$3.1	\$(0.7)	\$(0.6)
Gains on insurance recoveries	—	11.0	46.0
Other	0.2	0.3	0.3
Other operating income	\$3.3	\$10.6	\$45.7

The gains on disposition of property, plant and equipment in 2017 included a gain of \$3.3 million from the sale of a former manufacturing facility. The gains on insurance recoveries in 2016 included insurance recoveries for property damage and business interruption related to a 2008 Henderson, NV chlor alkali facility incident. The gains on insurance recoveries in 2015 included insurance recoveries for property damage and business interruption of \$42.3 million related to the portion of the Becancour, Canada chlor alkali facility that has been shut down since late June 2014 and \$3.7 million related to the McIntosh, AL chlor alkali facility.

## Other Income (Expense)

Other income consists of non-operating income items which are not related to our primary business activities.

## Foreign Currency Translation

Our worldwide operations utilize the U.S. dollar (USD) or local currency as the functional currency, where applicable. For foreign entities where the USD is the functional currency, gains and losses resulting from balance sheet translations are included in selling and administration. For foreign entities where the local currency is the functional currency, assets and liabilities denominated in local currencies are translated into USD at end-of-period exchange rates and the resultant translation adjustments are included in accumulated other comprehensive loss. Assets and liabilities denominated in other than the local currency are remeasured into the local currency prior to translation into USD and the resultant exchange gains or losses are included in income in the period in which they occur. Income and expenses are translated into USD using an approximation of the average rate prevailing during the period. We change the functional currency of our separate and distinct foreign entities only when significant changes in economic facts and circumstances indicate clearly that the functional currency has changed.

## Cash and Cash Equivalents

All highly liquid investments, with a maturity of three months or less at the date of purchase, are considered to be cash equivalents.

## Short-Term Investments

We classify our marketable securities as available-for-sale, which are reported at fair market value with unrealized gains and losses included in accumulated other comprehensive loss, net of applicable taxes. The fair value of marketable securities is determined by quoted market prices. Realized gains and losses on sales of investments, as

determined on the specific identification method, and declines in value of securities judged to be other-than-temporary are included in other income (expense) in the consolidated statements of operations. Interest and dividends on all securities are included in interest income and other income (expense), respectively. As of December 31, 2017 and 2016, we had no short-term investments recorded on our consolidated balance sheets.



## Table of Contents

### Allowance for Doubtful Accounts Receivable

We evaluate the collectibility of accounts receivable based on a combination of factors. We estimate an allowance for doubtful accounts as a percentage of net sales based on historical bad debt experience. This estimate is periodically adjusted when we become aware of a specific customer's inability to meet its financial obligations (e.g., bankruptcy filing) or as a result of changes in the overall aging of accounts receivable. While we have a large number of customers that operate in diverse businesses and are geographically dispersed, a general economic downturn in any of the industry segments in which we operate could result in higher than expected defaults, and, therefore, the need to revise estimates for the provision for doubtful accounts could occur.

### Inventories

Inventories are valued at the lower of cost and net realizable value. For U.S. inventories, inventory costs are determined principally by the last-in, first-out (LIFO) method of inventory accounting while for international inventories, inventory costs are determined principally by the first-in, first-out (FIFO) method of inventory accounting. Cost for other inventories has been determined principally by the average-cost method (primarily operating supplies, spare parts and maintenance parts). Elements of costs in inventories include raw materials, direct labor and manufacturing overhead.

### Property, Plant and Equipment

Property, plant and equipment are recorded at cost. Depreciation is computed on a straight-line basis over the estimated useful lives of the related assets. Interest costs incurred to finance expenditures for major long-term construction projects are capitalized as part of the historical cost and included in property, plant and equipment and are depreciated over the useful lives of the related assets. Leasehold improvements are amortized over the term of the lease or the estimated useful life of the improvement, whichever is shorter. Start-up costs are expensed as incurred. Expenditures for maintenance and repairs are charged to expense when incurred while the costs of significant improvements, which extend the useful life of the underlying asset, are capitalized.

Property, plant and equipment are reviewed for impairment when conditions indicate that the carrying values of the assets may not be recoverable. Such impairment conditions include an extended period of idleness or a plan of disposal. If such impairment indicators are present or other factors exist that indicate that the carrying amount of an asset may not be recoverable, we determine whether impairment has occurred through the use of an undiscounted cash flow analysis at the lowest level for which identifiable cash flows exist. For our Chlor Alkali Products and Vinyls, Epoxy and Winchester segments, the lowest level for which identifiable cash flows exist is the operating facility level or an appropriate grouping of operating facilities level. The amount of impairment loss, if any, is measured by the difference between the net book value of the assets and the estimated fair value of the related assets.

### Asset Retirement Obligations

We record the fair value of an asset retirement obligation associated with the retirement of a tangible long-lived asset as a liability in the period incurred. The liability is measured at discounted fair value and is adjusted to its present value in subsequent periods as accretion expense is recorded. The corresponding asset retirement costs are capitalized as part of the carrying amount of the related long-lived asset and depreciated over the asset's useful life. Asset retirement obligations are reviewed annually in the fourth quarter and/or when circumstances or other events indicate that changes underlying retirement assumptions may have occurred.



Table of Contents

The activities of our asset retirement obligations were as follows:

	December 31,	
	2017	2016
	(\$ in millions)	
Beginning balance	\$55.4	\$53.5
Accretion	3.0	3.1
Spending	(8.8 )	(8.8 )
Currency translation adjustments	0.2	0.2
Adjustments	4.5	7.4
Ending balance	\$54.3	\$55.4

At December 31, 2017 and 2016, our consolidated balance sheets included an asset retirement obligation of \$43.8 million and \$42.8 million, respectively, which were classified as other noncurrent liabilities.

In 2017 and 2016, we had net adjustments that increased the asset retirement obligation by \$4.5 million and \$7.4 million, respectively, which were primarily comprised of increases in estimated costs for certain assets.

#### Comprehensive Income (Loss)

Accumulated other comprehensive loss consists of foreign currency translation adjustments, pension and postretirement liability adjustments, pension and postretirement amortization of prior service costs and actuarial losses and net unrealized (losses) gains on derivative contracts.

#### Goodwill

Goodwill is not amortized, but is reviewed for impairment annually in the fourth quarter and/or when circumstances or other events indicate that impairment may have occurred. Accounting Standards Codification (ASC) 350 “Intangibles—Goodwill and Other” (ASC 350) permits entities to make a qualitative assessment of whether it is more likely than not that a reporting unit’s fair value is less than its carrying amount before applying the two-step goodwill impairment test. Circumstances that are considered as part of the qualitative assessment and could trigger the two-step impairment test include, but are not limited to: a significant adverse change in the business climate; a significant adverse legal judgment; adverse cash flow trends; an adverse action or assessment by a government agency; unanticipated competition; decline in our stock price; and a significant restructuring charge within a reporting unit. We define reporting units at the business segment level or one level below the business segment level. For purposes of testing goodwill for impairment, goodwill has been allocated to our reporting units to the extent it relates to each reporting unit. Based upon our qualitative assessment, it is more likely than not that the fair value of our reporting units are greater than their carrying amounts as of December 31, 2017. No impairment charges were recorded for 2017, 2016 or 2015.

It is our practice, at a minimum, to perform a quantitative goodwill impairment test in the fourth quarter every three years. In the fourth quarter of 2016, we performed our triennial quantitative goodwill impairment test for our reporting units. We use a discounted cash flow approach to develop the estimated fair value of a reporting unit when a quantitative test is performed. Management judgment is required in developing the assumptions for the discounted cash flow model. We also corroborate our discounted cash flow analysis by evaluating a market-based approach that considers earnings before interest, taxes, depreciation and amortization (EBITDA) multiples from a representative sample of comparable public companies. As a further indicator that each reporting unit has been valued appropriately using a discounted cash flow model, the aggregate fair value of all reporting units is reconciled to the total market value of Olin. An impairment would be recorded if the carrying amount of a reporting unit exceeded the estimated fair value. Based on the aforementioned analysis, the estimated fair value of our reporting units substantially exceeded the

carrying value of the reporting units.

The discount rate, profitability assumptions and terminal growth rate of our reporting units and the cyclical nature of the chlor alkali industry were the material assumptions utilized in the discounted cash flow model used to estimate the fair value of each reporting unit. The discount rate reflects a weighted-average cost of capital, which is calculated based on observable market data. Some of this data (such as the risk free or treasury rate and the pretax cost of debt) are based on the market data at a point in time. Other data (such as the equity risk premium) are based upon market data over time for a peer group of companies in the chemical manufacturing or distribution industries with a market capitalization premium added, as applicable.

## Table of Contents

The discounted cash flow analysis requires estimates, assumptions and judgments about future events. Our analysis uses our internally generated long-range plan. Our discounted cash flow analysis uses the assumptions in our long-range plan about terminal growth rates, forecasted capital expenditures and changes in future working capital requirements to determine the implied fair value of each reporting unit. The long-range plan reflects management judgment, supplemented by independent chemical industry analyses which provide multi-year industry operating and pricing forecasts.

We believe the assumptions used in our goodwill impairment analysis are appropriate and result in reasonable estimates of the implied fair value of each reporting unit. However, given the economic environment and the uncertainties regarding the impact on our business, there can be no assurance that our estimates and assumptions, made for purposes of our goodwill impairment testing, will prove to be an accurate prediction of the future. If our assumptions regarding future performance are not achieved, we may be required to record goodwill impairment charges in future periods. It is not possible at this time to determine if any such future impairment charge would result or, if it does, whether such charge would be material.

### Intangible Assets

In conjunction with our acquisitions, we have obtained access to the customer contracts and relationships, trade names, acquired technology and other intellectual property of the acquired companies. These relationships are expected to provide economic benefit for future periods. Amortization expense is recognized on a straight-line basis over the estimated lives of the related assets. The amortization period of customer contracts and relationships, trade names, acquired technology and other intellectual property represents our best estimate of the expected usage or consumption of the economic benefits of the acquired assets, which is based on the company's historical experience.

Intangible assets with finite lives are reviewed for impairment when conditions indicate that the carrying values of the assets may not be recoverable. Circumstances that are considered as part of the qualitative assessment and could trigger a quantitative impairment test include, but are not limited to: a significant adverse change in the business climate; a significant adverse legal judgment including asset specific factors; adverse cash flow trends; an adverse action or assessment by a government agency; unanticipated competition; decline in our stock price; and a significant restructuring charge within a reporting unit. Based upon our qualitative assessment, it is more likely than not that the fair value of our intangible assets are greater than the carrying amount as of December 31, 2017. No impairment of our intangible assets were recorded in 2017, 2016 or 2015.

### Environmental Liabilities and Expenditures

Accruals (charges to income) for environmental matters are recorded when it is probable that a liability has been incurred and the amount of the liability can be reasonably estimated, based upon current law and existing technologies. These amounts, which are not discounted and are exclusive of claims against third parties, are adjusted periodically as assessment and remediation efforts progress or additional technical or legal information becomes available. Environmental costs are capitalized if the costs increase the value of the property and/or mitigate or prevent contamination from future operations.

### Income Taxes

Deferred taxes are provided for differences between the financial statement and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. A valuation allowance is provided to offset deferred tax assets if, based on the available evidence, it is more likely than not that some or all of the value of the deferred tax assets will not be realized.



## Table of Contents

### Derivative Financial Instruments

We are exposed to market risk in the normal course of our business operations due to our purchases of certain commodities, our ongoing investing and financing activities and our operations that use foreign currencies. The risk of loss can be assessed from the perspective of adverse changes in fair values, cash flows and future earnings. We have established policies and procedures governing our management of market risks and the use of financial instruments to manage exposure to such risks. We use hedge accounting treatment for a significant amount of our business transactions whose risks are covered using derivative instruments. The hedge accounting treatment provides for the deferral of gains or losses on derivative instruments until such time as the related transactions occur.

### Concentration of Credit Risk

Accounts receivable is the principal financial instrument which subjects us to a concentration of credit risk. Credit is extended based upon the evaluation of a customer's financial condition and, generally, collateral is not required. Concentrations of credit risk with respect to receivables are somewhat limited due to our large number of customers, the diversity of these customers' businesses and the geographic dispersion of such customers. Our accounts receivable are predominantly derived from sales denominated in USD or the Euro. We maintain an allowance for doubtful accounts based upon the expected collectibility of all trade receivables.

### Fair Value

Fair value is defined as the price at which an asset could be exchanged in a current transaction between knowledgeable, willing parties or the amount that would be paid to transfer a liability to a new obligor, not the amount that would be paid to settle the liability with the creditor. Where available, fair value is based on observable market prices or parameters or derived from such prices or parameters. Where observable prices or inputs are not available, valuation models are applied. These valuation techniques involve some level of management estimation and judgment, the degree of which is dependent on the price transparency for the instruments or market and the instruments' complexity.

Assets and liabilities recorded at fair value in the consolidated balance sheets are categorized based upon the level of judgment associated with the inputs used to measure their fair value. Hierarchical levels, defined by ASC 820 "Fair Value Measurement" (ASC 820), and directly related to the amount of subjectivity associated with the inputs to fair valuation of these assets and liabilities, are as follows:

Level 1 — Inputs were unadjusted, quoted prices in active markets for identical assets or liabilities at the measurement date.

Level 2 — Inputs (other than quoted prices included in Level 1) were either directly or indirectly observable for the asset or liability through correlation with market data at the measurement date and for the duration of the instrument's anticipated life.

Level 3 — Inputs reflected management's best estimate of what market participants would use in pricing the asset or liability at the measurement date. Consideration was given to the risk inherent in the valuation technique and the risk inherent in the inputs to the model.

### Retirement-Related Benefits

We account for our defined benefit pension plans and non-pension postretirement benefit plans using actuarial models required by ASC 715 "Compensation—Retirement Benefits" (ASC 715). These models use an attribution approach that

generally spreads the financial impact of changes to the plan and actuarial assumptions over the average remaining service lives of the employees in the plan. Changes in liability due to changes in actuarial assumptions such as discount rate, rate of compensation increases and mortality, as well as annual deviations between what was assumed and what was experienced by the plan are treated as actuarial gains or losses. The principle underlying the required attribution approach is that employees render service over their average remaining service lives on a relatively smooth basis and, therefore, the accounting for benefits earned under the pension or non-pension postretirement benefits plans should follow the same relatively smooth pattern. Substantially all domestic defined benefit pension plan participants are no longer accruing benefits; therefore, actuarial gains and losses are amortized based upon the remaining life expectancy of the inactive plan participants. For both the years ended December 31, 2017 and 2016, the average remaining life expectancy of the inactive participants in the domestic defined benefit pension plan was 19 years.



Table of Contents

One of the key assumptions for the net periodic pension calculation is the expected long-term rate of return on plan assets, used to determine the “market-related value of assets.” The “market-related value of assets” recognizes differences between the plan’s actual return and expected return over a five year period. The required use of an expected long-term rate of return on the market-related value of plan assets may result in a recognized pension income that is greater or less than the actual returns of those plan assets in any given year. Over time, however, the expected long-term returns are designed to approximate the actual long-term returns and, therefore, result in a pattern of income and expense recognition that more closely matches the pattern of the services provided by the employees. As differences between actual and expected returns are recognized over five years, they subsequently generate gains and losses that are subject to amortization over the average remaining life expectancy of the inactive plan participants, as described in the preceding paragraph.

We use long-term historical actual return information, the mix of investments that comprise plan assets, and future estimates of long-term investment returns and inflation by reference to external sources to develop the expected long-term rate of return on plan assets as of December 31.

The discount rate assumptions used for pension and non-pension postretirement benefit plan accounting reflect the rates available on high-quality fixed-income debt instruments on December 31 of each year. The rate of compensation increase is based upon our long-term plans for such increases. For retiree medical plan accounting, we review external data and our own historical trends for healthcare costs to determine the healthcare cost trend rates.

**Stock-Based Compensation**

We measure the cost of employee services received in exchange for an award of equity instruments, such as stock options, performance shares and restricted stock, based on the grant-date fair value of the award. This cost is recognized over the period during which an employee is required to provide service in exchange for the award, the requisite service period (usually the vesting period). An initial measurement is made of the cost of employee services received in exchange for an award of liability instruments based on its current fair value and the value of that award is subsequently remeasured at each reporting date through the settlement date. Changes in fair value of liability awards during the requisite service period are recognized as compensation cost over that period.

The fair value of each option granted, which typically vests ratably over three years, but not less than one year, was estimated on the date of grant, using the Black-Scholes option-pricing model with the following assumptions:

	2017	2016	2015		
Dividend yield	2.69	% 6.09	% 2.92	%	
Risk-free interest rate	2.06	% 1.35	% 1.69	%	
Expected volatility	34	% 32	% 34	%	
Expected life (years)	6.0	6.0	6.0		
Weighted-average grant fair value (per option)	\$ 7.78	\$ 1.90	\$ 6.80		
Weighted-average exercise price	\$ 29.82	\$ 13.14	\$ 27.40		
Shares granted	1,621,000	1,670,400	776,750		

Dividend yield was based on our current dividend yield as of the option grant date. Risk-free interest rate was based on zero coupon U.S. Treasury securities rates for the expected life of the options. Expected volatility was based on our historical stock price movements, as we believe that historical experience is the best available indicator of the expected volatility. Expected life of the option grant was based on historical exercise and cancellation patterns, as we believe that historical experience is the best estimate for future exercise patterns.

**RECENT ACCOUNTING PRONOUNCEMENTS**

In February 2018, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2018-02, "Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income" which amends ASC 220 "Income Statement—Reporting Comprehensive Income." This update allows a reclassification from accumulated other comprehensive income (AOCI) to retained earnings for the stranded tax effects resulting from the 2017 Tax Act during each fiscal year or quarter in which the effect of the lower tax rate is recorded. The update is effective for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years, with earlier application permitted. We are currently evaluating the effect of this update on our consolidated financial statements; however, we expect the provisional deferred gain to be reclassified from AOCI to retained earnings to be approximately \$85 million upon adoption.

Table of Contents

Securities and Exchange Commission (SEC) Staff Accounting Bulletin No. 118, “Income Tax Accounting Implications of the Tax Cuts and Jobs Act” (SAB 118), has provided guidance for companies that have not completed their accounting for the income tax effects of U.S. Tax Cuts and Jobs Act (the 2017 Tax Act) in the period of enactment, allowing for a measurement period of up to one year after the enactment date to finalize the recording of the related tax impacts. We recognized a provisional deferred tax benefit of \$437.9 million, which is included as a component of income tax (benefit) provision. At December 31, 2017, we have not completed our accounting for the tax effects of enactment of the 2017 Tax Act as the income tax benefit may require further adjustments in 2018 due to anticipated additional guidance from the U.S. Department of the Treasury, changes in Olin’s assumptions, completion of 2017 tax returns, and further information and interpretations that become available; however, we have made a reasonable estimate of the effects on our existing deferred tax balances and of the one-time transition tax. Additional revisions to our estimates through the measurement period may have a material impact on our consolidated financial statements.

In August 2017, the FASB issued ASU 2017-12, “Targeted Improvements to Accounting for Hedge Activities” which amends ASC 815 “Derivatives and Hedging” (ASC 815). This update is intended to more closely align hedge accounting with companies’ risk management strategies, simplify the application of hedge accounting guidance, and increase transparency as to the scope and results of hedge programs. The update is effective for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years, with earlier application permitted. We are currently evaluating the effect of this update on our consolidated financial statements.

In March 2017, the FASB issued ASU 2017-07, “Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost” which amends ASC 715. This update requires the presentation of the service cost component of net periodic benefit income (costs) in the same income statement line item as other employee compensation costs arising from services rendered during the period. The update requires the presentation of the other components of the net periodic benefit income (costs) separately from the line item that includes the service cost and outside of any subtotal of operating income. The update is effective for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. The guidance in this update is applied on a retrospective basis with earlier application permitted. The adoption of ASU 2017-07 will result in a change in our net periodic benefit income (costs) within operating income, which will be offset by a corresponding change in non-operating income (expense) to reflect the impact of presenting the interest cost, expected return on plan assets and amortization of prior service cost and net actuarial loss components of net periodic benefit income (costs) outside of operating income. We have adopted this update on January 1, 2018 using the retrospective method reflecting the aforementioned reclassification on our consolidated statements of operations in the period of adoption. The adoption of this update did not have a material impact on our consolidated balance sheets or our consolidated statements of cash flows.

In January 2017, the FASB issued ASU 2017-04, “Simplifying the Test for Goodwill Impairment” which amends ASC 350. This update will simplify the measurement of goodwill impairment by eliminating Step 2 from the goodwill impairment test. This update will require an entity to perform its annual, or interim, goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount and recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit’s fair value. The update does not modify the option to perform the qualitative assessment for a reporting unit to determine if the quantitative impairment test is necessary. This update is effective for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years. The guidance in this update is applied on a prospective basis with earlier application permitted. We plan to adopt this update on January 1, 2020 and do not expect the update to have a material impact on our consolidated financial statements.

In August 2016, the FASB issued ASU 2016-15, “Classification of Certain Cash Receipts and Cash Payments” which amends ASC 230 “Statement of Cash Flows.” This update will make eight targeted changes to how cash receipts and cash payments are presented and classified in the statement of cash flows. The update is effective for fiscal years

beginning after December 15, 2017. The update will require adoption on a retrospective basis unless it is impracticable to apply, in which case it would be required to apply the amendments prospectively as of the earliest date practicable. We adopted this update on January 1, 2018. The adoption of this update did not have a material impact on our consolidated financial statements.

In March 2016, the FASB issued ASU 2016-09 “Improvements to Employee Share-Based Payment Accounting” which amends ASC 718 “Compensation—Stock Compensation.” This update will simplify the income tax consequences, accounting for forfeitures and classification on the statements of cash flows of share-based payment arrangements. This update is effective for fiscal years beginning after December 15, 2016, and interim periods within those fiscal years, with earlier application permitted. We adopted this update on January 1, 2017, which was applied prospectively; therefore, prior periods have not been retrospectively adjusted. The adoption of this update did not have a material impact on our consolidated financial statements.

Table of Contents

In February 2016, the FASB issued ASU 2016-02 “Leases,” which supersedes ASC 840 “Leases” and creates a new topic, ASC 842 “Leases.” Subsequent to the issuance of ASU 2016-02, ASC 842 was amended by various updates that amend and clarify the impact and implementation of the aforementioned update. These updates require lessees to recognize a lease liability and a lease asset for all leases, including operating leases, with a term greater than 12 months on its balance sheet. These updates also expand the required quantitative and qualitative disclosures surrounding leases. These updates are effective for fiscal years beginning after December 15, 2018 and interim periods within those fiscal years, with earlier application permitted. These updates will be applied using a modified retrospective transition approach for leases existing at, or entered into after, the beginning of the earliest comparative period presented in the financial statements. We are currently evaluating the effect of these updates on our consolidated financial statements.

In July 2015, the FASB issued ASU 2015-11 “Simplifying the Measurement of Inventory,” which amends ASC 330 “Inventory.” This update requires entities to measure inventory at the lower of cost and net realizable value. Net realizable value is the estimated selling prices in the ordinary course of business, less reasonable predictable costs of completion, disposal and transportation. This update simplifies the current guidance under which an entity must measure inventory at the lower of cost or market. This update does not impact inventory measured using LIFO. This update is effective for fiscal years beginning after December 15, 2016. We adopted this update on January 1, 2017, which was applied prospectively; therefore, prior periods have not been retrospectively adjusted. The adoption of this update did not have a material impact on our consolidated financial statements.

In May 2014, the FASB issued ASU 2014-09 “Revenue from Contracts with Customers” (ASU 2014-09), which amends ASC 605 “Revenue Recognition” and creates a new topic, ASC 606 “Revenue from Contracts with Customers” (ASC 606). Subsequent to the issuance of ASU 2014-09, ASC 606 was amended by various updates that amend and clarify the impact and implementation of the aforementioned update. These updates provide guidance on how an entity should recognize revenue to depict the transfer of control of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. Upon initial application, the provisions of these updates are required to be applied retrospectively to each prior reporting period presented or retrospectively with the cumulative effect of initially applying this update recognized at the date of initial application. These updates also expand the disclosure requirements surrounding revenue recorded from contracts with customers. These updates are effective for fiscal years, and interim periods within those years, beginning after December 15, 2017. We adopted these updates on January 1, 2018 using the modified retrospective transition method. The cumulative effect of applying the updates will be recorded to retained earnings as of the date of adoption. The most significant impact the updates will have will be on our accounting policies and disclosures on revenue recognition. The adoption of these updates did not have a material impact on our consolidated financial statements. Expanded disclosures regarding revenue recognition will be included within our consolidated financial statements in the period of adoption.

**ACQUISITION**

On the Closing Date, Olin consummated the previously announced merger (the Merger), using a Reverse Morris Trust structure, of our wholly owned subsidiary, Blue Cube Acquisition Corp. (Merger Sub), with and into Blue Cube Spinco Inc. (Spinco), with Spinco as the surviving corporation and a wholly owned subsidiary of Olin, as contemplated by the Agreement and Plan of Merger (the Merger Agreement) dated March 26, 2015, among Olin, DowDuPont, Merger Sub and Spinco (collectively, the Acquisition). Pursuant to the Merger Agreement and a Separation Agreement dated March 26, 2015 between DowDuPont and Spinco (the Separation Agreement), prior to the Merger, (1) DowDuPont transferred the Acquired Business to Spinco and (2) DowDuPont distributed Spinco’s stock to DowDuPont’s shareholders by way of a split-off (the Distribution). Upon consummation of the transactions contemplated by the Merger Agreement and the Separation Agreement (the Transactions), the shares of Spinco common stock then outstanding were automatically converted into the right to receive approximately 87.5 million shares of Olin common stock, which were issued by Olin on the Closing Date, and represented approximately 53% of

the then outstanding shares of Olin common stock, together with cash in lieu of fractional shares. Olin's pre-Merger shareholders continued to hold the remaining approximately 47% of the then outstanding shares of Olin common stock. On the Closing Date, Spinco became a wholly owned subsidiary of Olin.

Table of Contents

The following table summarizes the aggregate purchase price for the Acquired Business and related transactions, after the final post-closing adjustments:

	October 5, 2015 (In millions, except per share data)
Shares	87.5
Value of common stock on October 2, 2015	17.46
Equity consideration by exchange of shares	\$ 1,527.4
Cash and debt instruments received by DowDuPont	2,095.0
Payment for certain liabilities including the final working capital adjustment	69.5
Up-front payments under the ethylene agreements	433.5
Total cash, debt and equity consideration	\$ 4,125.4
Long-term debt assumed	569.0
Pension liabilities assumed	442.3
Aggregate purchase price	\$ 5,136.7

The value of the common stock was based on the closing stock price on the last trading day prior to the Closing Date. The aggregate purchase price was adjusted for the final working capital adjustment and the final valuation for the pension liabilities assumed from DowDuPont which resulted in a payment of \$69.5 million for the year ended December 31, 2016.

In connection with the Acquisition, DowDuPont retained liabilities relating to the Acquired Business for litigation, releases of hazardous materials and violations of environmental law to the extent arising prior to the Closing Date.

For the years ended December 31, 2017, 2016 and 2015, we incurred costs related to the integration of the Acquired Business which included \$12.8 million, \$48.8 million and \$76.3 million, respectively, of advisory, legal, accounting, and other professional fees. For the year ended December 31, 2015, we also incurred \$30.5 million of financing-related fees and \$47.1 million as a result of the change in control which created a mandatory acceleration of expenses under deferred compensation plans as a result of the Transactions.

For segment reporting purposes, the Acquired Business's Global Epoxy operating results comprise the Epoxy segment and U.S. Chlor Alkali and Vinyl and Global Chlorinated Organics (Acquired Chlor Alkali Business) operating results combined with our former Chlor Alkali Products and Chemical Distribution segments to comprise the Chlor Alkali Products and Vinyls segment. The Acquired Business's results of operations have been included in our consolidated results for the period subsequent to the Closing Date. Our results for the years ended December 31, 2017, 2016 and 2015 include Epoxy sales of \$2,086.4 million, \$1,822.0 million and \$429.6 million, respectively, and segment (loss) income of \$(11.8) million, \$15.4 million and \$(7.5) million, respectively. For the years ended December 31, 2017, 2016 and 2015, Chlor Alkali Products and Vinyls include sales of the Acquired Chlor Alkali Business of \$2,054.7 million, \$1,715.7 million and \$373.0 million, respectively, and segment income of \$235.6 million, \$164.5 million and \$37.2 million, respectively.





Table of Contents

The Transactions have been accounted for using the acquisition method of accounting which requires, among other things, that assets acquired and liabilities assumed be recognized at their fair values as of the acquisition date. We finalized our purchase price allocation during the third quarter of 2016. The following table summarizes the final allocation of the purchase price to the Acquired Business's assets and liabilities on the Closing Date:

	Initial Valuation	Measurement Period Adjustments	Final Valuation
	(\$ in millions)		
Total current assets	\$921.7	\$ (38.0 )	\$ 883.7
Property, plant and equipment	3,090.8	(11.7 )	3,079.1
Deferred tax assets	76.8	8.2	85.0
Intangible assets	582.3	30.3	612.6
Other assets	426.5	12.4	438.9
Total assets acquired	5,098.1	1.2	5,099.3
Total current liabilities	357.6	2.3	359.9
Long-term debt	517.9	—	517.9
Accrued pension liability	447.1	(4.8 )	442.3
Deferred tax liabilities	1,054.9	(37.2 )	1,017.7
Other liabilities	2.0	6.6	8.6
Total liabilities assumed	2,379.5	(33.1 )	2,346.4
Net identifiable assets acquired	2,718.6	34.3	2,752.9
Goodwill	1,427.5	(55.0 )	1,372.5
Fair value of net assets acquired	\$4,146.1	\$ (20.7 )	\$ 4,125.4

Measurement period adjustments to the initial valuation primarily consisted of the final working capital adjustment, the final valuation for the pension liabilities assumed from DowDuPont, changes in the estimated fair value of acquired intangible assets and property, plant and equipment, and the finalization of deferred tax assets and liabilities. Included in total current assets are cash and cash equivalents of \$25.4 million, inventories of \$456.4 million and receivables of \$401.6 million with a contracted value of \$403.8 million. Included in total current liabilities are current installments of long-term debt of \$51.1 million.

Based on final valuations, purchase price was allocated to intangible assets as follows:

	October 5, 2015	Gross Amount (\$ in millions)
	Weighted-Average Amortization Period	
Customers, customer contracts and relationships	15 Years	\$ 520.5
Acquired technology	7 Years	85.1
Trade name	5 Years	7.0
Total acquired intangible assets		\$ 612.6

Based on final valuations, \$1,372.5 million was assigned to goodwill, none of which is deductible for tax purposes. The primary reasons for the Acquisition and the principal factors that contributed to the Acquired Business purchase price that resulted in the recognition of goodwill are due to the providing of increased production capacity and diversification of Olin's product portfolio, cost-saving opportunities and enhanced size and geographic presence. The cost-saving opportunities include improved operating efficiencies and asset optimization.

Goodwill recorded in the Acquisition is not amortized but will be reviewed for impairment annually in the fourth quarter and/or when circumstances or other events indicate that impairment may have occurred.

Table of Contents

## Transaction financing

Prior to the Distribution, DowDuPont received from Spinco distributions of cash and debt instruments of Spinco with an aggregate value of \$2,095.0 million (collectively, the Cash and Debt Distribution). On the Closing Date, Spinco issued \$720.0 million aggregate principal amount of 9.75% senior notes due October 15, 2023 (2023 Notes) and \$500.0 million aggregate principal amount of 10.00% senior notes due October 15, 2025 (2025 Notes and, together with the 2023 Notes, the Notes) to DowDuPont. DowDuPont transferred the Notes to certain unaffiliated securityholders in satisfaction of existing debt obligations of DowDuPont held or acquired by those unaffiliated securityholders. On October 5, 2015, certain initial purchasers purchased the Notes from the unaffiliated securityholders. During 2016, the Notes were registered under the Securities Act of 1933, as amended. Interest on the Notes began accruing from October 1, 2015 and are paid semi-annually beginning on April 15, 2016. The Notes are not redeemable at any time prior to October 15, 2020. Neither Olin nor Spinco received any proceeds from the sale of the Notes. Upon the consummation of the Transactions, Olin became guarantor of the Notes.

On June 23, 2015, Spinco entered into a five-year delayed-draw term loan facility of up to \$1,050.0 million. As of the Closing Date, Spinco drew \$875.0 million to finance the cash portion of the Cash and Debt Distribution. Also on June 23, 2015, Olin and Spinco entered into a five-year \$1,850.0 million senior credit facility consisting of a \$500.0 million senior revolving credit facility, which replaced Olin's \$265.0 million senior revolving credit facility at the closing of the Merger, and a \$1,350.0 million (subject to reduction by the aggregate amount of the term loans funded to Spinco under the Spinco term loan facility) delayed-draw term loan facility. As of the Closing Date, an additional \$475.0 million was drawn by Olin under this term loan facility which was used to pay fees and expenses of the Transactions, obtain additional funds for general corporate purposes and refinance Olin's existing senior term loan facility due in 2019. Subsequent to the Closing Date, these senior credit facilities were consolidated into a single \$1,850.0 million senior credit facility, which includes a \$1,350.0 million term loan facility. The existing \$1,850.0 million senior credit facility was refinanced in its entirety on March 9, 2017 by a five-year \$1,975.0 million senior credit facility.

On August 25, 2015, Olin entered into a Credit Agreement (the Credit Agreement) with a syndicate of lenders and Sumitomo Mitsui Banking Corporation (Sumitomo), as administrative agent, in connection with the Transactions. The Credit Agreement provides for a term credit facility (the Sumitomo Credit Facility) under which Olin obtained term loans in an aggregate amount of \$600.0 million. On November 3, 2015, we entered into an amendment to the Sumitomo Credit Facility which increased the aggregate amount of term loans available by \$200.0 million. On the Closing Date, \$600.0 million of loans under the Credit Agreement were made available and borrowed upon and on November 5, 2015, \$200.0 million of loans under the Credit Agreement were made available and borrowed upon. The term loans under the Sumitomo Credit Facility were set to mature on October 5, 2018 and had no scheduled amortization payments. The proceeds of the Sumitomo Credit Facility were used to refinance existing Spinco indebtedness at the Closing Date, to pay fees and expenses in connection with the Transactions and for general corporate purposes. The Credit Agreement contained customary representations, warranties and affirmative and negative covenants which are substantially similar to those included in the \$1,850.0 million senior credit facility. During 2016, \$210.0 million was repaid under the Sumitomo Credit Facility using proceeds from the receivables financing agreement. During 2017, the remaining \$590.0 million was repaid the Sumitomo Credit Facility using proceeds from the \$500.0 million senior notes due 2027 and the \$1,975.0 million senior credit facility.

On March 26, 2015, we and certain financial institutions executed commitment letters pursuant to which the financial institutions agreed to provide \$3,354.5 million of financing to Spinco to finance the amount of the Cash and Debt Distribution and to provide financing, if needed, to Olin to refinance certain of our existing debt (the Bridge Financing), in each case on the terms and conditions set forth in the commitment letters. The Bridge Financing was not drawn on to facilitate the Transactions, and the commitments for the Bridge Financing were terminated as of the Closing Date. For the year ended December 31, 2015, we paid debt issuance costs of \$30.0 million associated with the Bridge Financing, which were included in interest expense.

Other acquisition-related transactions

In connection with the Transactions, certain additional agreements have been entered into, including, among others, an Employee Matters Agreement, a Tax Matters Agreement, site, transitional and other services agreements, supply and purchase agreements, real estate agreements, technology licenses and intellectual property agreements.

In addition, Olin and DowDuPont entered into arrangements for the long-term supply of ethylene by DowDuPont to Olin, pursuant to which, among other things, Olin has made upfront payments of \$433.5 million on the Closing Date in order to receive ethylene at producer economics and for certain reservation fees and for the option to obtain additional ethylene at producer economics. The fair value of the long-term supply contracts recorded as of the Closing Date was a long-term asset of \$416.1 million which will be amortized over the life of the contracts as ethylene is received. During 2016, we exercised one of

Table of Contents

the options to reserve additional ethylene at producer economics. In September 2017, DowDuPont's new Texas 9 ethylene cracker in Freeport, TX became operational. As a result, during 2017, a payment of \$209.4 million was made in connection with this option which increased the value of the long-term asset.

On February 27, 2017, we exercised the remaining option to obtain additional ethylene at producer economics from DowDuPont. In connection with the exercise of this option, we also secured a long-term customer arrangement. As a result, an additional payment will be made to DowDuPont of between \$440 million and \$465 million on or about the fourth quarter of 2020. During September 2017, as a result of DowDuPont's new Texas 9 ethylene cracker becoming operational, Olin recognized a long-term asset and other liabilities of \$389.2 million, which represents the present value of the estimated 2020 payment. The discount amount of \$51.8 million will be recorded as interest expense through the fourth quarter of 2020.

In connection with the Transactions and effective October 1, 2015, we filed a Certificate of Amendment to our Articles of Incorporation to increase the number of authorized shares of Olin common stock from 120.0 million shares to 240.0 million shares.

## Pro forma financial information

The following pro forma summary reflects consolidated results of operations as if the Acquisition had occurred on January 1, 2015 (unaudited).

	Year Ended December 31, 2015 (\$ in millions, except per share data)
Sales	\$ 5,681.8
Net loss	(36.6)
Net loss per common share:	
Basic	\$ (0.22 )
Diluted	\$ (0.22 )

The pro forma financial information was prepared based on historical financial information and has been adjusted to give effect to pro forma adjustments that are (i) directly attributable to the Transactions, (ii) factually supportable and (iii) expected to have a continuing impact on the combined results. The pro forma statement of operations uses estimates and assumptions based on information available at the time. Management believes the estimates and assumptions to be reasonable; however, actual results may differ significantly from this pro forma financial information. The pro forma results presented do not include any anticipated synergies or other expected benefits that may be realized from the Transactions. The pro forma information is not intended to reflect the actual results that would have occurred had the companies actually been combined during the period presented.

The pro forma results for the year ended December 31, 2015 primarily includes recurring adjustments for re-pricing of sales, raw materials and services to/from DowDuPont relating to arrangements for long-term supply agreements for the sale of raw materials, including ethylene and benzene, and services pursuant to the Separation Agreement, adjustments to eliminate historical sales between the Acquired Business and Olin, additional amortization expense

related to the fair value of acquired identifiable intangible assets, additional depreciation expense related to the fair value adjustment to property, plant and equipment, interest expense related to the incremental debt issued in conjunction with the Acquisition and an adjustment to tax-effect the aforementioned pro forma adjustments using an estimated aggregate statutory income tax rate of the jurisdictions to which the above adjustments relate.

In addition to the above recurring adjustments, the pro forma results for the year ended December 31, 2015 included a non-recurring adjustment of \$47.0 million relating to the elimination of transaction costs incurred that were directly related to the Transactions, and do not have a continuing impact on our combined operating results. The pro forma results for the year ended December 31, 2015 also included non-recurring adjustments of \$47.1 million relating to the impact of costs incurred as a result of the change in control which created a mandatory acceleration of expenses under deferred compensation plans and \$24.0 million related to additional costs of goods sold related to the increase of inventory to fair value at the acquisition date related to the purchase accounting for inventory.

Table of Contents

## RESTRUCTURING CHARGES

On March 21, 2016, we announced that we had made the decision to close a combined total of 433,000 tons of chlor alkali capacity across three separate locations. Associated with this action, we have permanently closed our Henderson, NV chlor alkali plant with 153,000 tons of capacity and have reconfigured the site to manufacture bleach and distribute caustic soda and hydrochloric acid. Also, the capacity of our Niagara Falls, NY chlor alkali plant has been reduced from 300,000 tons to 240,000 tons and the chlor alkali capacity at our Freeport, TX facility was reduced by 220,000 tons. This 220,000 ton reduction was entirely from diaphragm cell capacity. For the years ended December 31, 2017 and 2016, we recorded pretax restructuring charges of \$32.6 million and \$111.3 million for the write-off of equipment and facility costs, lease and other contract termination costs, employee severance and related benefit costs, employee relocation costs and facility exit costs related to these actions. We expect to incur additional restructuring charges through 2020 of approximately \$22 million related to these capacity reductions.

On December 12, 2014, we announced that we had made the decision to permanently close the portion of the Becancour, Canada chlor alkali facility that has been shut down since late June 2014. This action reduced the facility's chlor alkali capacity by 185,000 tons. Subsequent to the shut down, the plant predominantly focuses on bleach and hydrochloric acid, which are value-added products, as well as caustic soda. For the years ended December 31, 2017, 2016 and 2015, we recorded pretax restructuring charges of \$3.3 million, \$0.8 million and \$2.0 million, respectively, for the write-off of equipment and facility costs, lease and other contract termination costs and facility exit costs related to these actions. We expect to incur additional restructuring charges through 2018 of approximately \$2 million related to the shut down of this portion of the facility.

On November 3, 2010, we announced that we made the decision to relocate the Winchester centerfire pistol and rifle ammunition manufacturing operations from East Alton, IL to Oxford, MS. Consistent with this decision in 2010, we initiated an estimated \$110 million five-year project, which includes approximately \$80 million of capital spending. The capital spending was partially financed by \$31 million of grants provided by the State of Mississippi and local governments. During 2016, the final rifle ammunition production equipment relocation was completed. For the years ended December 31, 2017, 2016 and 2015, we recorded pretax restructuring charges of \$1.7 million, \$0.8 million and \$0.7 million, respectively, for employee severance and related benefit costs, employee relocation costs and facility exit costs related to these actions.

The following table summarizes the 2017, 2016 and 2015 activities by major component of these restructuring actions and the remaining balances of accrued restructuring costs as of December 31, 2017:

	Employee severance and job related benefits	Lease and other contract termination costs	Employee relocation costs	Facility exit costs	Write-off of equipment and facility	Total
	(\$ in millions)					
Balance at January 1, 2015	\$ 11.2	\$ 4.5	\$ —	\$ —	\$ —	\$ 15.7
2015 restructuring charges	—	0.7	0.6	0.9	0.5	2.7
Amounts utilized	(6.0 )	(2.9 )	(0.6 )	(0.9 )	(0.5 )	(10.9 )
Currency translation adjustments	(0.6 )	(0.2 )	—	—	—	(0.8 )
Balance at December 31, 2015	4.6	2.1	—	—	—	6.7
2016 restructuring charges	5.1	13.6	2.1	15.5	76.6	112.9
Amounts utilized	(6.3 )	(8.2 )	(2.1 )	(13.7 )	(76.6 )	(106.9 )
Balance at December 31, 2016	3.4	7.5	—	1.8	—	12.7

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2017 restructuring charges	2.0	22.1	0.3	11.7	1.5	37.6
Amounts utilized	(3.6 )	(26.3 )	(0.3 )	(13.5 )	(1.5 )	(45.2 )
Balance at December 31, 2017	\$1.8	\$ 3.3	\$ —	\$ —	\$ —	\$5.1

75

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Table of Contents

The following table summarizes the cumulative restructuring charges of these 2016, 2014 and 2010 restructuring actions by major component through December 31, 2017:

	Chlor Alkali Products and Vinyls Beacancourt Capacity Reductions		Winchester Total	
	(\$ in millions)			
Write-off of equipment and facility	\$3.5	\$ 78.1	\$ —	\$81.6
Employee severance and job related benefits	2.7	5.5	14.7	22.9
Facility exit costs	4.6	23.1	2.3	30.0
Pension and other postretirement benefits curtailment	—	—	4.1	4.1
Employee relocation costs	—	1.7	6.0	7.7
Lease and other contract termination costs	5.3	35.6	—	40.9
Total cumulative restructuring charges	\$16.1	\$ 144.0	\$ 27.1	\$187.2

As of December 31, 2017, we have incurred cash expenditures of \$96.0 million and non-cash charges of \$86.1 million related to these restructuring actions. The remaining balance of \$5.1 million is expected to be paid out through 2020.

**EARNINGS PER SHARE**

Basic and diluted income (loss) per share are computed by dividing net income (loss) by the weighted-average number of common shares outstanding. Diluted net income per share reflects the dilutive effect of stock-based compensation.

Computation of Income (Loss) per Share	Years ended December 31,		
	2017	2016	2015
	(In millions, except per share data)		
Net income (loss)	\$549.5	\$(3.9 )	\$(1.4 )
Basic shares	166.2	165.2	103.4
Basic net income (loss) per share	\$3.31	\$(0.02)	\$(0.01)
Diluted shares:			
Basic shares	166.2	165.2	103.4
Stock-based compensation	2.3	—	—
Diluted shares	168.5	165.2	103.4
Diluted net income (loss) per share	\$3.26	\$(0.02)	\$(0.01)

The computation of dilutive shares from stock-based compensation does not include 1.6 million, 6.5 million and 5.2 million shares in 2017, 2016 and 2015, respectively, as their effect would have been anti-dilutive.

**ACCOUNTS RECEIVABLES**

On December 20, 2016, we entered into a three year, \$250.0 million Receivables Financing Agreement with PNC Bank, National Association, as administrative agent (Receivables Financing Agreement). Under the Receivables Financing Agreement, our eligible trade receivables are used for collateralized borrowings and continue to be serviced by us. As of December 31, 2017 and 2016, \$340.9 million and \$282.3 million, respectively, of our trade receivables were pledged as collateral and we had \$249.7 million and \$210.0 million, respectively, drawn under the agreement.

For the year ended December 31, 2017, we borrowed \$40.0 million under the Receivables Financing Agreement and used the proceeds to fund a portion of the payment to DowDuPont associated with a long-term ethylene supply contract to reserve additional ethylene at producer economics. For the year ended December 31, 2016, the proceeds of the Receivables Financing Agreement were used to repay \$210.0 million of the Sumitomo Credit Facility. As of December 31, 2017, we had \$0.3 million additional borrowing capacity under the Receivables Financing Agreement. In addition, the Receivables Financing Agreement incorporates the leverage and coverage covenants that are contained in the senior revolving credit facility.

Table of Contents

On June 29, 2016, we entered into a trade accounts receivable factoring arrangement and, on December 22, 2016, we entered into a separate trade accounts receivable factoring arrangement, which were both subsequently amended (collectively the AR Facilities). Pursuant to the terms of the AR Facilities, certain of our subsidiaries may sell their accounts receivable up to a maximum of \$294.0 million. We will continue to service such accounts. These receivables qualify for sales treatment under ASC 860 “Transfers and Servicing” and, accordingly, the proceeds are included in net cash provided by operating activities in the consolidated statements of cash flows. The gross amount of receivables sold for the years ended December 31, 2017 and 2016 totaled \$1,655.2 million and \$533.6 million, respectively. The factoring discount paid under the AR Facilities is recorded as interest expense on the consolidated statements of operations. The factoring discount for the years ended December 31, 2017 and 2016 was \$3.7 million and \$1.1 million, respectively. The agreements are without recourse and therefore no recourse liability has been recorded as of December 31, 2017. As of December 31, 2017 and 2016, \$182.3 million and \$126.1 million, respectively, of receivables qualifying for sales treatment were outstanding and will continue to be serviced by us.

At December 31, 2017 and 2016, our consolidated balance sheets included other receivables of \$105.5 million and \$95.6 million, respectively, which were classified as receivables, net.

## ALLOWANCE FOR DOUBTFUL ACCOUNTS RECEIVABLES

Allowance for doubtful accounts receivable consisted of the following:

	December 31,	
	2017	2016
	(\$ in millions)	
Beginning balance	\$10.1	\$6.4
Provisions charged	2.3	4.5
Write-offs, net of recoveries	(0.1 )	(0.8 )
Ending balance	\$12.3	\$10.1

## INVENTORIES

	December 31,	
	2017	2016
	(\$ in millions)	
Supplies	\$66.1	\$58.1
Raw materials	75.3	72.6
Work in process	127.8	110.7
Finished goods	462.6	424.9
	731.8	666.3
LIFO reserves	(49.2 )	(35.9 )
Inventories, net	\$682.6	\$630.4

Inventories valued using the LIFO method comprised 55% and 54% of the total inventories at December 31, 2017 and 2016, respectively. The replacement cost of our inventories would have been approximately \$49.2 million and \$35.9 million higher than that reported at December 31, 2017 and 2016, respectively.

Table of Contents

## OTHER ASSETS

Included in other assets were the following:

	December 31,	
	2017	2016
	(\$ in millions)	
Investments in non-consolidated affiliates	\$28.5	\$26.7
Deferred debt issuance costs	2.5	2.6
Tax-related receivables	10.2	17.5
Interest rate swaps	3.6	7.7
Supply contracts	1,137.1	566.7
Other	26.5	23.2
Other assets	\$1,208.4	\$644.4

In connection with the Acquisition, Olin and DowDuPont entered into arrangements for the long-term supply of ethylene by DowDuPont to Olin, pursuant to which, among other things, Olin made upfront payments of \$433.5 million on the Closing Date in order to receive ethylene at producer economics and for certain reservation fees and for the option to obtain additional ethylene at producer economics. The fair value of the long-term supply contracts recorded as of the Closing Date was a long-term asset of \$416.1 million which will be amortized over the life of the contracts as ethylene is received. During 2016, we exercised one of the options to reserve additional ethylene supply at producer economics. In September 2017, DowDuPont's new Texas 9 ethylene cracker in Freeport, TX became operational. As a result, during 2017, a payment of \$209.4 million was made in connection with this option which increased the value of the long-term asset.

On February 27, 2017, we exercised the remaining option to obtain additional future ethylene at producer economics from DowDuPont. In connection with the exercise of this option, we also secured a long-term customer arrangement. As a result, an additional payment will be made to DowDuPont of between \$440 million and \$465 million on or about the fourth quarter of 2020. During September 2017, as a result of DowDuPont's new Texas 9 ethylene cracker becoming operational, Olin recognized a long-term asset and other liabilities of \$389.2 million, which represents the present value of the estimated 2020 payment. The discount amount of \$51.8 million will be recorded as interest expense through the fourth quarter of 2020. For the year ended December 31, 2017, interest expense of \$3.9 million was recorded for the accretion on the 2020 payment discount.

During 2016, Olin entered into arrangements to increase our supply of low cost electricity. In conjunction with these arrangements, Olin made payments of \$175.7 million in 2016. The payments made under these arrangements will be amortized over the life of the contracts as electrical power is received.

The weighted-average useful life of long-term supply contracts at December 31, 2017 was 20 years. For the years ended December 31, 2017, 2016 and 2015, amortization expense of \$28.2 million, \$21.5 million and \$4.3 million, respectively, was recognized within cost of goods sold related to these supply contracts and is reflected in depreciation and amortization on the consolidated statements of cash flows. We estimate that amortization expense will be approximately \$38 million in 2018, 2019 and 2020 and \$62 million in 2021 and 2022 related to these long-term supply contracts. The long-term supply contracts are monitored for impairment each reporting period.

Table of Contents

## PROPERTY, PLANT AND EQUIPMENT

	Useful Lives	December 31,	
		2017	2016
		(\$ in millions)	
Land and improvements to land	10-20 Years	\$281.7	\$281.2
Buildings and building equipment	10-30 Years	382.4	375.0
Machinery and equipment	3-15 Years	5,028.4	4,765.9
Leasehold improvements		3.9	3.4
Construction in progress		212.5	171.0
Property, plant and equipment		5,908.9	5,596.5
Accumulated depreciation		(2,333.1 )	(1,891.6 )
Property, plant and equipment, net		\$3,575.8	\$3,704.9

The weighted-average useful life of machinery and equipment at December 31, 2017 was 12 years. Depreciation expense was \$465.1 million, \$435.7 million and \$198.1 million for 2017, 2016 and 2015, respectively. Interest capitalized was \$3.0 million, \$1.9 million and \$1.1 million for 2017, 2016 and 2015, respectively. Maintenance, turnaround costs and repairs charged to operations amounted to \$414.7 million, \$329.6 million and \$187.7 million in 2017, 2016 and 2015, respectively.

The consolidated statements of cash flows for the years ended December 31, 2017, 2016 and 2015, included an increase of \$0.5 million and decreases of \$29.9 million and \$7.4 million, respectively, to capital expenditures, with the corresponding change to accounts payable and accrued liabilities, related to purchases of property, plant and equipment included in accounts payable at December 31, 2017, 2016 and 2015.

During 2016, we entered into sale/leaseback transactions for railcars that we acquired in connection with the Acquisition. We received proceeds from the sales of \$40.4 million for the year ended December 31, 2016.

## INVESTMENTS—AFFILIATED COMPANIES

During 2013, we sold our equity interest in a bleach joint venture which resulted in a gain of \$6.5 million. During both 2016 and 2015, we received \$8.8 million as a result of the sale. As of December 31, 2016, all amounts had been collected under the sale arrangement.

We hold a 9.1% limited partnership interest in Bay Gas Storage Company, Ltd. (Bay Gas), an Alabama limited partnership, in which EnergySouth, Inc. (EnergySouth) is the general partner with interest of 90.9%. Bay Gas owns, leases and operates underground gas storage and related pipeline facilities, which are used to provide storage in the McIntosh, AL area and delivery of natural gas to EnergySouth customers.

The following table summarizes our investment in our non-consolidated equity affiliate:

	December	
	2017	2016
	(\$ in millions)	
Bay Gas	\$28.5	\$26.7

The following table summarizes our equity earnings of our non-consolidated affiliate:

	Years Ended		
	December 31,		
	2017	2016	2015
	(\$ in millions)		
Bay Gas	\$1.8	\$1.7	\$1.7

We did not receive any distributions from our non-consolidated affiliates in 2017, 2016 and 2015.

79

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Table of Contents

## GOODWILL AND INTANGIBLE ASSETS

Changes in the carrying value of goodwill were as follows:

	Chlor Alkali Products and Vinyls (\$ in millions)	Epoxy	Total
Balance at January 1, 2016	\$1,877.5	\$296.6	\$2,174.1
Acquisition activity	(45.3 )	(9.7 )	(55.0 )
Foreign currency translation adjustment	(0.9 )	(0.2 )	(1.1 )
Balance at December 31, 2016	1,831.3	286.7	2,118.0
Foreign currency translation adjustment	1.6	0.4	2.0
Balance at December 31, 2017	\$1,832.9	\$287.1	\$2,120.0

The decrease in goodwill during 2016 was a result of measurement period adjustments from the preliminary valuation of the Acquisition and the effects of foreign currency translation adjustments. We finalized our purchase price allocation of the Acquisition during the third quarter of 2016.

Intangible assets consisted of the following:

	Useful Lives	December 31, 2017			2016		
		Gross Amount	Accumulated Amortization	Net	Gross Amount	Accumulated Amortization	Net
Customers, customer contracts and relationships	10-15 Years	\$679.5	\$ (163.6 )	\$515.9	\$667.8	\$ (112.9 )	\$554.9
Trade name	5 Years	7.1	(3.2 )	3.9	17.8	(12.7 )	5.1
Acquired technology	7 Years	86.1	(27.7 )	58.4	84.2	(15.0 )	69.2
Other	4-10 Years	2.3	(2.0 )	0.3	2.3	(1.9 )	0.4
Total intangible assets		\$775.0	\$ (196.5 )	\$578.5	\$772.1	\$ (142.5 )	\$629.6

In connection with the integration of the Acquired Business, in the first quarter of 2016, the K.A. Steel Chemicals Inc. trade name was changed from an indefinite life intangible asset to an intangible asset with a finite useful life of one year. Amortization expense of \$10.9 million was recognized within cost of goods sold for the year ended December 31, 2016 related to the change in useful life.

Amortization expense relating to intangible assets was \$62.8 million, \$73.8 million and \$25.8 million in 2017, 2016 and 2015, respectively. We estimate that amortization expense will be approximately \$63 million in 2018, 2019 and 2020, approximately \$61 million in 2021 and approximately \$54 million in 2022.

Table of Contents

## DEBT

## Long-Term Debt

	December 31,	
	2017	2016
	(\$ in millions)	
Notes payable:		
Variable-rate Senior Term Loan Facility, due 2022 and 2020, respectively, (3.57% and 2.77% at December 31, 2017 and 2016, respectively)	\$1,323.4	\$1,282.5
Variable-rate Sumitomo Credit Facility, due 2018 (2.27% at December 31, 2016)	—	590.0
Variable-rate Recovery Zone bonds, due 2024-2035 (3.27% and 2.47% at December 31, 2017 and 2016, respectively)	103.0	103.0
Variable-rate Go Zone bonds, due 2024 (3.27% and 2.47% at December 31, 2017 and 2016, respectively)	50.0	50.0
Variable-rate Industrial development and environmental improvement obligations, due 2025 (1.27% and 0.25% at December 31, 2017 and 2016, respectively)	2.9	2.9
9.75%, due 2023	720.0	720.0
10.00%, due 2025	500.0	500.0
5.50%, due 2022	200.0	200.0
5.125%, due 2027	500.0	—
7.23%, SunBelt Notes due 2013-2017	—	12.2
Senior Revolving Credit Facility	20.0	—
Receivables Financing Agreement	249.7	210.0
Capital lease obligations	3.7	3.9
Total notes payable	3,672.7	3,674.5
Deferred debt issuance costs	(32.6 )	(28.5 )
Interest rate swaps	(28.1 )	(28.4 )
Total debt	3,612.0	3,617.6
Amounts due within one year	0.7	80.5
Total long-term debt	\$3,611.3	\$3,537.1

On March 9, 2017, we entered into a new five-year \$1,975.0 million senior credit facility, which amended and restated the existing \$1,850.0 million senior credit facility. Pursuant to the agreement, the aggregate principal amount under the term loan facility was increased to \$1,375.0 million (Term Loan Facility), and the aggregate commitments under the senior revolving credit facility were increased to \$600.0 million (Senior Revolving Credit Facility and, together with the Term Loan Facility, the Senior Credit Facility), from \$500.0 million. At December 31, 2017, we had \$574.9 million available under our \$600.0 million Senior Revolving Credit Facility because we had outstanding borrowings of \$20.0 million and issued \$5.1 million of letters of credit. In March 2017, we drew the entire \$1,375.0 million term loan and used the proceeds to redeem the remaining balance of the existing \$1,350.0 million senior credit facility of \$1,282.5 million and a portion of the Sumitomo Credit Facility. The maturity date for the Senior Credit Facility was extended from October 5, 2020 to March 9, 2022. The \$600.0 million Senior Revolving Credit Facility includes a \$100.0 million letter of credit subfacility. The Term Loan Facility includes amortization payable in equal quarterly installments at a rate of 5.0% per annum for the first two years, increasing to 7.5% per annum for the following year and to 10.0% per annum for the last two years.

Under the Senior Credit Facility, we may select various floating rate borrowing options. The actual interest rate paid on borrowings under the Senior Credit Facility is based on a pricing grid which is dependent upon the leverage ratio as calculated under the terms of the applicable facility for the prior fiscal quarter. The facility includes various customary restrictive covenants, including restrictions related to the ratio of debt to earnings before interest expense, taxes, depreciation and amortization (leverage ratio) and the ratio of earnings before interest expense, taxes,



depreciation and amortization to interest expense (coverage ratio). Compliance with these covenants is determined quarterly based on the operating cash flows. We were in compliance with all covenants and restrictions under all our outstanding credit agreements as of December 31, 2017 and 2016, and no event of default had occurred that would permit the lenders under our outstanding credit agreements to accelerate the debt if not cured. In the future, our ability to generate sufficient operating cash flows, among other factors, will

81

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Table of Contents

determine the amounts available to be borrowed under these facilities. As of December 31, 2017, there were no covenants or other restrictions that would have limited our ability to borrow under these facilities.

On March 9, 2017, Olin issued \$500.0 million aggregate principal amount of 5.125% senior notes due September 15, 2027 (2027 Notes), which were registered under the Securities Act of 1933, as amended. Interest on the 2027 Notes began accruing from March 9, 2017 and is paid semi-annually beginning on September 15, 2017. Proceeds from the 2027 Notes were used to redeem the remaining balance of the Sumitomo Credit Facility.

On December 20, 2016, we entered into a three year, \$250.0 million Receivables Financing Agreement. Under the Receivables Financing Agreement, our eligible trade receivables are used for collateralized borrowings and are continued to be serviced by us. As of December 31, 2017 and 2016, \$340.9 million and \$282.3 million, respectively, of our trade receivables were pledged as collateral and we had \$249.7 million and \$210.0 million, respectively, drawn under the agreement. For the year ended December 31, 2017, we borrowed \$40.0 million under the Receivables Financing Agreement and used the proceeds to fund a portion of the payment to DowDuPont associated with a long-term ethylene supply contract to reserve additional ethylene at producer economics. During 2016, we drew \$230.0 million under the agreement and subsequently repaid \$20.0 million. For the year ended December 31, 2016, the proceeds of the Receivables Financing Agreement were used to repay \$210.0 million of the Sumitomo Credit Facility. In addition, the Receivables Financing Agreement incorporates the leverage and coverage covenants that are contained in the Senior Revolving Credit Facility.

On the Closing Date, Spinco issued \$720.0 million aggregate principal 2023 Notes and \$500.0 million aggregate principal 2025 Notes to DowDuPont. DowDuPont transferred the Notes to certain unaffiliated securityholders in satisfaction of existing debt obligations of DowDuPont held or acquired by those unaffiliated securityholders. On October 5, 2015, certain initial purchasers purchased the Notes from the unaffiliated securityholders. During 2016, the Notes were registered under the Securities Act of 1933, as amended. Interest on the Notes began accruing from October 1, 2015 and are paid semi-annually beginning on April 15, 2016. The Notes are not redeemable at any time prior to October 15, 2020. Neither Olin nor Spinco received any proceeds from the sale of the Notes. Upon the consummation of the Transactions, Olin became guarantor of the Notes.

On June 23, 2015, Spinco entered into a five-year delayed-draw term loan facility of up to \$1,050.0 million. As of the Closing Date, Spinco drew \$875.0 million to finance the cash portion of the Cash and Debt Distribution. Also on June 23, 2015, Olin and Spinco entered into a five-year \$1,850.0 million senior credit facility consisting of a \$500.0 million senior revolving credit facility, which replaced Olin's \$265.0 million senior revolving credit facility at the closing of the Merger, and a \$1,350.0 million delayed-draw term loan facility. As of the Closing Date, an additional \$475.0 million was drawn by Olin under this term loan facility which was used to pay fees and expenses of the Transactions, obtain additional funds for general corporate purposes and refinance Olin's existing senior term loan facility due in 2019. Subsequent to the Closing Date, these senior credit facilities were consolidated into a single \$1,850.0 million senior credit facility. The \$1,850.0 million senior credit facility was refinanced in its entirety by the Senior Credit Facility during 2017. We recognized interest expense of \$1.2 million for the write-off of unamortized deferred debt issuance costs related to this action during 2017.

For the years ended December 31, 2017 and 2016, we repaid \$51.6 million and \$67.5 million under the required quarterly installments of the term loan facilities, respectively.

On August 25, 2015, Olin entered into a Credit Agreement with a syndicate of lenders and Sumitomo Mitsui Banking Corporation, as administrative agent, in connection with the Transactions. Olin obtained term loans in an aggregate amount of \$600.0 million under the Sumitomo Credit Facility. On November 3, 2015, we entered into an amendment to the Sumitomo Credit Facility which increased the aggregate amount of term loans available by \$200.0 million. On the Closing Date, \$600.0 million of loans under the Credit Agreement were made available and borrowed upon and on

November 5, 2015, \$200.0 million of loans under the Credit Agreement were made available and borrowed upon. The term loans under the Sumitomo Credit Facility were set to mature on October 5, 2018 and had no scheduled amortization payments. The proceeds of the Sumitomo Credit Facility were used to refinance existing Spinco indebtedness at the Closing Date of \$569.0 million, to pay fees and expenses in connection with the Transactions and for general corporate purposes. The Credit Agreement contained customary representations, warranties and affirmative and negative covenants which are substantially similar to those included in the \$1,850.0 million senior credit facility. During 2016, \$210.0 million was repaid under the Sumitomo Credit Facility using proceeds from the Receivables Financing Agreement. During 2017, the remaining balance of \$590.0 million was repaid using proceeds from the Senior Credit Facility and the 2027 Notes. We recognized interest expense of \$1.5 million related to the write-off of unamortized deferred debt issuance costs related to this action in 2017.

In June 2016, we repaid \$125.0 million of 6.75% senior notes due 2016, which became due.

## Table of Contents

In 2017, we paid debt issuance costs of \$11.2 million relating to the Senior Credit Facility and the 2027 Notes. In 2016, we paid debt issuance costs of \$1.0 million for the registration of the Notes. In 2015, we paid debt issuance costs of \$13.3 million relating to the Notes, the Sumitomo Credit Facility and the \$1,850.0 million senior credit facility.

On March 26, 2015, we and certain financial institutions executed commitment letters pursuant to which the financial institutions agreed to provide \$3,354.5 million of Bridge Financing, in each case on the terms and conditions set forth in the commitment letters. The Bridge Financing was not drawn on to facilitate the Acquisition and the commitments for the Bridge Financing have been terminated as of the Closing Date. For the year ended December 31, 2015, we paid debt issuance costs of \$30.0 million associated with the Bridge Financing, which are included in interest expense.

On June 24, 2014, we entered into a five-year \$415.0 million senior credit facility consisting of a \$265.0 million senior revolving credit facility, which replaced our previous \$265.0 million senior revolving credit facility, and a \$150.0 million delayed-draw term loan facility. In August 2014, we drew the entire \$150.0 million of the term loan and used the proceeds to redeem our 2019 Notes. In 2015, we repaid \$2.8 million under the required quarterly installments of the \$150.0 million term loan facility and, on the Closing Date of the Acquisition, the remaining \$146.3 million was refinanced using the proceeds of the \$1,850.0 million senior credit facility. We recognized interest expense of \$0.5 million for the write-off of unamortized deferred debt issuance costs related to this action in 2015.

Pursuant to a note purchase agreement dated December 22, 1997, SunBelt sold \$97.5 million of Guaranteed Senior Secured Notes due 2017, Series O, and \$97.5 million of Guaranteed Senior Secured Notes due 2017, Series G. We refer to these notes as the SunBelt Notes. The SunBelt Notes bear interest at a rate of 7.23% per annum, payable semi-annually in arrears on each June 22 and December 22. Beginning on December 22, 2002 and each year through 2017, SunBelt was required to repay \$12.2 million of the SunBelt Notes, of which \$6.1 million is attributable to the Series O Notes and of which \$6.1 million is attributable to the Series G Notes. In December 2017, 2016 and 2015, \$12.2 million was repaid on these SunBelt Notes. At December 31, 2017, all amounts due under the SunBelt Notes have been repaid.

At December 31, 2017, we had total letters of credit of \$72.8 million outstanding, of which \$5.1 million were issued under our Senior Revolving Credit Facility. The letters of credit are used to support certain long-term debt, certain workers compensation insurance policies, certain plant closure and post-closure obligations and certain international pension funding requirements.

Annual maturities of long-term debt, including capital lease obligations, are \$0.7 million in 2018, \$0.7 million in 2019, \$251.3 million in 2020, \$0.3 million in 2021, \$993.7 million in 2022 and a total of \$2,426.0 million thereafter. The long-term debt obligations reflects the issuance of the \$550.0 million 2030 Notes and related prepayment of the \$1,375.0 million Term Loan Facility in January 2018.

In April 2016, we entered into three tranches of forward starting interest rate swaps whereby we agreed to pay fixed rates to the counterparties who, in turn, pay us floating rates on \$1,100.0 million, \$900.0 million, and \$400.0 million of our underlying floating-rate debt obligations. Each tranche's term length is for twelve months beginning on December 31, 2016, December 31, 2017, and December 31, 2018, respectively. The counterparties to the agreements are SMBC Capital Markets, Inc., Wells Fargo Bank, N.A. (Wells Fargo), PNC Bank, National Association, and Toronto-Dominion Bank. These counterparties are large financial institutions. We have designated the swaps as cash flow hedges of the risk of changes in interest payments associated with our variable-rate borrowings. Accordingly, the swap agreements have been recorded at their fair market value of \$10.5 million and are included in other current assets and other assets on the accompanying consolidated balance sheet, with the corresponding gain deferred as a component of other comprehensive loss. For the year ended December 31, 2017, \$3.1 million of income was recorded to interest expense related to these swap agreements.

In April 2016, we entered into interest rate swaps on \$250.0 million of our underlying fixed-rate debt obligations, whereby we agreed to pay variable rates to the counterparties who, in turn, pay us fixed rates. The counterparties to these agreements are Toronto-Dominion Bank and SMBC Capital Markets, Inc., both of which are major financial institutions.

In October 2016, we entered into interest rate swaps on an additional \$250.0 million of our underlying fixed-rate debt obligations, whereby we agreed to pay variable rates to the counterparties who, in turn, pay us fixed rates. The counterparties to these agreements are PNC Bank, National Association and Wells Fargo, both of which are major financial institutions.

We have designated the April 2016 and October 2016 interest rate swap agreements as fair value hedges of the risk of changes in the value of fixed rate debt due to changes in interest rates for a portion of our fixed rate borrowings. Accordingly, the swap agreements have been recorded at their fair market value of \$28.1 million and are included in other long-term liabilities on the accompanying consolidated balance sheet, with a corresponding decrease in the carrying amount of the related

## Table of Contents

debt. For the years ended December 31, 2017 and 2016, \$2.9 million and \$2.6 million, respectively, of income has been recorded to interest expense on the accompanying consolidated statement of operations related to these swap agreements.

Our loss in the event of nonperformance by these counterparties could be significant to our financial position and results of operations. Our interest rate swaps reduced interest expense by \$6.1 million, \$3.7 million and \$2.8 million in 2017, 2016 and 2015, respectively. The difference between interest paid and interest received is included as an adjustment to interest expense.

### Subsequent Event

On January 19, 2018, Olin issued \$550.0 million aggregate principal amount of 5.00% senior notes due February 1, 2030 (2030 Notes), which were registered under the Securities Act of 1933, as amended. Interest on the 2030 Notes began accruing from January 19, 2018 and is paid semi-annually beginning on August 1, 2018. Proceeds from the 2030 Notes were used to redeem \$550.0 million of debt under the Term Loan Facility. This prepayment of the Term Loan Facility eliminates the required quarterly installments under the Term Loan Facility.

### PENSION PLANS

We sponsor domestic and foreign defined benefit pension plans for eligible employees and retirees. Most of our domestic employees participate in defined contribution plans. However, a portion of our bargaining hourly employees continue to participate in our domestic qualified defined benefit pension plans under a flat-benefit formula. Our funding policy for the qualified defined benefit pension plans is consistent with the requirements of federal laws and regulations. Our foreign subsidiaries maintain pension and other benefit plans, which are consistent with local statutory practices.

Our domestic qualified defined benefit pension plan provides that if, within three years following a change of control of Olin, any corporate action is taken or filing made in contemplation of, among other things, a plan termination or merger or other transfer of assets or liabilities of the plan, and such termination, merger or transfer thereafter takes place, plan benefits would automatically be increased for affected participants (and retired participants) to absorb any plan surplus (subject to applicable collective bargaining requirements).

During 2016, we made a discretionary cash contribution to our domestic qualified defined benefit pension plan of \$6.0 million. Based on our plan assumptions and estimates, we will not be required to make any cash contributions to the domestic qualified defined benefit pension plan at least through 2018.

We have international qualified defined benefit pension plans to which we made cash contributions of \$1.7 million and \$1.3 million in 2017 and 2016, respectively, and we anticipate less than \$5 million of cash contributions to international qualified defined benefit pension plans in 2018.

Table of Contents

## Pension Obligations and Funded Status

Changes in the benefit obligation and plan assets were as follows:

	December 31, 2017			December 31, 2016		
	(\$ in millions)			(\$ in millions)		
Change in Benefit Obligation	U.S.	Foreign	Total	U.S.	Foreign	Total
Benefit obligation at beginning of year	\$2,466.2	\$251.0	\$2,717.2	\$2,458.5	\$227.4	\$2,685.9
Service cost	1.2	7.9	9.1	1.3	7.6	8.9
Interest cost	81.3	5.3	86.6	82.4	5.3	87.7
Actuarial loss	161.7	9.6	171.3	88.7	20.4	109.1
Benefits paid	(130.5 )	(4.2 )	(134.7 )	(132.2 )	(3.4 )	(135.6 )
Plan participant's contributions	—	1.0	1.0	—	0.9	0.9
Plan amendments	—	1.7	1.7	—	(1.2 )	(1.2 )
Business combination	—	—	—	(32.5 )	—	(32.5 )
Currency translation adjustments	—	31.1	31.1	—	(6.0 )	(6.0 )
Benefit obligation at end of year	\$2,579.9	\$303.4	\$2,883.3	\$2,466.2	\$251.0	\$2,717.2

	December 31, 2017			December 31, 2016		
	(\$ in millions)			(\$ in millions)		
Change in Plan Assets	U.S.	Foreign	Total	U.S.	Foreign	Total
Fair value of plans' assets at beginning of year	\$2,012.0	\$66.5	\$2,078.5	\$1,974.0	\$62.5	\$2,036.5
Actual return on plans' assets	290.6	5.0	295.6	191.5	3.5	195.0
Employer contributions	0.4	2.2	2.6	6.4	2.0	8.4
Benefits paid	(130.5 )	(3.0 )	(133.5 )	(132.2 )	(3.4 )	(135.6 )
Business combination	—	—	—	(27.7 )	—	(27.7 )
Currency translation adjustments	—	3.7	3.7	—	1.9	1.9
Fair value of plans' assets at end of year	\$2,172.5	\$74.4	\$2,246.9	\$2,012.0	\$66.5	\$2,078.5

	December 31, 2017			December 31, 2016		
	(\$ in millions)			(\$ in millions)		
Funded Status	U.S.	Foreign	Total	U.S.	Foreign	Total
Qualified plans	\$(403.7)	\$(226.9)	\$(630.6)	\$(450.6)	\$(182.6)	\$(633.2)
Non-qualified plans	(3.7 )	(2.1 )	(5.8 )	(3.6 )	(1.9 )	(5.5 )
Total funded status	\$(407.4)	\$(229.0)	\$(636.4)	\$(454.2)	\$(184.5)	\$(638.7)

Under ASC 715, we recorded a \$21.3 million after-tax charge (\$26.9 million pretax) to shareholders' equity as of December 31, 2017 for our pension plans. This charge reflected a 50-basis point decrease in the domestic pension plans' discount rate, partially offset by favorable performance on plan assets during 2017. In 2016, we recorded a \$40.7 million after-tax charge (\$66.1 million pretax) to shareholders' equity as of December 31, 2016 for our pension plans. This charge reflected a 30-basis point decrease in the domestic pension plans' discount rate, partially offset by favorable performance on plan assets during 2016.

The \$171.3 million actuarial loss for 2017 was primarily due to a 50-basis point decrease in the domestic pension plans' discount rate. The \$109.1 million actuarial loss for 2016 was primarily due to a 30-basis point decrease in the plans' discount rate.

Table of Contents

Amounts recognized in the consolidated balance sheets consisted of:

	December 31, 2017			December 31, 2016		
	(\$ in millions)			(\$ in millions)		
	U.S.	Foreign	Total	U.S.	Foreign	Total
Accrued benefit in current liabilities	\$(0.4 )	\$(0.1 )	\$(0.5 )	\$(0.4 )	\$(0.2 )	\$(0.6 )
Accrued benefit in noncurrent liabilities	(407.0 )	(228.9 )	(635.9 )	(453.8 )	(184.3 )	(638.1 )
Accumulated other comprehensive loss	735.1	51.4	786.5	743.1	43.5	786.6
Net balance sheet impact	\$327.7	\$(177.6)	\$150.1	\$288.9	\$(141.0)	\$147.9

At December 31, 2017 and 2016, the benefit obligation of non-qualified pension plans was \$5.8 million and \$5.5 million, respectively, and was included in the above pension benefit obligation. There were no plan assets for these non-qualified pension plans. Benefit payments for the non-qualified pension plans are expected to be as follows: 2018—\$0.5 million; 2019—\$0.6 million; 2020—\$0.6 million; 2021—\$0.6 million; and 2022—\$0.3 million. Benefit payments for the qualified plans are projected to be as follows: 2018—\$138.7 million; 2019—\$139.1 million; 2020—\$139.9 million; 2021—\$139.3 million; and 2022—\$138.0 million.

	December 31,	
	2017	2016
	(\$ in millions)	
Projected benefit obligation	\$2,883.3	\$2,717.2
Accumulated benefit obligation	2,851.0	2,685.7
Fair value of plan assets	2,246.9	2,078.5

	Years Ended December		
	31,		
	2017	2016	2015
	(\$ in millions)		
Components of Net Periodic Benefit (Income) Costs			
Service cost	\$17.1	\$12.3	\$7.8
Interest cost	86.6	87.7	83.3
Expected return on plans' assets	(157.1)	(157.8)	(147.4 )
Amortization of prior service cost	2.2	—	1.6
Recognized actuarial loss	24.8	20.7	26.2
Curtailments/settlements	—	—	47.2
Net periodic benefit (income) costs	\$(26.4)	\$(37.1)	\$18.7
Included in Other Comprehensive Loss (Pretax)			
Liability adjustment	\$26.9	\$66.1	\$125.4
Amortization of prior service costs and actuarial losses	(27.0 )	(20.7 )	(62.4 )

The \$47.2 million curtailments/settlements for 2015 were due to a settlement of \$47.1 million of costs incurred as a result of the change in control which created a mandatory acceleration of payments under the domestic non-qualified pension plan as a result of the Acquisition. This charge was included in acquisition-related costs. For the year ended December 31, 2015, we also recorded a curtailment charge of \$0.1 million associated with permanently closing a portion of the Becancour, Canada chlor alkali facility that has been shut down since late June 2014. This charge was included in restructuring charges.



The defined benefit pension plans' actuarial loss that will be recognized from accumulated other comprehensive loss into net periodic benefit income in 2018 will be approximately \$35 million.

Table of Contents

The service cost and the amortization of prior service cost components of pension expense related to the employees of the operating segments are allocated to the operating segments based on their respective estimated census data.

## Pension Plan Assumptions

Certain actuarial assumptions, such as discount rate and long-term rate of return on plan assets, have a significant effect on the amounts reported for net periodic benefit cost and accrued benefit obligation amounts. We use a measurement date of December 31 for our pension plans.

Weighted-Average Assumptions	U.S. Pension Benefits			Foreign Pension Benefits		
	2017	2016	2015	2017	2016	2015
Discount rate—periodic benefit cost	4.1 % <sup>(1)</sup>	4.4 %	3.9 %	2.3 %	2.7 %	2.8 %
Expected return on assets	7.75 %	7.75 %	7.75 %	5.6 %	6.0 %	6.0 %
Rate of compensation increase	3.0 %	3.0 %	3.0 %	3.0 %	3.0 %	3.0 %
Discount rate—benefit obligation	3.6 %	4.1 %	4.4 %	2.2 %	2.3 %	2.7 %

(1) The discount rate—periodic benefit cost for our domestic qualified pension plan is comprised of the discount rate used to determine interest costs of 3.4% and the discount rate used to determine service costs of 4.2%.

The discount rate is based on a hypothetical yield curve represented by a series of annualized individual zero-coupon bond spot rates for maturities ranging from one-half to thirty years. The bonds used in the yield curve must have a rating of AA or better per Standard & Poor's, be non-callable, and have at least \$250 million par outstanding. The yield curve is then applied to the projected benefit payments from the plan. Based on these bonds and the projected benefit payment streams, the single rate that produces the same yield as the matching bond portfolio is used as the discount rate.

The long-term expected rate of return on plan assets represents an estimate of the long-term rate of returns on the investment portfolio consisting of equities, fixed income and alternative investments. We use long-term historical actual return information, the allocation mix of investments that comprise plan assets, and forecast estimates of long-term investment returns, including inflation rates, by reference to external sources. The historic rates of return on plan assets have been 7.9% for the last 5 years, 8.7% for the last 10 years and 10.9% for the last 15 years. The following rates of return by asset class were considered in setting the long-term rate of return assumption:

U.S. equities	9% to 13%
Non-U.S. equities	10% to 14%
Fixed income/cash	5% to 9%
Alternative investments	5% to 15%
Absolute return strategies	8% to 12%

## Plan Assets

Our pension plan asset allocations at December 31, 2017 and 2016 by asset class were as follows:

Asset Class	Percentage of Plan Assets	
	2017	2016

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U.S. equities	19 %	19 %
Non-U.S. equities	17 %	15 %
Fixed income/cash	24 %	35 %
Alternative investments	21 %	20 %
Absolute return strategies	19 %	11 %
Total	100 %	100 %

87

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Table of Contents

The Alternative Investments asset class includes hedge funds, real estate and private equity investments. The Alternative Investments class is intended to help diversify risk and increase returns by utilizing a broader group of assets.

Absolute Return Strategies further diversify the plan's assets through the use of asset allocations that seek to provide a targeted rate of return over inflation. The investment managers allocate funds within asset classes that they consider to be undervalued in an effort to preserve gains in overvalued asset classes and to find opportunities in undervalued asset classes.

A master trust was established by our pension plan to accumulate funds required to meet benefit payments of our plan and is administered solely in the interest of our plan's participants and their beneficiaries. The master trust's investment horizon is long term. Its assets are managed by professional investment managers or invested in professionally managed investment vehicles.

Our pension plan maintains a portfolio of assets designed to achieve an appropriate risk adjusted return. The portfolio of assets is also structured to manage risk by diversifying assets across asset classes whose return patterns are not highly correlated, investing in passively and actively managed strategies and in value and growth styles, and by periodic rebalancing of asset classes, strategies and investment styles to objectively set targets.

As of December 31, 2017, the following target allocation and ranges have been set for each asset class:

Asset Class	Target Allocation	Target Range
U.S. equities <sup>(1)</sup>	27 %	19-35
Non-U.S. equities <sup>(1)</sup>	18 %	4-34
Fixed income/cash <sup>(1)</sup>	29 %	20-72
Alternative investments	6 %	0-28
Absolute return strategies	20 %	10-30

(1) The target allocation for these asset classes include alternative investments, primarily hedge funds, based on the underlying investments in each hedge fund.

Determining which hierarchical level an asset or liability falls within requires significant judgment. The following table summarizes our domestic and foreign defined benefit pension plan assets measured at fair value as of December 31, 2017:

Asset Class	Investments Measured at NAV	Quoted Prices In Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Equity securities					
U.S. equities	\$ 230.7	\$ 203.7	\$ —	\$ —	—\$434.4

(\$ in millions)

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Non-U.S. equities	321.9	55.6	14.6	—	392.1
Fixed income/cash					
Cash	—	41.9	—	—	41.9
Government treasuries	0.7	—	151.2	—	151.9
Corporate debt instruments	80.9	—	115.1	—	196.0
Asset-backed securities	104.3	—	44.0	—	148.3
Alternative investments					
Hedge fund of funds	430.7	—	—	—	430.7
Real estate funds	21.8	—	—	—	21.8
Private equity funds	11.5	—	—	—	11.5
Absolute return strategies	418.3	—	—	—	418.3
Total assets	\$ 1,620.8	\$ 301.2	\$ 324.9	\$	—\$2,246.9

Table of Contents

The following table summarizes our domestic and foreign defined benefit pension plan assets measured at fair value as of December 31, 2016:

Asset Class	Investments Measured at NAV	Quoted Prices In Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
(\$ in millions)					
Equity securities					
U.S. equities	\$ 241.4	\$ 143.2	\$ —	\$ —	—\$384.6
Non-U.S. equities	248.6	38.6	29.9	—	317.1
Fixed income/cash					
Cash	—	259.6	—	—	259.6
Government treasuries	18.2	—	169.4	—	187.6
Corporate debt instruments	51.8	0.2	129.6	—	181.6
Asset-backed securities	61.4	—	36.4	—	97.8
Alternative investments					
Hedge fund of funds	380.6	—	—	—	380.6
Real estate funds	22.5	—	—	—	22.5
Private equity funds	16.4	—	—	—	16.4
Absolute return strategies	230.7	—	—	—	230.7
Total assets	\$ 1,271.6	\$ 441.6	\$ 365.3	\$ —	—\$2,078.5

U.S. equities—This class included actively and passively managed equity investments in common stock and commingled funds comprised primarily of large-capitalization stocks with value, core and growth strategies.

Non-U.S. equities—This class included actively managed equity investments in commingled funds comprised primarily of international large-capitalization stocks from both developed and emerging markets.

Acquisition plan receivable—This class included pension assets which were transferred from DowDuPont's U.S. qualified defined benefit pension plan trustee to our qualified defined benefit pension plan trustee in the form of cash related to the Acquisition. During 2016, assets of \$184.3 million were transferred from DowDuPont's U.S. qualified defined benefit pension plan trustee to our qualified defined benefit pension plan trustee, resulting in the settlement of the acquisition plan receivable.

Fixed income and cash—This class included commingled funds comprised of debt instruments issued by the U.S. and Canadian Treasuries, U.S. Agencies, corporate debt instruments, asset- and mortgage-backed securities and cash.

Hedge fund of funds—This class included a hedge fund which invests in the following types of hedge funds:

Event driven hedge funds—This class included hedge funds that invest in securities to capture excess returns that are driven by market or specific company events including activist investment philosophies and the arbitrage of equity and private and public debt securities.

Market neutral hedge funds—This class included investments in U.S. and international equities and fixed income securities while maintaining a market neutral position in those markets.

Other hedge funds—This class primarily included long-short equity strategies and a global macro fund which invested in fixed income, equity, currency, commodity and related derivative markets.

Real estate funds—This class included several funds that invest primarily in U.S. commercial real estate.

Private equity funds—This class included several private equity funds that invest primarily in infrastructure and U.S. power generation and transmission assets.

Table of Contents

Absolute return strategies—This class included multiple strategies which use asset allocations that seek to provide a targeted rate of return over inflation. The investment managers allocate funds within asset classes that they consider to be undervalued in an effort to preserve gains in overvalued asset classes and to find opportunities in undervalued asset classes.

U.S. equities and non-U.S. equities are primarily valued at the net asset value provided by the independent administrator or custodian of the commingled fund. The net asset value is based on the value of the underlying equities, which are traded on an active market. U.S. equities are also valued at the closing price reported in an active market on which the individual securities are traded. A portion of our fixed income investments are valued at the net asset value provided by the independent administrator or custodian of the fund. The net asset value is based on the underlying assets, which are valued using inputs such as the closing price reported, if traded on an active market, values derived from comparable securities of issuers with similar credit ratings, or under a discounted cash flow approach that utilizes observable inputs, such as current yields of similar instruments, but includes adjustments for risks that may not be observable such as certain credit and liquidity risks. Alternative investments are valued at the net asset value as determined by the independent administrator or custodian of the fund. The net asset value is based on the underlying investments, which are valued using inputs such as quoted market prices of identical instruments, discounted future cash flows, independent appraisals and market-based comparable data. Absolute return strategies are commingled funds which reflect the fair value of our ownership interest in these funds. The investments in these commingled funds include some or all of the above asset classes and are primarily valued at net asset values based on the underlying investments, which are valued consistent with the methodologies described above for each asset class.

The following table summarizes the activity for our defined benefit pension plans level 3 assets for the year ended December 31, 2016:

	December 31, 2015	Realized Gain/(Loss)	Unrealized Gain/(Loss) Relating to Assets Held at Period End	Purchases, Sales, Settlements, and Other	Transfers In/(Out)	December 31, 2016
	(\$ in millions)					
Acquisition plan receivable	\$ 212.0	\$ —	\$ —	(\$ 212.0 )	\$ —	\$ —

## POSTRETIREMENT BENEFITS

We provide certain postretirement healthcare (medical) and life insurance benefits for eligible active and retired domestic employees. The healthcare plans are contributory with participants' contributions adjusted annually based on medical rates of inflation and plan experience. We use a measurement date of December 31 for our postretirement plans.

Effective as of December 31, 2015, we changed the approach used to measure service and interest costs for our other postretirement benefits. For the year ended December 31, 2015, we measured service and interest costs utilizing a single weighted-average discount rate derived from the yield curve used to measure the plan obligations. Beginning in 2016 for our other postretirement benefits, we elected to measure service and interest costs by applying the specific spot rates along the yield curve to the plans' estimated cash flows. We believe the new approach provides a more precise measurement of service and interest costs by aligning the timing of the plans' liability cash flows to the corresponding spot rates on the yield curve. This change does not affect the measurement of our plan obligations. We have accounted for this change as a change in accounting estimate and, accordingly, have accounted for it on a



prospective basis.

90

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Table of Contents

## Other Postretirement Benefits Obligations and Funded Status

Changes in the benefit obligation were as follows:

	December 31, 2017			December 31, 2016		
	(\$ in millions)			(\$ in millions)		
Change in Benefit Obligation	U.S.	Foreign	Total	U.S.	Foreign	Total
Benefit obligation at beginning of year	\$43.6	\$ 8.6	\$52.2	\$53.9	\$ 8.1	\$62.0
Service cost	0.8	0.3	1.1	0.8	0.4	1.2
Interest cost	1.2	0.3	1.5	1.2	0.4	1.6
Actuarial (gain) loss	(0.6 )	1.0	0.4	(5.1 )	—	(5.1 )
Benefits paid	(4.4 )	(0.3 )	(4.7 )	(7.2 )	(0.4 )	(7.6 )
Currency translation adjustments	—	0.3	0.3	—	0.1	0.1
Benefit obligation at end of year	\$40.6	\$ 10.2	\$50.8	\$43.6	\$ 8.6	\$52.2

	December 31, 2017			December 31, 2016		
	(\$ in millions)			(\$ in millions)		
	U.S.	Foreign	Total	U.S.	Foreign	Total
Funded status	\$(40.6)	\$(10.2)	\$(50.8)	\$(43.6)	\$(8.6 )	\$(52.2)

Under ASC 715, we recorded a \$0.3 million after-tax benefit (\$0.4 million pretax) to shareholders' equity as of December 31, 2017 for our other postretirement plans. In 2016, we recorded an after-tax benefit of \$3.2 million (\$5.1 million pretax) to shareholders' equity as of December 31, 2016 for our other postretirement plans.

Amounts recognized in the consolidated balance sheets consisted of:

	December 31, 2017			December 31, 2016		
	(\$ in millions)			(\$ in millions)		
	U.S.	Foreign	Total	U.S.	Foreign	Total
Accrued benefit in current liabilities	\$(4.0 )	\$(0.3 )	\$(4.3 )	\$(4.8 )	\$(0.3 )	\$(5.1 )
Accrued benefit in noncurrent liabilities	(36.6 )	(9.9 )	(46.5 )	(38.8 )	(8.3 )	(47.1 )
Accumulated other comprehensive loss	24.7	0.9	25.6	24.8	0.3	25.1
Net balance sheet impact	\$(15.9)	\$(9.3 )	\$(25.2)	\$(18.8)	\$(8.3 )	\$(27.1)

	Years Ended		
	December 31,		
	2017	2016	2015
Components of Net Periodic Benefit Cost	(\$ in millions)		
Service cost	\$1.1	\$1.2	\$1.2
Interest cost	1.5	1.6	2.3
Amortization of prior service cost	(2.2 )	(2.6 )	—
Recognized actuarial loss	2.1	2.3	3.1
Curtailment	—	—	0.1
Net periodic benefit cost	\$2.5	\$2.5	\$6.7

Included in Other Comprehensive Loss (Pretax)

Liability adjustment	\$0.4	\$(5.1)	\$(0.1)
Amortization of prior service costs and actuarial losses	0.1	0.3	(3.2 )



Table of Contents

For the year ended December 31, 2015, we recorded a curtailment charge of \$0.1 million associated with permanently closing a portion of the Becancour, Canada chlor alkali facility that has been shut down since late June 2014. This charge was included in restructuring charges.

The other postretirement plans' actuarial loss that will be recognized from accumulated other comprehensive loss into net periodic benefit cost in 2018 will be approximately \$2 million.

The service cost and amortization of prior service cost components of postretirement benefit expense related to the employees of the operating segments are allocated to the operating segments based on their respective estimated census data.

## Other Postretirement Benefits Plan Assumptions

Certain actuarial assumptions, such as discount rate, have a significant effect on the amounts reported for net periodic benefit cost and accrued benefit obligation amounts.

	December 31,		
Weighted-Average Assumptions	2017	2016	2015
Discount rate—periodic benefit cost	4.8%	4.1%	3.7%
Discount rate—benefit obligation	3.5%	3.8%	4.1%

The discount rate is based on a hypothetical yield curve represented by a series of annualized individual zero-coupon bond spot rates for maturities ranging from one-half to thirty years. The bonds used in the yield curve must have a rating of AA or better per Standard & Poor's, be non-callable, and have at least \$250 million par outstanding. The yield curve is then applied to the projected benefit payments from the plan. Based on these bonds and the projected benefit payment streams, the single rate that produces the same yield as the matching bond portfolio is used as the discount rate.

We review external data and our own internal trends for healthcare costs to determine the healthcare cost for the post retirement benefit obligation. The assumed healthcare cost trend rates for pre-65 retirees were as follows:

	December 31,	
	2017	2016
Healthcare cost trend rate assumed for next year	8.0 %	8.0 %
Rate that the cost trend rate gradually declines to	4.5 %	5.0 %
Year that the rate reaches the ultimate rate	2024	2022

For post-65 retirees, we provide a fixed dollar benefit, which is not subject to escalation.

Assumed healthcare cost trend rates have an effect on the amounts reported for the healthcare plans. A one-percentage-point change in assumed healthcare cost trend rates would have the following effects:

	One-Percentage Point Increase	One-Percentage Point Decrease
	(\$ in millions)	
Effect on total of service and interest costs	\$ 0.5	\$ (0.2)
Effect on postretirement benefit obligation	1.7	(1.5)

We expect to make payments of approximately \$4 million for each of the next five years under the provisions of our other postretirement benefit plans.

Table of Contents

## INCOME TAXES

	Years ended December 31,		
	2017	2016	2015
Components of Income (Loss) Before Taxes	(\$ in millions)		
Domestic	\$53.3	\$(23.3)	\$(66.9)
Foreign	63.9	(10.9 )	73.6
Income (loss) before taxes	\$117.2	\$(34.2)	\$6.7
Components of Income Tax (Benefit) Provision			
Current (benefit) expense:			
Federal	\$(4.0 )	\$(11.6)	\$(16.6)
State	3.0	0.9	1.2
Foreign	24.1	15.7	14.4
	23.1	5.0	(1.0 )
Deferred (benefit) expense:			
Federal	\$(549.6)	\$(10.1)	\$8.9
State	14.6	(5.1 )	(2.4 )
Foreign	79.6	(20.1 )	2.6
	(455.4 )	(35.3 )	9.1
Income tax (benefit) provision	\$(432.3)	\$(30.3)	\$8.1

The following table accounts for the difference between the actual tax provision and the amounts obtained by applying the statutory U.S. federal income tax rate of 35% to the income (loss) before taxes.

Effective Tax Rate Reconciliation (Percent)	Years ended December 31,		
	2017	2016	2015
Statutory federal tax rate	35.0 %	35.0 %	35.0 %
State income taxes, net	(1.2 )	8.0	(38.2 )
Foreign rate differential	(7.7 )	(25.1)	(129.8)
U.S. tax on foreign earnings	(70.8 )	24.4	128.6
Salt depletion	(16.1 )	45.4	(38.8 )
Non-deductible transaction costs	—	—	133.1
Change in valuation allowance	76.0	(0.7 )	27.9
Remeasurement of U.S. state deferred taxes	10.2	9.4	7.6
Change in tax contingencies	(7.7 )	(9.7 )	5.0
U.S. Tax Cuts and Jobs Act	(373.5)	—	—
Share-based payments	(5.7 )	—	—
Dividends paid to Contributing Employee Ownership Plan	(0.6 )	2.8	(11.1 )
Return to provision	(0.6 )	5.3	(4.2 )
U.S. Federal tax credits	(4.2 )	0.6	(3.1 )
Other, net	(2.0 )	(6.8 )	8.9
Effective tax rate	(368.9)%	88.6 %	120.9 %

The effective tax rate for 2017 was favorably impacted by (1) the 2017 Tax Act, (2) an agreement with the Internal Revenue Service (IRS) on prior period tax examinations, (3) stock based compensation, (4) U.S. federal tax credits, (5) changes to prior year tax positions and (6) a reduction to the deferred tax liability on unremitted foreign earnings. The effective tax rate was also unfavorably impacted by a net increase in the valuation allowance, primarily related to foreign net operating losses and remeasurement of deferred taxes due to an increase in our state effective tax rates. These factors resulted in a net \$452.3 million tax benefit of which \$437.9 million was a provisional benefit from the

2017 Tax Act.

93

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## Table of Contents

The effective tax rate for 2016 was favorably impacted by provision to return adjustments, primarily related to salt depletion and non-deductible acquisition costs, and the remeasurement of deferred taxes due to a decrease in our state effective tax rates. The effective tax rate was also unfavorably impacted a change in prior year uncertain tax positions. These factors resulted in a net \$3.9 million tax benefit.

The tax rate for 2015 was unfavorably impacted by non-deductible acquisition costs, which was partially offset by a benefit for salt depletion deductions. The net impact of these factors was a net \$6.3 million tax expense.

The 2017 Tax Act was enacted on December 22, 2017 and included a broad range of provisions impacting the taxation of businesses. Included within the provisions, the 2017 Tax Act reduces the U.S. federal corporate tax rate from 35% to 21%, requires companies to pay a one-time transition tax on unremitted earnings of foreign subsidiaries that were previously tax deferred and transitions the U.S. from a worldwide tax system to a modified territorial tax system.

The SEC issued SAB 118, which provides guidance on accounting for the tax effects of the 2017 Tax Act. SAB 118 provides a measurement period of up to one year from the 2017 Tax Act's enactment date for companies to complete the accounting under ASC 740 "Income Taxes" (ASC 740). In accordance with SAB 118, to the extent that a company's accounting for certain income tax effects of the 2017 Tax Act is incomplete but it is able to determine a reasonable estimate, it must record a provisional estimate in the financial statements. If a company cannot determine a provisional estimate to be included in the financial statements, it should continue to apply ASC 740 on the basis of the provisions of the tax laws that were in effect immediately before the enactment of the 2017 Tax Act.

At December 31, 2017, we have not completed our accounting for the tax effects of the 2017 Tax Act. The impact of the 2017 Tax Act is expected to require further adjustments in 2018 due to anticipated additional guidance from the U.S. Department of the Treasury, changes in our assumptions, completion of 2017 U.S. and foreign tax returns and further information and interpretations that become available. However, we have made and recorded reasonable estimates of significant items including: (1) the effects on our existing deferred tax balances, (2) the remeasurement of deferred taxes on foreign unremitted earnings and (3) the one-time transition tax. We will make adjustments to these provisional estimates as new information becomes available during the one year measurement period. Our analyses of the 2017 Tax Act will continue throughout 2018 and will be completed when we file all U.S. and foreign tax returns.

In connection with our initial analysis of the 2017 Tax Act, we recognized a provisional deferred tax benefit of \$437.9 million. The impact of the 2017 Tax Act includes: (1) a provisional \$315.8 million deferred tax benefit to reflect the reduction of the U.S. corporate tax rate from 35% to 21% and (2) a provisional \$122.1 million deferred tax benefit to reflect an estimated reduction of \$162.6 million in our deferred tax liability on unremitted foreign earnings partially offset by an estimate of the one-time transition tax of \$40.5 million. We expect to utilize existing U.S. federal net operating loss carryforwards and foreign tax credits to fully offset the cash tax impact of the one-time transition tax liability.

A provision of the 2017 Tax Act establishes a minimum tax on certain foreign earnings (i.e. global intangible low-taxed income or GILTI). We have not yet completed our analysis of the GILTI tax rules and are still evaluating whether to make a policy election to treat the GILTI tax as a period expense or to provide U.S. deferred taxes on certain foreign differences between the financial statement and tax basis of foreign assets and liabilities. At December 31, 2017, we did not record a deferred tax liability for these differences. We will continue to analyze the impact of GILTI as more guidance is issued and a decision will be made during 2018 on whether to treat the GILTI as a period cost or a deferred tax item.





Table of Contents

Components of Deferred Tax Assets and Liabilities	December 31,	
	2017	2016
	(\$ in millions)	
Deferred tax assets:		
Pension and postretirement benefits	\$147.3	\$226.1
Environmental reserves	33.2	54.5
Asset retirement obligations	14.0	22.0
Accrued liabilities	37.6	53.0
Tax credits	37.1	13.2
Net operating losses	53.3	105.3
Capital loss carryforward	2.1	2.8
Other miscellaneous items	11.2	—
Total deferred tax assets	335.8	476.9
Valuation allowance	(121.4 )	(29.0 )
Net deferred tax assets	214.4	447.9
Deferred tax liabilities:		
Property, plant and equipment	550.3	875.5
Intangible amortization	67.3	137.3
Inventory and prepaids	1.0	13.6
Partnerships	67.5	106.3
Taxes on unremitted earnings	3.1	223.6
Other miscellaneous items	—	4.6
Total deferred tax liabilities	689.2	1,360.9
Net deferred tax liability	\$(474.8)	\$(913.0)

Realization of the net deferred tax assets, irrespective of indefinite-lived deferred tax liabilities, is dependent on future reversals of existing taxable temporary differences and adequate future taxable income, exclusive of reversing temporary differences and carryforwards. Although realization is not assured, we believe that it is more likely than not that the net deferred tax assets will be realized.

At December 31, 2017, we had a U.S. net operating loss carryforward (NOL) of approximately \$1.0 million (representing \$0.2 million of deferred tax assets) that will expire after 2019, if not utilized. The utilization is limited to \$0.5 million in 2018 and 2019 under Section 382 of the U.S. Internal Revenue Code.

At December 31, 2017, we had deferred state tax benefits of \$19.9 million relating to state NOLs, which are available to offset future state taxable income through 2037.

At December 31, 2017, we had deferred state tax benefits of \$15.9 million relating to state tax credits, which are available to offset future state tax liabilities through 2032.

At December 31, 2017, we had a capital loss carryforward of \$8.7 million (representing \$1.8 million of deferred tax assets) which are available to offset future consolidated capital gains that will expire in years 2018 through 2022, if not utilized.

At December 31, 2017, we had foreign tax credits of \$18.6 million, which are available to offset federal tax liabilities through 2027 and U.S. federal credits of \$7.4 million, which expire between 2034 and 2037.

At December 31, 2017, we had NOLs of approximately \$210.4 million (representing \$33.1 million of deferred tax assets) in various foreign jurisdictions. Of these, \$17.4 million (representing \$3.8 million of deferred tax assets) expire

in various years from 2020 to 2027. The remaining \$193.0 million (representing \$29.3 million of deferred tax assets) do not expire.

As of December 31, 2017, we had recorded a valuation allowance of \$121.4 million, compared to \$29.0 million as of December 31, 2016. The increase of \$92.4 million is primarily due to the recent history of cumulative losses within foreign jurisdictions and projections of future taxable income insufficient to overcome the loss history. We continue to have net

Table of Contents

deferred tax assets in several jurisdictions which we expect to realize, assuming, based on certain estimates and assumptions, sufficient taxable income can be generated to utilize these deferred tax benefits. If these estimates and related assumptions change in the future, we may be required to reduce the value of the deferred tax assets resulting in additional tax expense.

The activity of our deferred income tax valuation allowance was as follows:

	December 31,	
	2017	2016
	(\$ in millions)	
Beginning balance	\$29.0	\$29.3
Increases to valuation allowances	94.5	8.4
Acquisition activity	—	(4.3 )
U.S. Tax Cuts and Jobs Act	2.2	—
Decreases to valuation allowances	(5.0 )	(4.4 )
Currency translation adjustment	0.7	—
Ending balance	\$121.4	\$29.0

As of December 31, 2017, we had \$36.3 million of gross unrecognized tax benefits, which would have a net \$35.5 million impact on the effective tax rate, if recognized. As of December 31, 2016, we had \$38.4 million of gross unrecognized tax benefits, which would have a net \$36.7 million impact on the effective tax rate, if recognized. The change for 2017 primarily relates to additional gross unrecognized benefits for current and prior year tax positions, as well as decreases for prior year tax positions. The change for 2016 primarily relates to additional gross unrecognized benefits for prior year tax positions, as well as the settlement of ongoing audits. The amounts of unrecognized tax benefits were as follows:

	December 31,	
	2017	2016
	(\$ in millions)	
Beginning balance	\$38.4	\$35.1
Increase for current year tax positions	2.9	1.7
Increase for prior year tax positions	5.4	5.8
Reductions due to statute of limitations	(0.1 )	(0.3 )
Decrease for prior year tax positions	(9.2 )	(1.8 )
Decrease due to tax settlements	(1.1 )	(2.1 )
Ending balance	\$36.3	\$38.4

In May 2017, we reached an agreement in principle with the IRS regarding their examination of our U.S. income tax returns for 2008 and 2010 to 2012. The settlement resulted in a reduction of income tax expense of \$9.5 million related primarily to favorable adjustments in uncertain tax positions for prior tax years.

We recognize interest and penalty expense related to unrecognized tax positions as a component of the income tax provision. As of December 31, 2017 and 2016, interest and penalties accrued were \$1.2 million and \$3.0 million, respectively. For 2017, 2016 and 2015, we recorded (benefit) expense related to interest and penalties of \$(1.8) million, \$(0.4) million and \$0.2 million, respectively.

As of December 31, 2017, we believe it is reasonably possible that our total amount of unrecognized tax benefits will decrease by approximately \$5.7 million over the next twelve months. The anticipated reduction primarily relates to settlements with tax authorities and the expiration of federal, state and foreign statutes of limitation.



Table of Contents

We operate globally and file income tax returns in numerous jurisdictions. Our tax returns are subject to examination by various federal, state and local tax authorities. None of our U.S. federal income tax returns are currently under examination by the IRS. In connection with the Acquisition, DowDuPont retained liabilities relating to taxes to the extent arising prior to the Closing Date. We believe we have adequately provided for all tax positions; however, amounts asserted by taxing authorities could be greater than our accrued position. For our primary tax jurisdictions, the tax years that remain subject to examination are as follows:

	Tax Years
U.S. federal income tax	2013 - 2016
U.S. state income tax	2006 - 2016
Canadian federal income tax	2012 - 2016
Brazil	2014 - 2016
Germany	2015 - 2016
China	2014 - 2016
The Netherlands	2014 - 2016

**ACCRUED LIABILITIES**

Included in accrued liabilities were the following:

	December 31,	
	2017	2016
	(\$ in millions)	
Accrued compensation and payroll taxes	\$82.5	\$77.8
Tax-related accruals	34.4	40.9
Accrued interest	37.4	30.7
Legal and professional costs	31.8	21.2
Accrued employee benefits	21.7	21.2
Environmental (current portion only)	20.0	17.0
Asset retirement obligation (current portion only)	10.5	12.6
Other	36.1	42.4
Accrued liabilities	\$274.4	\$263.8

**CONTRIBUTING EMPLOYEE OWNERSHIP PLAN**

The Contributing Employee Ownership Plan (CEOP) is a defined contribution plan available to essentially all domestic employees. We provide a contribution to an individual retirement contribution account maintained with the CEOP equal to an amount of between 5% and 10% of the employee's eligible compensation. The defined contribution plan expense was \$29.0 million, \$28.2 million and \$18.1 million for 2017, 2016 and 2015, respectively. The increase in defined contribution plan expense in 2016 compared to 2015 was due to the additional employees added in conjunction with the Acquired Business.

Company matching contributions are invested in the same investment allocation as the employee's contribution. Our matching contributions for eligible employees amounted to \$11.5 million, \$11.2 million and \$6.9 million in 2017, 2016 and 2015, respectively.

Employees generally become vested in the value of the contributions we make to the CEOP according to a schedule based on service. After two years of service, participants are 25% vested. They vest in increments of 25% for each additional year and after five years of service, they are 100% vested in the value of the contributions that we have made to their accounts.

Employees may transfer any or all of the value of the investments, including Olin common stock, to any one or combination of investments available in the CEOP. Employees may transfer balances daily and may elect to transfer any percentage of the balance in the fund from which the transfer is made. However, when transferring out of a fund, employees are prohibited from trading out of the fund to which the transfer was made for seven calendar days. This limitation does not apply to trades into the money market fund or the Olin Common Stock Fund.

#### STOCK-BASED COMPENSATION

Stock-based compensation expense was allocated to the operating segments for the portion related to employees whose compensation would be included in cost of goods sold with the remainder recognized in corporate/other. There were no significant capitalized stock-based compensation costs. Stock-based compensation granted includes stock options, performance stock awards, restricted stock awards and deferred directors' compensation. Stock-based compensation expense was as follows:

	Years ended		
	December 31,		
	2017	2016	2015
	(\$ in millions)		
Stock-based compensation	\$18.7	\$11.2	\$11.5
Mark-to-market adjustments	4.5	3.0	(3.0 )
Total expense	\$23.2	\$14.2	\$8.5

Table of Contents

## Stock Plans

Under the stock option and long-term incentive plans, options may be granted to purchase shares of our common stock at an exercise price not less than fair market value at the date of grant, and are exercisable for a period not exceeding ten years from that date. Stock options, restricted stock and performance shares typically vest over three years. We issue shares to settle stock options, restricted stock and share-based performance awards. In 2017, 2016 and 2015 long-term incentive awards included stock options, performance share awards and restricted stock. The stock option exercise price was set at the fair market value of common stock on the date of the grant, and the options have a ten-year term.

Stock option transactions were as follows:

	Shares	Option Price	Weighted-Average Option Price	Exercisable Options	Weighted-Average Exercise Price
Outstanding at January 1, 2017	5,734,740	\$13.14-27.65	\$ 19.25	3,407,300	\$ 20.56
Granted	1,621,000	29.75-31.90	29.82		
Exercised	(1,791,865)	13.14-27.40	18.09		
Canceled	(221,349 )	13.14-29.75	22.14		
Outstanding at December 31, 2017	5,342,526	\$13.14-31.90	\$ 22.72	2,603,962	\$ 21.78

At December 31, 2017, the average exercise period for all outstanding and exercisable options was 86 months and 67 months, respectively. At December 31, 2017, the aggregate intrinsic value (the difference between the exercise price and market value) for outstanding options was \$68.9 million and exercisable options was \$36.0 million. The total intrinsic value of options exercised during the years ended December 31, 2017, 2016 and 2015 was \$26.5 million, \$2.1 million and \$1.3 million, respectively.

The total unrecognized compensation cost related to unvested stock options at December 31, 2017 was \$9.4 million and was expected to be recognized over a weighted-average period of 1.2 years.

The following table provides certain information with respect to stock options exercisable at December 31, 2017:

Range of Exercise Prices	Options Exercisable	Weighted-Average Exercise Price	Options Outstanding	Weighted-Average Exercise Price
Under \$20.00	788,749	\$ 15.05	1,782,327	\$ 13.98
\$20.00 - \$25.00	855,668	22.69	855,668	22.69
Over \$25.00	959,545	26.50	2,704,531	28.49
	2,603,962		5,342,526	



Table of Contents

At December 31, 2017, common shares reserved for issuance and available for grant or purchase under the following plans consisted of:

Stock Option Plans	Number of Shares	
	Reserved for Issuance	Available for Grant or Purchase <sup>(1)</sup>
2000 long term incentive plan	151,157	82,194
2003 long term incentive plan	290,389	61,205
2006 long term incentive plan	375,550	63,949
2009 long term incentive plan	2,110,063	143,310
2014 long term incentive plan	2,844,441	517,991
2016 long term incentive plan	6,000,000	4,513,000
Total under stock option plans	11,771,600	5,381,649

Stock Purchase Plans	Number of Shares	
	Reserved for Issuance	Available for Grant or Purchase
1997 stock plan for non-employee directors	544,027	416,766
Employee deferral plan	45,627	45,623
Total under stock purchase plans	589,654	462,389

(1) All available to be issued as stock options, but includes a sub-limit for all types of stock awards of 2,856,933 shares.

Under the stock purchase plans, our non-employee directors may defer certain elements of their compensation into shares of our common stock based on fair market value of the shares at the time of deferral. Non-employee directors annually receive stock grants as a portion of their director compensation. Of the shares reserved under the stock purchase plans at December 31, 2017, 127,261 shares were committed.

Table of Contents

Performance share awards are denominated in shares of our stock and are paid half in cash and half in stock. Payouts for performance share awards granted prior to December 31, 2016 are based on Olin's average annual return on capital over a three-year performance cycle in relation to the average annual return on capital over the same period among a portfolio of public companies which are selected in concert with outside compensation consultants. Payouts for performance share awards granted during 2017 are based on two criteria: (1) 50% of the award is based on Olin's total shareholder returns over the applicable three-year performance cycle in relation to the total shareholder return over the same period among a portfolio of public companies which are selected in concert with outside compensation consultants and (2) 50% of the award is based on Olin's net income over the applicable three-year performance cycle in relation to the net income goal for such period as set by the compensation committee of Olin's board of directors. The expense associated with performance shares is recorded based on our estimate of our performance relative to the respective target. If an employee leaves the company before the end of the performance cycle, the performance shares may be prorated based on the number of months of the performance cycle worked and are settled in cash instead of half in cash and half in stock when the three-year performance cycle is completed. Performance share transactions were as follows:

	To Settle in Cash		To Settle in Shares	
	Shares	Weighted-Average Fair Value per Share	Shares	Weighted-Average Fair Value per Share
Outstanding at January 1, 2017	542,828	\$ 25.84	536,575	\$ 16.18
Granted	154,550	30.05	154,550	30.02
Paid/Issued	(41,514 )	25.84	(40,500 )	25.57
Converted from shares to cash	82,625	17.47	(82,625 )	17.47
Canceled	(87,800 )	26.02	(87,800 )	15.16
Outstanding at December 31, 2017	650,689	\$ 35.62	480,200	\$ 19.81
Total vested at December 31, 2017	448,672	\$ 35.62	278,183	\$ 18.21

The summary of the status of our unvested performance shares to be settled in cash were as follows:

	Shares	Weighted-Average Fair Value per Share
Unvested at January 1, 2017	301,529	\$ 25.84
Granted	154,550	30.05
Vested	(166,262 )	35.62
Canceled	(87,800 )	26.02
Unvested at December 31, 2017	202,017	\$ 35.62

At December 31, 2017, the liability recorded for performance shares to be settled in cash totaled \$16.0 million. The total unrecognized compensation cost related to unvested performance shares at December 31, 2017 was \$11.6 million and was expected to be recognized over a weighted-average period of 1.2 years.

## SHAREHOLDERS' EQUITY

On April 24, 2014, our board of directors authorized a share repurchase program for up to 8 million shares of common stock that terminated on April 24, 2017. For the years ended December 31, 2017, 2016 and 2015, no shares were purchased and retired. We repurchased a total of 1.9 million shares under the April 2014 program, and the 6.1 million shares that remained authorized to be purchased have expired. Related to the Acquisition, for a period of two years subsequent to the Closing Date, we were subject to certain restrictions on our ability to conduct share repurchases.

During 2017, 2016 and 2015, we issued 1.7 million, 0.3 million and 0.1 million shares, respectively, with a total value of \$32.4 million, \$4.1 million and \$3.1 million, respectively, representing stock options exercised.

We have registered an undetermined amount of securities with the SEC, so that, from time-to-time, we may issue debt securities, preferred stock and/or common stock and associated warrants in the public market under that registration statement.

100

---

Table of Contents

The following table represents the activity included in accumulated other comprehensive loss:

	Unrealized			
	Foreign	Gains	Pension and	Accumulated
	Currency	(Losses)	Postretirement	Other
	Translation	Adjustment	Benefits	Comprehensive
	(net of	Derivative	(net of taxes)	Loss
	taxes)	Contracts		
	(net of	(net of		
	taxes)	taxes)		
	(\$ in millions)			
Balance at January 1, 2015	\$ (2.3)	\$ (4.2)	\$ (436.6)	\$ (443.1)
Unrealized losses	(15.7)	(13.9)	(125.3)	(154.9)
Reclassification adjustments into income	—	9.7	65.6	75.3
Tax benefit	5.9	1.5	22.8	30.2
Net change	(9.8)	(2.7)	(36.9)	(49.4)
Balance at December 31, 2015	(12.1)	(6.9)	(473.5)	(492.5)
Unrealized (losses) gains	(22.4)	26.3	(61.0)	(57.1)
Reclassification adjustments into income	—	5.8	20.4	26.2
Tax benefit (provision)	10.4	(12.4)	15.4	13.4
Net change	(12.0)	19.7	(25.2)	(17.5)
Balance at December 31, 2016	(24.1)	12.8	(498.7)	(510.0)
Unrealized gains (losses)	55.6	1.9	(27.3)	30.2
Reclassification adjustments into income	—	(4.6)	26.9	22.3
Tax (provision) benefit	(23.9)	1.0	(4.2)	(27.1)
Net change	31.7	(1.7)	(4.6)	25.4
Balance at December 31, 2017	\$ 7.6	\$ 11.1	\$ (503.3)	\$ (484.6)

Net income (loss) and cost of goods sold included reclassification adjustments for realized gains and losses on derivative contracts from accumulated other comprehensive loss.

Net income (loss), cost of goods sold and selling and administration expenses included the amortization of prior service costs and actuarial losses from accumulated other comprehensive loss. This amortization is recognized equally in cost of goods sold and selling and administration expenses.

## SEGMENT INFORMATION

We define segment results as income (loss) before interest expense, interest income, other operating income, other income (expense) and income taxes, and include the results of non-consolidated affiliates. Consistent with the guidance in ASC 280 "Segment Reporting," we have determined it is appropriate to include the operating results of non-consolidated affiliates in the relevant segment financial results. We have three operating segments: Chlor Alkali Products and Vinyls, Epoxy and Winchester. The three operating segments reflect the organization used by our management for purposes of allocating resources and assessing performance. Chlorine used in our Epoxy segment is transferred at cost from the Chlor Alkali Products and Vinyls segment. Sales and profits are recognized in the Chlor Alkali Products and Vinyls segment for all caustic soda generated and sold by Olin.



Table of Contents

	Years ended December 31,		
	2017	2016	2015
Sales:	(\$ in millions)		
Chlor Alkali Products and Vinyls	\$3,500.8	\$2,999.3	\$1,713.4
Epoxy	2,086.4	1,822.0	429.6
Winchester	681.2	729.3	711.4
Total sales	\$6,268.4	\$5,550.6	\$2,854.4
Income (loss) before taxes:			
Chlor Alkali Products and Vinyls	\$405.8	\$224.9	\$115.5
Epoxy	(11.8 )	15.4	(7.5 )
Winchester	72.4	120.9	115.6
Corporate/Other	(86.5 )	(55.8 )	(40.6 )
Restructuring charges	(37.6 )	(112.9 )	(2.7 )
Acquisition-related costs	(12.8 )	(48.8 )	(123.4 )
Other operating income	3.3	10.6	45.7
Interest expense	(217.4 )	(191.9 )	(97.0 )
Interest income	1.8	3.4	1.1
Income (loss) before taxes	\$117.2	\$(34.2 )	\$6.7
Earnings of non-consolidated affiliates:			
Chlor Alkali Products and Vinyls	\$1.8	\$1.7	\$1.7
Depreciation and amortization expense:			
Chlor Alkali Products and Vinyls	\$432.2	\$418.1	\$186.1
Epoxy	94.3	90.0	20.9
Winchester	19.5	18.5	17.4
Corporate/Other	12.9	6.9	4.5
Total depreciation and amortization expense	\$558.9	\$533.5	\$228.9
Capital spending:			
Chlor Alkali Products and Vinyls	\$209.5	\$195.1	\$94.5
Epoxy	37.9	45.4	7.7
Winchester	22.5	19.5	25.6
Corporate/Other	24.4	18.0	3.1
Total capital spending	\$294.3	\$278.0	\$130.9

	December 31,	
	2017	2016
Assets:	(\$ in millions)	
Chlor Alkali Products and Vinyls	\$7,008.0	\$6,521.4
Epoxy	1,597.1	1,514.3
Winchester	425.2	424.0
Corporate/Other	188.0	302.9
Total assets	\$9,218.3	\$8,762.6

Investments—affiliated companies (at equity):		
Chlor Alkali Products and Vinyls	\$28.5	\$26.7

Table of Contents

Segment assets include only those assets which are directly identifiable to an operating segment. Assets of the corporate/other segment include primarily such items as cash and cash equivalents, deferred taxes, and other assets.

	Years ended December 31,		
Geographic Data	2017	2016	2015
Sales:	(\$ in millions)		
United States	\$3,560.4	\$3,356.8	\$2,208.5
Foreign	2,708.0	2,193.8	645.9
Total sales	\$6,268.4	\$5,550.6	\$2,854.4

	December 31,	
Long-lived assets:	2017	2016
	(\$ in millions)	
United States	\$3,211.9	\$3,352.2
Foreign	363.9	352.7
Total long-lived assets	\$3,575.8	\$3,704.9

Sales are attributed to geographic areas based on customer location and long-lived assets are attributed to geographic areas based on asset location.

**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.

The establishment and implementation of national, state or provincial and local standards to regulate air, water and land quality affect substantially all of our manufacturing locations around the world. Laws providing for regulation of the manufacture, transportation, use and disposal of hazardous and toxic substances, and remediation of contaminated sites, have imposed additional regulatory requirements on industry, particularly the chemicals industry. In addition, implementation of environmental laws has required and will continue to require new capital expenditures and will increase plant operating costs. We employ waste minimization and pollution prevention programs at our manufacturing sites.

In connection with the Acquisition, DowDuPont retained liabilities relating to releases of hazardous materials and violations of environmental law to the extent arising prior to the Closing Date.

We are party to various governmental and private environmental actions associated with past manufacturing facilities and former waste disposal sites. Associated costs of investigatory and remedial activities are provided for in accordance with generally accepted accounting principles governing probability and the ability to reasonably estimate future costs. Our ability to estimate future costs depends on whether our investigatory and remedial activities are in preliminary or advanced stages. With respect to unasserted claims, we accrue liabilities for costs that, in our experience, we expect to incur to protect our interests against those unasserted claims. Our accrued liabilities for unasserted claims amounted to \$7.9 million at December 31, 2017. With respect to asserted claims, we accrue liabilities based on remedial investigation, feasibility study, remedial action and operation, maintenance and monitoring (OM&M) expenses that, in our experience, we expect to incur in connection with the asserted claims. Required site OM&M expenses are estimated and accrued in their entirety for required periods not exceeding 30 years, which reasonably approximates the typical duration of long-term site OM&M.





Table of Contents

Our liabilities for future environmental expenditures were as follows:

	December 31,	
	2017	2016
	(\$ in millions)	
Beginning balance	\$137.3	\$138.1
Charges to income	10.3	9.2
Remedial and investigatory spending	(16.5 )	(10.3 )
Currency translation adjustments	0.5	0.3
Ending balance	\$131.6	\$137.3

At December 31, 2017 and 2016, our consolidated balance sheets included environmental liabilities of \$111.6 million and \$120.3 million, respectively, which were classified as other noncurrent liabilities. Our environmental liability amounts do not take into account any discounting of future expenditures or any consideration of insurance recoveries or advances in technology. These liabilities are reassessed periodically to determine if environmental circumstances have changed and/or remediation efforts and our estimate of related costs have changed. As a result of these reassessments, future charges to income may be made for additional liabilities. Of the \$131.6 million included on our consolidated balance sheet at December 31, 2017 for future environmental expenditures, we currently expect to utilize \$76.2 million of the reserve for future environmental expenditures over the next 5 years, \$14.0 million for expenditures 6 to 10 years in the future, and \$41.4 million for expenditures beyond 10 years in the future.

Our total estimated environmental liability at December 31, 2017 was attributable to 59 sites, 15 of which were United States Environmental Protection Agency National Priority List sites. Nine sites accounted for 78% of our environmental liability and, of the remaining 50 sites, no one site accounted for more than 3% of our environmental liability. At four of the nine sites, part of the site is subject to a remedial investigation and another part is in the long-term OM&M stage. At one of the nine sites, a remedial action plan is being developed for part of the site and another part a remedial design is being developed. At one of the nine sites, part of the site is subject to a remedial investigation and another part a remedial design is being developed. At one of these nine sites, a remedial investigation is being performed. At one of the nine sites, a remedial action plan is being developed for part of the site and another part is in the long-term OM&M stage. The one remaining site is in long-term OM&M. All nine sites are either associated with past manufacturing operations or former waste disposal sites. None of the nine largest sites represents more than 22% of the liabilities reserved on our consolidated balance sheet at December 31, 2017 for future environmental expenditures.

Environmental provisions charged to income, which are included in cost of goods sold, were as follows:

	Years ended		
	December 31,		
	2017	2016	2015
	(\$ in millions)		
Charges to income	\$10.3	\$9.2	\$15.7
Recoveries from third parties of costs incurred and expensed	(1.8 )	—	—
Environmental expense	\$8.5	\$9.2	\$15.7

These charges relate primarily to remedial and investigatory activities associated with past manufacturing operations and former waste disposal sites and may be material to operating results in future years.

Annual environmental-related cash outlays for site investigation and remediation are expected to range between approximately \$15 million to \$25 million over the next several years, which are expected to be charged against reserves recorded on our consolidated balance sheet. While we do not anticipate a material increase in the projected

annual level of our environmental-related cash outlays for site investigation and remediation, there is always the possibility that such an increase may occur in the future in view of the uncertainties associated with environmental exposures. Environmental exposures are difficult to assess for numerous reasons, including the identification of new sites, developments at sites resulting from investigatory studies, advances in technology, changes in environmental laws and regulations and their application, changes in regulatory authorities, the scarcity of reliable data pertaining to identified sites, the difficulty in assessing the involvement and financial capability of other Potentially Responsible Parties (PRPs), our ability to obtain contributions from other parties and the lengthy time periods over which site remediation occurs. It is possible that some of these matters (the outcomes of which are subject to various uncertainties) may be resolved unfavorably to us, which could materially adversely affect our financial

Table of Contents

position or results of operations. At December 31, 2017, we estimate that it is reasonably possible that we may have additional contingent environmental liabilities of \$60 million in addition to the amounts for which we have already recorded as a reserve.

## COMMITMENTS AND CONTINGENCIES

The following table summarizes our contractual commitments under non-cancelable operating leases and purchase contracts as of December 31, 2017:

	Operating Leases	Purchase Commitments
	(\$ in millions)	
2018	\$87.9	\$ 692.7
2019	67.4	645.0
2020	51.5	631.5
2021	36.9	708.3
2022	23.9	708.0
Thereafter	87.5	4,364.2
Total commitments	\$355.1	\$ 7,749.7

Our operating lease commitments are primarily for railroad cars but also include distribution, warehousing and office space and data processing and office equipment. Virtually none of our lease agreements contain escalation clauses or step rent provisions. Total rent expense charged to operations amounted to \$118.5 million, \$95.5 million and \$75.1 million in 2017, 2016 and 2015, respectively (sublease income is not significant). The above purchase commitments include raw material, capital expenditure and utility purchasing commitments utilized in our normal course of business for our projected needs. In connection with the Acquisition, certain additional agreements have been entered into with DowDuPont, including, long-term purchase agreements for raw materials. These agreements are maintained through long-term cost based contracts that provide us with a reliable supply of key raw materials. Key raw materials received from DowDuPont include ethylene, electricity, propylene and benzene. During 2016, we exercised one of the options to reserve additional ethylene supply at producer economics. In September 2017, DowDuPont's new Texas 9 ethylene cracker in Freeport, TX became operational. As a result, a payment of \$209.4 million was made in connection with this option, which increased the value of the long-term asset.

On February 27, 2017, we exercised the remaining option to obtain additional future ethylene at producer economics from DowDuPont. In connection with the exercise of this option, we also secured a long-term customer arrangement. As a result, an additional payment will be made to DowDuPont of between \$440 million and \$465 million on or about the fourth quarter of 2020. During September 2017, as a result of DowDuPont's new Texas 9 ethylene cracker becoming operational, Olin recognized a long-term asset and other liabilities of \$389.2 million, which represents the present value of the estimated 2020 payment. The discount amount of \$51.8 million will be recorded as interest expense through the fourth quarter of 2020.

We, and our subsidiaries, are defendants in various legal actions (including proceedings based on alleged exposures to asbestos) incidental to our past and current business activities. At December 31, 2017 and 2016, our consolidated balance sheets included liabilities for these legal actions of \$24.8 million and \$13.6 million, respectively. These liabilities do not include costs associated with legal representation and do not include \$8.0 million of insurance recoveries included in receivables, net within the accompanying consolidated balance sheet as of December 31, 2017. Based on our analysis, and considering the inherent uncertainties associated with litigation, we do not believe that it is reasonably possible that these legal actions will materially and adversely affect our financial position, cash flows or results of operations. In connection with the Acquisition, DowDuPont retained liabilities related to litigation

to the extent arising prior to the Closing Date.

During the ordinary course of our business, contingencies arise resulting from an existing condition, situation or set of circumstances involving an uncertainty as to the realization of a possible gain contingency. In certain instances such as environmental projects, we are responsible for managing the cleanup and remediation of an environmental site. There exists the possibility of recovering a portion of these costs from other parties. We account for gain contingencies in accordance with the provisions of ASC 450 "Contingencies" and therefore do not record gain contingencies and recognize income until it is earned and realizable.

For the year ended December 31, 2016, we recognized an insurance recovery of \$11.0 million in other operating income for property damage and business interruption related to a 2008 chlor alkali facility incident.

105

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## Table of Contents

For the year ended December 31, 2015 we recognized insurance recoveries of \$57.4 million for property damage and business interruption related to the Becancour, Canada and McIntosh, AL chlor alkali facilities. Cost of goods sold was reduced by \$10.5 million and selling and administration was reduced by \$0.9 million for the reimbursement of costs incurred and expensed in prior periods and other operating income included a gain of \$46.0 million. The consolidated statement of cash flows for the year ended December 31, 2015 included \$25.8 million for the property damage portion of the insurance recoveries within proceeds from disposition of property, plant and equipment and gains on disposition of property, plant and equipment.

## DERIVATIVE FINANCIAL INSTRUMENTS

We are exposed to market risk in the normal course of our business operations due to our purchases of certain commodities, our ongoing investing and financing activities and our operations that use foreign currencies. The risk of loss can be assessed from the perspective of adverse changes in fair values, cash flows and future earnings. We have established policies and procedures governing our management of market risks and the use of financial instruments to manage exposure to such risks. ASC 815 requires an entity to recognize all derivatives as either assets or liabilities in the consolidated balance sheets and measure those instruments at fair value. In accordance with ASC 815, we designate derivative contracts as cash flow hedges of forecasted purchases of commodities and forecasted interest payments related to variable-rate borrowings and designate certain interest rate swaps as fair value hedges of fixed-rate borrowings. We do not enter into any derivative instruments for trading or speculative purposes.

Energy costs, including electricity and natural gas, and certain raw materials used in our production processes are subject to price volatility. Depending on market conditions, we may enter into futures contracts, forward contracts, commodity swaps and put and call option contracts in order to reduce the impact of commodity price fluctuations. The majority of our commodity derivatives expire within one year. Those commodity contracts that extend beyond one year correspond with raw material purchases for long-term fixed-price sales contracts.

We actively manage currency exposures that are associated with net monetary asset positions, currency purchases and sales commitments denominated in foreign currencies and foreign currency denominated assets and liabilities created in the normal course of business. We enter into forward sales and purchase contracts to manage currency to offset our net exposures, by currency, related to the foreign currency denominated monetary assets and liabilities of our operations. At December 31, 2017, we had outstanding forward contracts to buy foreign currency with a notional value of \$135.5 million and to sell foreign currency with a notional value of \$97.7 million. All of the currency derivatives expire within one year and are for USD equivalents. The counterparties to the forward contracts are large financial institutions; however, the risk of loss to us in the event of nonperformance by a counterparty could be significant to our financial position or results of operations. At December 31, 2016, we had outstanding forward contracts to buy foreign currency with a notional value of \$73.2 million and to sell foreign currency with a notional value of \$100.8 million.

### Cash Flow Hedges

For derivative instruments that are designated and qualify as a cash flow hedge, the change in fair value of the derivative is recognized as a component of other comprehensive income (loss) until the hedged item is recognized into earnings. Gains and losses on the derivatives representing hedge ineffectiveness are recognized currently in earnings.

We had the following notional amount of outstanding commodity contracts that were entered into to hedge forecasted purchases:

	December 31, 2017 2016	
	(\$ in millions)	
Copper	\$45.2	\$35.8
Zinc	8.4	8.0
Lead	—	3.4
Natural gas	39.2	54.4

As of December 31, 2017, the counterparties to these commodity contracts were Wells Fargo (\$36.3 million), Citibank (\$34.3 million), Merrill Lynch Commodities, Inc. (\$18.6 million) and JPMorgan Chase Bank, National Association (\$3.6 million), all of which are major financial institutions.

## Table of Contents

We use cash flow hedges for certain raw material and energy costs such as copper, zinc, lead, electricity and natural gas to provide a measure of stability in managing our exposure to price fluctuations associated with forecasted purchases of raw materials and energy used in our manufacturing process. At December 31, 2017, we had open derivative contract positions through 2022. If all open futures contracts had been settled on December 31, 2017, we would have recognized a pretax gain of \$7.5 million.

If commodity prices were to remain at December 31, 2017 levels, approximately \$1.7 million of deferred gains, net of tax, would be reclassified into earnings during the next twelve months. The actual effect on earnings will be dependent on actual commodity prices when the forecasted transactions occur.

We use interest rate swaps as a means of minimizing significant unanticipated earnings fluctuations that may arise from volatility in interest rates of our variable-rate borrowings. In April 2016, we entered into three tranches of forward starting interest rate swaps whereby we agreed to pay fixed rates to the counterparties who, in turn, pay us floating rates on \$1,100.0 million, \$900.0 million and \$400.0 million of our underlying floating-rate debt obligations. Each tranche's term length is for twelve months beginning on December 31, 2016, December 31, 2017 and December 31, 2018, respectively. The counterparties to the agreements are SMBC Capital Markets, Inc., Wells Fargo, PNC Bank, National Association, and Toronto-Dominion Bank. These counterparties are large financial institutions; however, the risk of loss to us in the event of nonperformance by a counterparty could be significant to our financial position or results of operations. We have designated the swaps as cash flow hedges of the risk of changes in interest payments associated with our variable-rate borrowings. Accordingly, the swap agreements have been recorded at their fair market value of \$10.5 million and are included in other current assets and other assets on the accompanying consolidated balance sheet, with the corresponding gain deferred as a component of other comprehensive loss. For the year ended December 31, 2017, \$3.1 million of income was recorded to interest expense on the accompanying consolidated statement of operations related to these swap agreements.

At December 31, 2017, we had open interest rate swaps designated as cash flow hedges with maximum terms through 2019. If all open futures contracts had been settled on December 31, 2017, we would have recognized a pretax gain of \$10.5 million.

If interest rates were to remain at December 31, 2017 levels, \$5.2 million of deferred gains would be reclassified into earnings during the next twelve months. The actual effect on earnings will be dependent on actual interest rates when the forecasted transactions occur.

### Fair Value Hedges

We use interest rate swaps as a means of managing interest expense and floating interest rate exposure to optimal levels. For derivative instruments that are designated and qualify as a fair value hedge, the gain or loss on the derivative as well as the offsetting loss or gain on the hedged item attributable to the hedged risk are recognized in current earnings. We include the gain or loss on the hedged items (fixed-rate borrowings) in the same line item, interest expense, as the offsetting loss or gain on the related interest rate swaps. As of both December 31, 2017 and 2016, the total notional amounts of our interest rate swaps designated as fair value hedges were \$500.0 million.

In April 2016, we entered into interest rate swaps on \$250.0 million of our underlying fixed-rate debt obligations, whereby we agreed to pay variable rates to the counterparties who, in turn, pay us fixed rates. The counterparties to these agreements are Toronto-Dominion Bank and SMBC Capital Markets, Inc., both of which are major financial institutions.

In October 2016, we entered into interest rate swaps on an additional \$250.0 million of our underlying fixed-rate debt obligations, whereby we agreed to pay variable rates to the counterparties who, in turn, pay us fixed rates. The counterparties to these agreements are PNC Bank, National Association and Wells Fargo, both of which are major financial institutions.

We have designated the April 2016 and October 2016 interest rate swap agreements as fair value hedges of the risk of changes in the value of fixed rate debt due to changes in interest rates for a portion of our fixed rate borrowings. Accordingly, the swap agreements have been recorded at their fair market value of \$28.1 million and are included in other long-term liabilities on the accompanying consolidated balance sheet, with a corresponding decrease in the carrying amount of the related debt. For the years ended December 31, 2017 and 2016, \$2.9 million and \$2.6 million, respectively, of income has been recorded to interest expense on the accompanying consolidated statement of operations related to these swap agreements.



Table of Contents

## Financial Statement Impacts

We present our derivative assets and liabilities in our consolidated balance sheets on a net basis whenever we have a legally enforceable master netting agreement with the counterparty to our derivative contracts. We use these agreements to manage and substantially reduce our potential counterparty credit risk.

The following table summarizes the location and fair value of the derivative instruments on our consolidated balance sheets. The table disaggregates our net derivative assets and liabilities into gross components on a contract-by-contract basis before giving effect to master netting arrangements:

	December 31,	
	2017	2016
Asset Derivatives:		
Other current assets		
Derivatives designated as hedging instruments:		
Interest rate contracts - gains	\$6.9	\$1.9
Commodity contracts - gains	11.4	13.2
Commodity contracts - losses	(0.1 )	(1.7 )
Derivatives not designated as hedging instruments:		
Foreign exchange contracts - losses	(1.0 )	(0.5 )
Foreign exchange contracts - gains	2.0	0.6
Total other current assets	19.2	13.5
Other assets		
Derivatives designated as hedging instruments:		
Interest rate contracts - gains	3.6	7.7
Total other assets	3.6	7.7
Total Asset Derivatives <sup>(1)</sup>	\$22.8	\$21.2
Liability Derivatives:		
Current installments of long-term debt		
Derivatives designated as hedging instruments:		
Interest rate contracts - gains	\$—	\$0.1
Total current installments of long-term debt	—	0.1
Accrued liabilities		
Derivatives designated as hedging instruments:		
Commodity contracts - losses	3.8	—
Derivatives not designated as hedging instruments:		
Foreign exchange contracts - losses	—	1.7
Foreign exchange contracts - gains	—	(0.5 )
Total accrued liabilities	3.8	1.2
Other liabilities		
Derivatives designated as hedging instruments:		
Interest rate contracts - losses	28.1	28.5
Total other liabilities	28.1	28.5
Total Liability Derivatives <sup>(1)</sup>	\$31.9	\$29.8

(1) Does not include the impact of cash collateral received from or provided to counterparties.



Table of Contents

The following table summarizes the effects of derivative instruments on our consolidated statements of operations:

		Amount of Gain (Loss)		
		Years Ended December 31,		
Location of Gain (Loss)		2017	2016	2015
(\$ in millions)				
Derivatives – Cash Flow Hedges				
Recognized in other comprehensive loss (effective portion):				
Commodity contracts	_____	\$(2.1)	\$16.7	\$(13.9)
Interest rate contracts	_____	4.0	9.6	—
		\$1.9	\$26.3	\$(13.9)
Reclassified from accumulated other comprehensive loss into income (effective portion):				
Interest rate contracts	Interest expense	\$3.1	\$—	\$—
Commodity contracts	Cost of goods sold	1.5	(5.8 )	(9.7 )
		\$4.6	\$(5.8 )	\$(9.7 )
Derivatives – Fair Value Hedges				
Interest rate contracts	Interest expense	\$3.0	\$3.7	\$2.8
Derivatives Not Designated as Hedging Instruments				
Commodity contracts	Cost of goods sold	\$—	\$(0.4 )	\$(2.2 )
Foreign exchange contracts	Selling and administration	1.8	(11.1 )	0.1
		\$1.8	\$(11.5 )	\$(2.1 )

The ineffective portion of changes in fair value resulted in zero charged or credited to earnings for the years ended December 31, 2017, 2016 and 2015.

## Credit Risk and Collateral

By using derivative instruments, we are exposed to credit and market risk. If a counterparty fails to fulfill its performance obligations under a derivative contract, our credit risk will equal the fair-value gain in a derivative. Generally, when the fair value of a derivative contract is positive, this indicates that the counterparty owes us, thus creating a repayment risk for us. When the fair value of a derivative contract is negative, we owe the counterparty and, therefore, assume no repayment risk. We minimize the credit (or repayment) risk in derivative instruments by entering into transactions with high-quality counterparties. We monitor our positions and the credit ratings of our counterparties, and we do not anticipate non-performance by the counterparties.

Based on the agreements with our various counterparties, cash collateral is required to be provided when the net fair value of the derivatives, with the counterparty, exceeds a specific threshold. If the threshold is exceeded, cash is either provided by the counterparty to us if the value of the derivatives is our asset, or cash is provided by us to the counterparty if the value of the derivatives is our liability. As of December 31, 2017 and 2016, this threshold was not exceeded. In all instances where we are party to a master netting agreement, we offset the receivable or payable recognized upon payment of cash collateral against the fair value amounts recognized for derivative instruments that have also been offset under such master netting agreements.

Table of Contents

## FAIR VALUE MEASUREMENTS

Assets and liabilities recorded at fair value in the consolidated balance sheets are categorized based upon the level of judgment associated with the inputs used to measure their fair value. Hierarchical levels are directly related to the amount of subjectivity associated with the inputs to fair valuation of these assets and liabilities. We are required to separately disclose assets and liabilities measured at fair value on a recurring basis, from those measured at fair value on a nonrecurring basis. Nonfinancial assets measured at fair value on a nonrecurring basis are intangible assets and goodwill, which are reviewed for impairment annually in the fourth quarter and/or when circumstances or other events indicate that impairment may have occurred. Determining which hierarchical level an asset or liability falls within requires significant judgment. The following table summarizes the assets and liabilities measured at fair value in the consolidated balance sheets:

Balance at December 31, 2017	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Assets (\$ in millions)				
Interest rate swaps	\$ 10.5	\$	\$	—\$10.5
Commodity contracts	—11.3	—	—	11.3
Foreign exchange contracts	—1.0	—	—	1.0
Liabilities				
Interest rate swaps	—28.1	—	—	28.1
Commodity contracts	—3.8	—	—	3.8
Balance at December 31, 2016				
Assets				
Interest rate swaps	\$ 9.6	\$	\$	—9.6
Commodity contracts	—11.5	—	—	11.5
Foreign exchange contracts	—0.1	—	—	0.1
Liabilities				
Interest rate swaps	—28.6	—	—	28.6
Foreign exchange contracts	—1.2	—	—	1.2

For the years ended December 31, 2017 and 2016, there were no transfers into or out of Level 1, Level 2 and Level 3.

## Interest Rate Swaps

Interest rate swap financial instruments were valued using the “income approach” valuation technique. This method used valuation techniques to convert future amounts to a single present amount. The measurement was based on the value indicated by current market expectations about those future amounts. We use interest rate swaps as a means of managing interest expense and floating interest rate exposure to optimal levels.

## Commodity Forward Contracts

Commodity contract financial instruments were valued primarily based on prices and other relevant information observable in market transactions involving identical or comparable assets or liabilities including both forward and spot prices for commodities. We use commodity derivative contracts for certain raw materials and energy costs such as copper, zinc, lead, electricity and natural gas to provide a measure of stability in managing our exposure to price fluctuations.

#### Foreign Currency Contracts

Foreign currency contract financial instruments were valued primarily based on relevant information observable in market transactions involving identical or comparable assets or liabilities including both forward and spot prices for currencies. We enter into forward sales and purchase contracts to manage currency risk resulting from purchase and sale commitments denominated in foreign currencies.

Table of Contents

## Financial Instruments

The carrying values of cash and cash equivalents, accounts receivable and accounts payable approximated fair values due to the short-term maturities of these instruments. The fair value of our long-term debt was determined based on current market rates for debt of similar risk and maturities. The following table summarizes the fair value measurements of debt and the actual debt recorded on our balance sheets:

	Fair Value Measurements			Amount recorded on balance sheets
	Level 1	Level 2	Level 3 Total	
	(\$ in millions)			
Balance at December 31, 2017	\$-3,758.0	\$153.0	\$3,911.0	\$3,612.0
Balance at December 31, 2016	—3,703.7	153.0	3,856.7	3,617.6

## Nonrecurring Fair Value Measurements

In addition to assets and liabilities that are recorded at fair value on a recurring basis, we record assets and liabilities at fair value on a nonrecurring basis as required by ASC 820. There were no assets measured at fair value on a nonrecurring basis as of December 31, 2017 and 2016.

## SUPPLEMENTAL GUARANTOR FINANCIAL INFORMATION

In October 2015, Spinco (the Issuer) issued \$720.0 million aggregate principal amount of the 2023 Notes and \$500.0 million aggregate principal amount of the 2025 Notes. During 2016, the Notes were registered under the Securities Act of 1933, as amended. The Issuer was formed on March 13, 2015 as a wholly owned subsidiary of DowDuPont and upon closing of the Acquisition became a 100% owned subsidiary of Olin (the Parent Guarantor). The Notes are fully and unconditionally guaranteed by the Parent Guarantor.

The following condensed consolidating financial information presents the condensed consolidating balance sheets as of December 31, 2017 and 2016, and the related condensed consolidating statements of operations, comprehensive income (loss) and cash flows for each of the years in the three-year period ended December 31, 2017 of (a) the Parent Guarantor, (b) the Issuer, (c) the non-guarantor subsidiaries, (d) elimination entries necessary to consolidate the Parent Guarantor with the Issuer and the non-guarantor subsidiaries and (e) Olin on a consolidated basis. Investments in consolidated subsidiaries are presented under the equity method of accounting.

Table of Contents

## CONDENSED CONSOLIDATING BALANCE SHEETS

December 31, 2017

(In millions)

	Parent Guarantor	Issuer	Subsidiary Non-Guarantor	Eliminations	Total
Assets					
Current assets:					
Cash and cash equivalents	\$57.1	\$—	\$ 161.3	\$—	\$218.4
Receivables, net	95.6	—	637.6	—	733.2
Intercompany receivables	—	—	2,093.2	(2,093.2 )	—
Income taxes receivable	11.7	—	6.3	(1.1 )	16.9
Inventories, net	155.4	—	527.2	—	682.6
Other current assets	206.2	—	5.3	(163.4 )	48.1
Total current assets	526.0	—	3,430.9	(2,257.7 )	1,699.2
Property, plant and equipment, net	544.4	—	3,031.4	—	3,575.8
Investment in subsidiaries	6,680.4	4,092.3	—	(10,772.7 )	—
Deferred income taxes	38.1	—	34.5	(36.2 )	36.4
Other assets	45.9	—	1,162.5	—	1,208.4
Long-term receivables—affiliates	—	2,132.1	—	(2,132.1 )	—
Intangible assets, net	0.3	5.7	572.5	—	578.5
Goodwill	—	966.3	1,153.7	—	2,120.0
Total assets	\$7,835.1	\$7,196.4	\$ 9,385.5	\$(15,198.7 )	\$9,218.3
Liabilities and Shareholders' Equity					
Current liabilities:					
Current installments of long-term debt	\$0.7	\$—	\$ —	\$—	\$0.7
Accounts payable	83.2	—	590.0	(3.4 )	669.8
Intercompany payables	2,093.2	—	—	(2,093.2 )	—
Income taxes payable	—	—	10.5	(1.1 )	9.4
Accrued liabilities	117.7	—	318.1	(161.4 )	274.4
Total current liabilities	2,294.8	—	918.6	(2,259.1 )	954.3
Long-term debt	839.4	2,522.2	249.7	—	3,611.3
Accrued pension liability	406.7	—	229.2	—	635.9
Deferred income taxes	—	3.0	544.4	(36.2 )	511.2
Long-term payables—affiliates	1,250.0	—	882.1	(2,132.1 )	—
Other liabilities	290.5	5.6	455.8	—	751.9
Total liabilities	5,081.4	2,530.8	3,279.8	(4,427.4 )	6,464.6
Commitments and contingencies					
Shareholders' equity:					
Common stock	167.1	—	14.6	(14.6 )	167.1
Additional paid-in capital	2,280.9	4,125.7	4,808.2	(8,933.9 )	2,280.9
Accumulated other comprehensive loss	(484.6 )	—	(4.6 )	4.6 )	(484.6 )
Retained earnings	790.3	539.9	1,287.5	(1,827.4 )	790.3
Total shareholders' equity	2,753.7	4,665.6	6,105.7	(10,771.3 )	2,753.7
Total liabilities and shareholders' equity	\$7,835.1	\$7,196.4	\$ 9,385.5	\$(15,198.7 )	\$9,218.3

Table of Contents

## CONDENSED CONSOLIDATING BALANCE SHEETS

December 31, 2016

(In millions)

	Parent Guarantor	Issuer	Subsidiary Non-Guarantor	Eliminations	Total
Assets					
Current assets:					
Cash and cash equivalents	\$25.2	\$—	\$ 159.3	\$—	\$184.5
Receivables, net	88.3	—	586.7	—	675.0
Intercompany receivables	—	—	1,912.3	(1,912.3 )	—
Income taxes receivable	19.0	—	7.3	(0.8 )	25.5
Inventories, net	167.7	—	462.7	—	630.4
Other current assets	164.7	3.4	1.2	(138.5 )	30.8
Total current assets	464.9	3.4	3,129.5	(2,051.6 )	1,546.2
Property, plant and equipment, net	510.1	—	3,194.8	—	3,704.9
Investment in subsidiaries	6,035.2	3,734.7	—	(9,769.9 )	—
Deferred income taxes	133.5	—	103.5	(117.5 )	119.5
Other assets	48.1	—	596.3	—	644.4
Long-term receivables—affiliates	—	2,194.2	—	(2,194.2 )	—
Intangible assets, net	0.4	5.7	623.5	—	629.6
Goodwill	—	966.3	1,151.7	—	2,118.0
Total assets	\$7,192.2	\$6,904.3	\$ 8,799.3	\$(14,133.2 )	\$8,762.6
Liabilities and Shareholders' Equity					
Current liabilities:					
Current installments of long-term debt	\$0.6	67.5	\$ 12.4	—	\$80.5
Accounts payable	45.3	—	527.4	(1.9 )	570.8
Intercompany payables	1,882.8	29.5	—	(1,912.3 )	—
Income taxes payable	—	—	8.3	(0.8 )	7.5
Accrued liabilities	124.9	—	277.5	(138.6 )	263.8
Total current liabilities	2,053.6	97.0	825.6	(2,053.6 )	922.6
Long-term debt	913.9	2,413.3	209.9	—	3,537.1
Accrued pension liability	453.7	—	184.4	—	638.1
Deferred income taxes	—	223.6	926.4	(117.5 )	1,032.5
Long-term payables—affiliates	1,209.1	—	985.1	(2,194.2 )	—
Other liabilities	288.9	6.6	63.8	—	359.3
Total liabilities	4,919.2	2,740.5	3,195.2	(4,365.3 )	6,489.6
Commitments and contingencies					
Shareholders' equity:					
Common stock	165.4	—	14.6	(14.6 )	165.4
Additional paid-in capital	2,243.8	4,125.7	4,808.2	(8,933.9 )	2,243.8
Accumulated other comprehensive loss	(510.0 )	—	(7.0 )	7.0 )	(510.0 )
Retained earnings	373.8	38.1	788.3	(826.4 )	373.8
Total shareholders' equity	2,273.0	4,163.8	5,604.1	(9,767.9 )	2,273.0
Total liabilities and shareholders' equity	\$7,192.2	\$6,904.3	\$ 8,799.3	\$(14,133.2 )	\$8,762.6





Table of Contents

## CONDENSED CONSOLIDATING STATEMENTS OF OPERATIONS

Year Ended December 31, 2017

(In millions)

	Parent Guarantor	Issuer	Subsidiary Non-Guarantor	Eliminations	Total
Sales	\$ 1,330.3	\$—	\$ 5,344.9	\$ (406.8 )	\$ 6,268.4
Operating expenses:					
Cost of goods sold	1,176.1	—	4,770.3	(406.8 )	5,539.6
Selling and administration	137.9	—	212.8	—	350.7
Restructuring charges	1.7	—	35.9	—	37.6
Acquisition-related costs	12.8	—	—	—	12.8
Other operating (loss) income	(11.1 )	—	14.4	—	3.3
Operating (loss) income	(9.3 )	—	340.3	—	331.0
Earnings of non-consolidated affiliates	1.8	—	—	—	1.8
Equity income in subsidiaries	638.4	357.6	—	(996.0 )	—
Interest expense	44.5	165.8	13.0	(5.9 )	217.4
Interest income	6.3	—	1.4	(5.9 )	1.8
Income before taxes	592.7	191.8	328.7	(996.0 )	117.2
Income tax provision (benefit)	43.2	(310.0 )	(165.5 )	—	(432.3 )
Net income	\$ 549.5	\$ 501.8	\$ 494.2	\$ (996.0 )	\$ 549.5

## CONDENSED CONSOLIDATING STATEMENTS OF OPERATIONS

Year Ended December 31, 2016

(In millions)

	Parent Guarantor	Issuer	Subsidiary Non-Guarantor	Eliminations	Total
Sales	\$ 1,321.3	\$—	\$ 4,720.2	\$ (490.9 )	\$ 5,550.6
Operating expenses:					
Cost of goods sold	1,128.7	—	4,285.9	(490.9 )	4,923.7
Selling and administration	138.1	—	185.1	—	323.2
Restructuring charges	0.8	—	112.1	—	112.9
Acquisition-related costs	47.4	—	1.4	—	48.8
Other operating (loss) income	(2.2 )	—	12.8	—	10.6
Operating income	4.1	—	148.5	—	152.6
Earnings of non-consolidated affiliates	1.7	—	—	—	1.7
Equity income in subsidiaries	16.2	139.0	—	(155.2 )	—
Interest expense	38.8	153.9	4.7	(5.5 )	191.9
Interest income	4.7	—	4.2	(5.5 )	3.4
Income (loss) before taxes	(12.1 )	(14.9 )	148.0	(155.2 )	(34.2 )
Income tax (benefit) provision	(8.2 )	(57.6 )	35.5	—	(30.3 )
Net (loss) income	\$ (3.9 )	\$ 42.7	\$ 112.5	\$ (155.2 )	\$ (3.9 )

Table of Contents

## CONDENSED CONSOLIDATING STATEMENTS OF OPERATIONS

Year Ended December 31, 2015

(In millions)

	Parent Guarantor	Issuer	Subsidiary Non-Guarantor	Eliminations	Total
Sales	\$ 1,215.4	\$—	\$ 2,002.5	\$ (363.5 )	\$ 2,854.4
Operating expenses:					
Cost of goods sold	1,057.8	—	1,792.5	(363.5 )	2,486.8
Selling and administration	110.0	—	76.3	—	186.3
Restructuring charges	0.7	—	2.0	—	2.7
Acquisition-related costs	117.9	—	5.5	—	123.4
Other operating (loss) income	(4.0 )	—	49.7	—	45.7
Operating (loss) income	(75.0 )	—	175.9	—	100.9
Earnings of non-consolidated affiliates	1.7	—	—	—	1.7
Equity income in subsidiaries	90.2	19.7	—	(109.9 )	—
Interest expense	60.9	37.0	4.5	(5.4 )	97.0
Interest income	3.1	—	3.4	(5.4 )	1.1
Income (loss) before taxes	(40.9 )	(17.3 )	174.8	(109.9 )	6.7
Income tax (benefit) provision	(39.5 )	(12.7 )	60.3	—	8.1
Net (loss) income	\$(1.4 )	\$(4.6 )	\$ 114.5	\$ (109.9 )	\$(1.4 )

## CONDENSED CONSOLIDATING STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

Year Ended December 31, 2017

(In millions)

	Parent Guarantor	Issuer	Subsidiary Non-Guarantor	Eliminations	Total
Net income	\$ 549.5	\$501.8	\$ 494.2	\$ (996.0 )	\$ 549.5
Other comprehensive income, net of tax:					
Foreign currency translation adjustments, net	—	—	31.7	—	31.7
Unrealized losses on derivative contracts, net	(1.7 )	—	—	—	(1.7 )
Pension and postretirement liability adjustments, net	(12.3 )	—	(9.3 )	—	(21.6 )
Amortization of prior service costs and actuarial losses, net	15.3	—	1.7	—	17.0
Total other comprehensive income, net of tax	1.3	—	24.1	—	25.4
Comprehensive income	\$ 550.8	\$501.8	\$ 518.3	\$ (996.0 )	\$ 574.9

Table of Contents

## CONDENSED CONSOLIDATING STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

Year Ended December 31, 2016

(In millions)

	Parent Guarantor	Issuer	Subsidiary Non-Guarantor	Eliminations	Total
Net (loss) income	\$ (3.9 )	\$42.7	\$ 112.5	\$ (155.2 )	\$(3.9 )
Other comprehensive income (loss), net of tax:					
Foreign currency translation adjustments, net	—	—	(12.0 )	—	(12.0 )
Unrealized gains on derivative contracts, net	19.7	—	—	—	19.7
Pension and postretirement liability adjustments, net	(25.3 )	—	(12.2 )	—	(37.5 )
Amortization of prior service costs and actuarial losses, net	10.9	—	1.4	—	12.3
Total other comprehensive income (loss), net of tax	5.3	—	(22.8 )	—	(17.5 )
Comprehensive income (loss)	\$ 1.4	\$42.7	\$ 89.7	\$ (155.2 )	\$(21.4)

## CONDENSED CONSOLIDATING STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

Year Ended December 31, 2015

(In millions)

	Parent Guarantor	Issuer	Subsidiary Non-Guarantor	Eliminations	Total
Net (loss) income	\$ (1.4 )	\$(4.6)	\$ 114.5	\$ (109.9 )	\$(1.4 )
Other comprehensive loss, net of tax:					
Foreign currency translation adjustments, net	—	—	(9.8 )	—	(9.8 )
Unrealized losses on derivative contracts, net	(2.7 )	—	—	—	(2.7 )
Pension and postretirement liability adjustments, net	(73.7 )	—	(5.1 )	—	(78.8 )
Amortization of prior service costs and actuarial losses, net	39.6	—	2.3	—	41.9
Total other comprehensive loss, net of tax	(36.8 )	—	(12.6 )	—	(49.4 )
Comprehensive (loss) income	\$ (38.2 )	\$(4.6)	\$ 101.9	\$ (109.9 )	\$(50.8)

Table of Contents

## CONDENSED CONSOLIDATING STATEMENTS OF CASH FLOWS

Year Ended December 31, 2017

(In millions)

	Parent Guarantor	Issuer	Subsidiary Non-Guarantor	Eliminations	Total
Net operating activities	\$ 472.0	\$ —	\$ 176.8	\$ —	\$ 648.8
Investing Activities					
Capital expenditures	(89.1 )	—	(205.2 )	—	(294.3 )
Payments under long-term supply contracts	—	—	(209.4 )	—	(209.4 )
Proceeds from disposition of property, plant and equipment	—	—	5.2	—	5.2
Distributions from consolidated subsidiaries, net	2.7	—	—	(2.7 )	—
Net investing activities	(86.4 )	—	(409.4 )	(2.7 )	(498.5 )
Financing Activities					
Long-term debt:					
Borrowings	620.0	1,375.0	40.5	—	2,035.5
Repayments	(690.8 )	(1,334.1 )	(13.0 )	—	(2,037.9 )
Stock options exercised	29.8	—	—	—	29.8
Dividends paid	(133.0 )	—	(2.7 )	2.7	(133.0 )
Debt and equity issuance costs	(8.3 )	(2.9 )	—	—	(11.2 )
Intercompany financing activities	(171.4 )	(38.0 )	209.4	—	—
Net financing activities	(353.7 )	—	234.2	2.7	(116.8 )
Effect of exchange rate changes on cash and cash equivalents	—	—	0.4	—	0.4
Net increase in cash and cash equivalents	31.9	—	2.0	—	33.9
Cash and cash equivalents, beginning of year	25.2	—	159.3	—	184.5
Cash and cash equivalents, end of year	\$ 57.1	\$ —	\$ 161.3	\$ —	\$ 218.4

Table of Contents

## CONDENSED CONSOLIDATING STATEMENTS OF CASH FLOWS

Year Ended December 31, 2016

(In millions)

	Parent Guarantor	Issuer	Subsidiary Non-Guarantor	Eliminations	Total
Net operating activities	\$ 702.6	\$ —	\$ (99.4 )	\$ —	—\$603.2
Investing Activities					
Capital expenditures	(65.7 )	—	(212.3 )	—	(278.0 )
Business acquired and related transactions, net of cash acquired	(69.5 )	—	—	—	(69.5 )
Payments under long-term supply contracts	—	—	(175.7 )	—	(175.7 )
Proceeds from sale/leaseback of equipment	—	—	40.4	—	40.4
Proceeds from disposition of property, plant and equipment	0.2	—	0.3	—	0.5
Proceeds from disposition of affiliated companies	8.8	—	—	—	8.8
Net investing activities	(126.2 )	—	(347.3 )	—	(473.5 )
Financing Activities					
Long-term debt:					
Borrowings	—	—	230.0	—	230.0
Repayments	(335.6 )	(67.5 )	(32.2 )	—	(435.3 )
Stock options exercised	0.5	—	—	—	0.5
Excess tax benefits from stock-based compensation	0.4	—	—	—	0.4
Dividends paid	(132.1 )	—	—	—	(132.1 )
Debt and equity issuance costs	—	(1.0)	—	—	(1.0 )
Intercompany financing activities	(203.8 )	68.5	135.3	—	—
Net financing activities	(670.6 )	—	333.1	—	(337.5 )
Effect of exchange rate changes on cash and cash equivalents	—	—	0.3	—	0.3
Net decrease in cash and cash equivalents	(94.2 )	—	(113.3 )	—	(207.5 )
Cash and cash equivalents, beginning of year	119.4	—	272.6	—	392.0
Cash and cash equivalents, end of year	\$ 25.2	\$ —	\$ 159.3	\$ —	—\$184.5

Table of Contents

## CONDENSED CONSOLIDATING STATEMENTS OF CASH FLOWS

Year Ended December 31, 2015

(In millions)

	Parent Guarantor	Issuer	Subsidiary Non-Guarantor	Eliminations	Total
Net operating activities	\$ (70.6 )	\$ —	\$ 287.7	\$	—\$217.1
Investing Activities					
Capital expenditures	(74.0 )	—	(56.9 )	—	(130.9 )
Business acquired and related transactions, net of cash acquired	(408.1 )	—	—	—	(408.1 )
Proceeds from disposition of property, plant and equipment	1.7	—	24.5	—	26.2
Proceeds from disposition of affiliated companies	8.8	—	—	—	8.8
Net investing activities	(471.6 )	—	(32.4 )	—	(504.0 )
Financing Activities					
Long-term debt:					
Borrowings	1,275.0	—	—	—	1,275.0
Repayments	(149.5 )	—	(581.2 )	—	(730.7 )
Stock options exercised	2.2	—	—	—	2.2
Excess tax benefits from stock-based compensation	0.4	—	—	—	0.4
Dividends paid	(79.5 )	—	—	—	(79.5 )
Debt and equity issuance costs	(35.2 )	(10.0)	—	—	(45.2 )
Intercompany financing activities	(591.2 )	10.0	581.2	—	—
Net financing activities	422.2	—	—	—	422.2
Effect of exchange rate changes on cash and cash equivalents	—	—	(0.1 )	—	(0.1 )
Net (decrease) increase in cash and cash equivalents	(120.0 )	—	255.2	—	135.2
Cash and cash equivalents, beginning of year	239.4	—	17.4	—	256.8
Cash and cash equivalents, end of year	\$ 119.4	\$ —	\$ 272.6	\$	—\$392.0

Table of Contents

## OTHER FINANCIAL DATA

## Quarterly Data (Unaudited)

(\$ in millions, except per share data)

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Year
2017					
Sales	\$1,567.1	\$1,526.5	\$1,554.9	\$1,619.9	\$6,268.4
Cost of goods sold	1,393.7	1,404.1	1,345.6	1,396.2	5,539.6
Net income (loss)	13.4	(5.9 )	52.7	489.3	549.5
Net income (loss) per common share:					
Basic	0.08	(0.04 )	0.32	2.93	3.31
Diluted	0.08	(0.04 )	0.31	2.89	3.26
Common dividends per share	0.20	0.20	0.20	0.20	0.80
Market price of common stock <sup>(1)</sup>					
High	33.88	33.67	34.85	37.52	37.52
Low	25.43	27.79	28.45	33.34	25.43
2016					
Sales	\$1,348.2	\$1,364.0	\$1,452.7	\$1,385.7	\$5,550.6
Cost of goods sold	1,175.4	1,236.9	1,284.4	1,227.0	4,923.7
Net (loss) income	(37.9 )	(1.0 )	17.5	17.5	(3.9 )
Net (loss) income per common share:					
Basic	(0.23 )	(0.01 )	0.11	0.11	(0.02 )
Diluted	(0.23 )	(0.01 )	0.11	0.10	(0.02 )
Common dividends per share	0.20	0.20	0.20	0.20	0.80
Market price of common stock <sup>(1)</sup>					
High	17.75	24.99	26.46	26.93	26.93
Low	12.29	16.55	18.24	19.62	12.29

(1)NYSE composite transactions.

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

Not applicable.

## Item 9A. CONTROLS AND PROCEDURES

Our chief executive officer and our chief financial officer evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2017. Based on that evaluation, our chief executive officer and chief financial officer have concluded that, as of such date, our disclosure controls and procedures were effective to ensure that information Olin is required to disclose in the reports that it files or submits with the SEC under the Securities Exchange Act of 1934 is recorded, processed, summarized and reported within the time periods specified in the Commission's rules and forms, and to ensure that information required to be disclosed in such reports is accumulated and communicated to our management, including our chief executive officer and chief financial officer, as appropriate to allow timely decisions regarding required disclosure.



There have been no changes in our internal control over financial reporting that occurred during the quarter ended December 31, 2017 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Management's report on internal control over financial reporting and the related report of Olin's independent registered public accounting firm, KPMG LLP, are included in Item 8—"Consolidated Financial Statements and Supplementary Data."

Table of Contents

Item 9B. OTHER INFORMATION

Not applicable.

PART III

Item 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

We incorporate the biographical information relating to our Directors under the heading ITEM 1—“PROPOSAL FOR THE ELECTION OF DIRECTORS” in our Proxy Statement relating to our 2018 Annual Meeting of Shareholders (the “Proxy Statement”) by reference in this Report. We incorporate the biographical information regarding executive officers under the heading “EXECUTIVE OFFICERS” in our Proxy Statement by reference in this report. We incorporate the information regarding compliance with Section 16 of the Securities Exchange Act of 1934, as amended, under the heading entitled “SECTION 16(a) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE” in our Proxy Statement by reference in this Report.

The information with respect to our audit committee, including the audit committee financial expert, is incorporated by reference in this Report to the information contained in the paragraph entitled “CORPORATE GOVERNANCE MATTERS—What Are The Committees Of The Board?” in our Proxy Statement. We incorporate by reference in this Report information regarding procedures for shareholders to nominate a director for election, in the Proxy Statement under the headings “MISCELLANEOUS—How can I directly nominate a director for election to the board at the 2019 annual meeting?” and “CORPORATE GOVERNANCE MATTERS—What Is Olin’s Director Nomination Process?”.

We have adopted a code of business conduct and ethics for directors, officers and employees, known as the Code of Conduct. The Code of Conduct is available in the About Olin, Ethics section of our website at [www.olin.com](http://www.olin.com). Olin intends to satisfy disclosure requirements under Item 5.05 of Form 8-K regarding an amendment to, or waiver from, any provision of the Code of Conduct with respect to its executive officers or directors by posting such amendment or waiver on its website.

Item 11. EXECUTIVE COMPENSATION

The information in the Proxy Statement under the heading “CORPORATE GOVERNANCE MATTERS—Compensation Committee Interlocks and Insider Participation,” and the information under the heading “COMPENSATION DISCUSSION AND ANALYSIS” through the information under the heading “COMPENSATION COMMITTEE REPORT,” are incorporated by reference in this Report.

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

We incorporate the information concerning holdings of our common stock by certain beneficial owners contained under the heading “CERTAIN BENEFICIAL OWNERS” in our Proxy Statement, and the information concerning beneficial ownership of our common stock by our directors and officers under the heading “SECURITY OWNERSHIP OF DIRECTORS AND OFFICERS” in our Proxy Statement by reference in this Report. We also incorporate the table entitled “Equity Compensation Plan Information” included under the heading “Item 2—Proposal to Approve the Olin Corporation 2018 Long Term Incentive Plan” in our Proxy Statement by reference in this Report.

Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE

We incorporate the information under the headings “CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS” and “CORPORATE GOVERNANCE MATTERS—Which Board Members Are Independent?” in our Proxy Statement by reference in this Report.

Item 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

We incorporate the information concerning the accounting fees and services of our independent registered public accounting firm, KPMG LLP, under the heading ITEM 4—“PROPOSAL TO RATIFY APPOINTMENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM” in our Proxy Statement by reference in this Report.

Table of Contents

PART IV

Item 15. EXHIBITS AND CONSOLIDATED FINANCIAL STATEMENT SCHEDULES

(a) 1. Consolidated Financial Statements

Consolidated financial statements of the registrant are included in Item 8 above.

2. Financial Statement Schedules

Schedules not included herein are omitted because they are inapplicable or not required or because the required information is given in the consolidated financial statements and notes thereto.

Separate consolidated financial statements of our 50% or less owned subsidiaries accounted for by the equity method are not summarized herein and have been omitted because, in the aggregate, they would not constitute a significant subsidiary.

3. Exhibits

The following exhibits are filed with this Annual Report on Form 10-K, unless incorporated by reference. Management contracts and compensatory plans and arrangements are listed as Exhibits 10(a) through 10(hh). We are party to a number of other instruments defining the rights of holders of long-term debt. No such instrument authorizes an amount of securities in excess of 10% of the total assets of Olin and its subsidiaries on a consolidated basis. Olin agrees to furnish a copy of each instrument to the Commission upon request.

- 2(a) Merger Agreement dated as of March 26, 2015, among The Dow Chemical Company, Blue Cube Spinco Inc., Olin Corporation and Blue Cube Acquisition Corp.—Exhibit 2.1 to Olin’s Form 8-K dated March 27, 2015.\*
- 3(a) Amended and Restated Articles of Incorporation of Olin Corporation as amended effective October 1, 2015—Exhibit 3.1 to Olin’s Form 10-Q for the quarter ended September 30, 2015.\*
- (b) Bylaws of Olin Corporation as amended effective October 25, 2017—Exhibit 3.1 to Olin’s Form 8-K dated October 25, 2017.\*
- (c) Articles of Amendment of the Amended and Restated Articles of Incorporation of Olin Corporation, effective on October 1, 2015—Exhibit 3.1 to Olin’s Form 8-K dated October 5, 2015.\*
- 4(a) Trust Indenture effective October 1, 2010 between The Industrial Development Authority of Washington County and U. S. Bank National Association, as trustee—Exhibit 4.1 to Olin’s Form 8-K dated October 20, 2010.\*
- (b) Loan Agreement effective October 1, 2010 between The Industrial Development Authority of Washington County and Olin Corporation—Exhibit 4.2 to Olin’s Form 8-K dated October 20, 2010.\*
- (c) Bond Purchase Agreement dated October 14, 2010 between The Industrial Development Authority of Washington County, Olin Corporation and PNC Bank National Association, as administrative agent—Exhibit 4.3 to Olin’s Form 8-K dated October 20, 2010.\*
- (d) Trust Indenture effective December 1, 2010 between Mississippi Business Finance Corporation and U. S. Bank National Association—Exhibit 4.1 to Olin’s Form 8-K dated December 10, 2010.\*
- (e) Second Supplemental Indenture dated as of August 9, 2012 between Olin Corporation, The Bank of New York Mellon Trust Company, N.A. and U. S. Bank National Association—Exhibit 4.1 to Olin’s Form 8-K dated August 9, 2012.\*
- (f) Third Supplemental Indenture dated as of August 22, 2012 between Olin Corporation and U. S. Bank National Association—Exhibit 4.1 to Olin’s Form 8-K dated August 22, 2012.\*
- (g) Fourth Supplemental Indenture dated as of March 9, 2017 between Olin Corporation and U.S. Bank National Association—Exhibit 4.3 to Olin’s Form 8-K dated March 9, 2017.\*

- (h) Fifth Supplemental Indenture dated January 16, 2018 between Olin Corporation and U.S. Bank National Association, as trustee, governing the Senior Notes—Exhibit 4.1 to Olin’s Form 8-K dated January 19, 2018.\*
- (i) Loan Agreement effective December 1, 2010 between Mississippi Business Finance Corporation and Olin Corporation—Exhibit 4.2 to Olin’s Form 8-K dated December 10, 2010.\*

Table of Contents

- (j) Bond Purchase Agreement dated December 9, 2010 between Mississippi Business Finance Corporation, Olin Corporation and PNC Bank, National Association, as administrative agent—Exhibit 4.3 to Olin’s Form 8-K dated December 10, 2010.\*
- (k) Amended and Restated Credit and Funding Agreement dated December 9, 2010 between Olin Corporation, as borrower; PNC Bank, National Association, as administrative agent; PNC Capital Markets LLC, as lead arranger; and the Lenders party thereto—Exhibit 4.4 to Olin’s Form 8-K dated December 10, 2010.\*
- (l) First Amendment dated December 27, 2010 to the Amended and Restated Credit and Funding Agreement dated December 9, 2010 between Olin Corporation, as borrower; PNC Bank, National Association, as administrative agent; PNC Capital Markets LLC, as lead arranger; and the Lenders party thereto—Exhibit 4.4 to Olin’s Form 8-K dated December 30, 2010.\*
- (m) Second Amendment dated April 27, 2012 to Amended and Restated Credit and Funding Agreement dated December 9, 2010 among Olin Corporation, the Lenders, and PNC Bank, National Association, as administrative agent for the Lenders—Exhibit 4.2 to Olin’s Form 8-K dated May 3, 2012.\*
- (n) Third Amendment dated June 23, 2014 to Amended and Restated Credit and Funding Agreement dated December 9, 2010 among Olin Corporation, the Lenders, and PNC Bank, National Association, as administrative agent for the Lenders—Exhibit 4.2 to Olin’s Form 8-K dated June 25, 2014.\*
- (o) Amendment No. 4 dated June 23, 2015 to the Amended and Restated Credit and Funding Agreement dated December 9, 2010 among Olin Corporation, the Lenders, and PNC Bank, National Association, as administrative agent—Exhibit 10.3 to Olin’s Form 8-K dated June 29, 2015.\*
- (p) Fifth Amendment dated September 29, 2016 to Amended and Restated Credit and Funding Agreement dated December 9, 2010 among Olin Corporation, the Lenders as defined therein, and PNC Bank, National Association, as administrative agent for the Lenders—Exhibit 4.1 to Olin’s Form 10-Q dated May 3, 2017.\*
- (q) Sixth Amendment dated March 9, 2017 to Amended and Restated Credit and Funding Agreement dated December 9, 2010 among Olin Corporation, the Lenders as defined therein, and PNC Bank, National Association, as administrative agent for the Lenders—Exhibit 4.1 to Olin’s Form 8-K dated March 9, 2017.\*
- (r) Form of 5.50% Senior Notes due 2022—Exhibit 4.2 to Olin’s Form 8-K dated August 22, 2012.\*
- (s) Forward Purchase Agreement, dated as of March 9, 2017, among Olin Corporation, the Lenders (as defined therein), and PNC Bank, National Association, as administrative agent—Exhibit 4.1 to Olin’s Form 8-K dated March 9, 2017.\*
- (t) Senior Notes Indenture dated October 5, 2015 between Blue Cube Spinco Inc., as issuer, and U. S. Bank National Association, as trustee, governing the 9.75% Senior Notes due 2023—Exhibit 4.1 to Olin’s Form 8-K dated October 5, 2015.\*
- (u) Senior Notes Indenture dated October 5, 2015 between Blue Cube Spinco Inc., as issuer, and U. S. Bank National Association, as trustee, governing the 10.00% Senior Notes due 2025—Exhibit 4.2 to Olin’s Form 8-K dated October 5, 2015.\*
- (v) First Supplemental Indenture dated October 5, 2015 between Blue Cube Spinco Inc., as issuer, and Olin Corporation, as guarantor, and U. S. Bank National Association, as trustee, governing the 9.75% Senior Notes due 2023—Exhibit 4.3 to Olin’s Form 8-K dated October 5, 2015.\*
- (w) First Supplemental Indenture dated October 5, 2015 between Blue Cube Spinco Inc., as issuer, and Olin Corporation, as guarantor, and U. S. Bank National Association, as trustee, governing the 10.00% Senior Notes due 2025—Exhibit 4.4 to Olin’s Form 8-K dated October 5, 2015.\*
- (x) Form of 9.75% Senior Notes due 2023—Exhibit 4.5 (included in Exhibit 4.1) to Olin’s Form 8-K dated October 5, 2015.\*
- (y) Form of 10.00% Senior Notes due 2025—Exhibit 4.6 (included in Exhibit 4.2) to Olin’s Form 8-K dated October 5, 2015.\*
- (z) Form of 5.125% Senior Notes due 2027—Exhibit 4.4 (included in Exhibit 4.3) to Olin’s Form 8-K dated March 9, 2017.\*
- (aa) Form of 5.000% Senior Notes due 2030—Exhibit 4.1 to Olin’s Form 8-K dated January 19, 2018.\*
- (bb)

Registration Rights Agreement dated October 5, 2015 relating to the 9.75% Senior Notes due 2023 and 10.00% Senior Notes due 2025 by and among Blue Cube Spinco Inc., Olin Corporation, J.P. Morgan Securities LLC and Wells Fargo Securities LLC for themselves and as representatives of other initial purchasers—Exhibit 4.7 to Olin’s Form 8-K dated October 5, 2015.\*

Receivables Financing Arrangement dated December 20, 2016 by and among Olin Finance Company, LLC,

(cc) PNC Bank, National Association, Olin Corporation, PNC Capital Markets LLC and the Lender parties thereto—Exhibit 4(x) to Olin’s Form 10-K for 2016.\*

10(a) Employee Deferral Plan as amended and restated effective as of January 30, 2003—Exhibit 10(b) to Olin’s Form 10-K for 2002.\*

(b) Amendment to Employee Deferral Plan effective January 1, 2005—Exhibit 10(b)(1) to Olin’s Form 10-K for 2005.\*

Table of Contents

- (c) Senior Executive Pension Plan amended and restated effective October 24, 2008—Exhibit 10.1 to Olin’s Form 10-Q for the quarter ended September 30, 2008.\*
- (d) Supplemental Contributing Employee Ownership Plan as amended and restated effective January 1, 2018—Exhibit 99.1 to Olin’s Form 8-K dated December 12, 2017.\*
- (e) Olin Corporation Key Executive Life Insurance Program—Exhibit 10(e) to Olin’s Form 10-K for 2002.\*
- (f) Form of amendment to executive agreement between Olin Corporation and Messrs. Curley and Fischer dated November 9, 2007—Exhibit 10(g) to Olin’s Form 10-K for 2007.\*
- (g) Form of executive agreement between Olin Corporation and Mr. McIntosh dated November 1, 2007—Exhibit 10.1 to Olin’s Form 10-Q for the quarter ended September 30, 2007.\*
- (h) Form of amendment to executive agreement between Olin Corporation and Messrs. Curley, Fischer and McIntosh dated October 25, 2010—Exhibit 10.1 to Olin’s Form 10-K for 2010.\*
- (i) Form of amendment to executive agreement between Olin Corporation and Messrs. Curley, Fischer and McIntosh dated October 19, 2015—Exhibit 10(i) to Olin’s Form 10-K for 2015.\*
- (j) Form of executive retention agreement between Olin Corporation and Messrs. Dawson, Sampson and Varilek dated July 1, 2015—Exhibit 10(j) to Olin’s Form 10-K for 2015.\*
- (k) Form of executive change in control agreement between Olin Corporation and Ms. Ennico and Messrs. O’Keefe and Slater dated January 29, 2014—Exhibit 10(l) to Olin’s Form 10-K for 2013.\*
- (l) Form of executive change in control agreement between Olin Corporation and Messrs. Curley, Fischer and McIntosh dated January 29, 2014—Exhibit 10.1 to Olin’s Form 8-K dated January 30, 2014.\*
- (m) Form of amendment to executive change in control agreement between Olin Corporation and Ms. Ennico and Messrs. Curley, Fischer, McIntosh, O’Keefe and Slater dated October 19, 2015—Exhibit 10(m) to Olin’s Form 10-K for 2015.\*
- (n) Form of executive change in control agreement between Olin Corporation and Messrs. Dawson, Sampson and Varilek dated February 15, 2016—Exhibit 10(n) to Olin’s Form 10-K for 2015.\*
- (o) Form of executive change in control agreement between Olin Corporation and Ms. Sumner dated February 15, 2016—Exhibit 10(o) to Olin’s Form 10-K for 2015.\*
- (p) Form of executive agreement between Olin Corporation and Mr. Blanchard dated April 26, 2017—Exhibit 10.1 to Olin’s Form 10-Q for the quarter ended June 30, 2017.\*
- (q) Form of executive change in control agreement between Olin Corporation and Mr. Blanchard dated April 26, 2017—Exhibit 10.2 to Olin’s Form 10-Q for the quarter ended June 30, 2017.\*
- (r) Amended and Restated 1997 Stock Plan for Non-employee Directors codified to reflect amendments adopted through February 26, 2016—Exhibit 10(p) to Olin’s Form 10-K for 2015.\*
- (s) Amended and Restated Senior Management Incentive Compensation Plan, as amended and restated effective April 23, 2015—Appendix A to Olin’s Proxy Statement dated March 11, 2015.\*
- (t) Description of Restricted Stock Unit Awards granted under the 2000, 2003, 2006, 2009, 2014 or 2016 Long Term Incentive Plans—Exhibit 10(p) to Olin’s Form 10-K for 2008.\*
- (u) Supplementary and Deferral Benefit Pension Plan as amended and restated effective October 24, 2008—Exhibit 10.2 to Olin’s Form 10-Q for the quarter ended September 30, 2008.\*
- (v) Amended and Restated Olin Corporation 2000 Long Term Incentive Plan codified as of January 24, 2014—Exhibit 10(r) to Olin’s Form 10-K for 2013.\*
- (w) Amended and Restated Olin Corporation 2003 Long Term Incentive Plan codified as of January 24, 2014—Exhibit 10(s) to Olin’s Form 10-K for 2013.\*
- (x) Amended and Restated Olin Corporation 2006 Long Term Incentive Plan codified as of January 24, 2014—Exhibit 10(t) to Olin’s Form 10-K for 2013.\*
- (y) Amended and Restated Olin Corporation 2009 Long Term Incentive Plan codified as of January 24, 2014—Exhibit 10(u) to Olin’s Form 10-K for 2013.\*
- (z) Olin Corporation 2014 Long Term Incentive Plan effective April 24, 2014—Exhibit 10.1 to Olin’s Form 8-K filed April 25, 2014.\*
- (aa)



Olin Corporation 2016 Long Term Incentive Plan effective April 28, 2016—Appendix A to Olin’s Proxy Statement dated March 11, 2016.\*

- (bb) Performance Share Program codified to reflect amendments through January 26, 2017—Exhibit 99.1 to Olin’s Form 8-K dated January 31, 2017.\*
- (cc) Form of Non-Qualified Stock Option Award Certificate—Exhibit 10(bb) to Olin’s Form 10-K for 2007.\*
- (dd) Form of Restricted Stock Unit Award Certificate—Exhibit 10(cc) to Olin’s Form 10-K for 2007.\*
- (ee) Form of Restricted Stock Unit Award Certificate—Exhibit 10.7 to Olin’s Form 10-Q for the quarter ended September 30, 2015.\*

Table of Contents

- (ff) Form of Performance Award and Senior Performance Award Certificates—Exhibit 10(dd) to Olin’s Form 10-K for 2007.\*
- (gg) Summary of Stock Option Continuation Policy—Exhibit 10.2 to Olin’s Form 10-Q for the quarter ended March 31, 2009.\*
- (hh) Olin Corporation Contributing Employee Ownership Plan Amended and Restated effective as of October 24, 2008, and as amended effective September 29, 2015—Exhibit 99.1 to Olin’s Form S-8 filed February 16, 2016.\*
- (ii) Distribution Agreement between Olin Corporation and Arch Chemicals, Inc., dated as of February 1, 1999—Exhibit 2.1 to Olin’s Form 8-K filed February 23, 1999.\*
- (jj) Purchase Agreement dated as of February 28, 2011, by and among PolyOne Corporation, 1997 Chloralkali Venture, LLC, Olin Corporation and Olin SunBelt II, Inc.—Exhibit 2.1 to Olin’s Form 8-K dated March 3, 2011.\*
- (kk) Note Purchase Agreement dated December 22, 1997 between the SunBelt Chlor Alkali Partnership and the Purchasers named therein—Exhibit 99.5 to Olin’s Form 8-K dated December 3, 2001.\*
- (ll) Guarantee Agreement dated December 22, 1997 between Olin Corporation and the Purchasers named therein—Exhibit 99.6 to Olin’s Form 8-K dated December 3, 2001.\*
- (mm) Subordination Agreement dated December 22, 1997 between Olin Corporation and the Subordinated Parties named therein—Exhibit 99.7 to Olin’s Form 8-K dated December 3, 2001.\*
- (nn) Credit Agreement dated as of April 27, 2012 among Olin Corporation, Olin Canada ULC and the banks named therein—Exhibit 10.1 to Olin’s Form 8-K dated May 3, 2012.\*
- (oo) Stock Purchase Agreement dated as of July 17, 2012, by and among K. A. Steel Chemicals Inc., the stockholders of K. A. Steel Chemicals Inc. and Robert F. Steel, as the sellers’ representative—Exhibit 2.1 to Olin’s Form 8-K dated July 18, 2012.\*
- (pp) Credit Agreement dated June 23, 2015 among Olin Corporation, Olin Canada ULC, the Lenders named therein and Wells Fargo Bank, National Association, as administrative agent—Exhibit 10.1 to Olin’s Form 8-K dated June 29, 2015.\*
- (qq) Credit Agreement dated June 23, 2015 among Blue Cube Spinco Inc., the Lenders named therein and Wells Fargo Bank, National Association, as administrative agent—Exhibit 10.2 to Olin’s Form 8-K dated June 29, 2015.\*
- (rr) Amendment Agreement dated June 23, 2015 among Olin, Olin Canada ULC, Blue Cube Spinco Inc., the Lenders named therein and Wells Fargo Bank, National Association, as administrative agent—Exhibit 10.5 to Olin’s Form 8-K dated October 5, 2015.\*
- (ss) Second Amendment Agreement, dated as of March 9, 2017 among Olin Corporation, Olin Canada ULC and Blue Cube Spinco Inc., the Lenders named therein and Wells Fargo Bank, National Association, as administrative agent—Exhibit 10.1 to Olin’s Form 8-K dated March 9, 2017.\*
- (tt) Separation Agreement dated March 26, 2015 between The Dow Chemical Company and Blue Cube Spinco Inc.—Exhibit 10.1 to Olin’s Form 8-K dated March 27, 2015.\*
- (uu) Credit Agreement dated August 25, 2015 among Olin Corporation, Olin subsidiaries, the Lenders (as defined therein) and Sumitomo Mitsui Banking Corporation, as administrative agent—Exhibit 10.1 to Olin’s Form 8-K dated August 25, 2015.\*
- (vv) Amended and Restated Credit Agreement, dated as of October 5, 2015 and Amended and Restated by the Second Amendment Agreement dated as of March 9, 2017 among Olin Corporation, Olin Canada ULC and Blue Cube Spinco Inc., the Lenders named therein and Wells Fargo Bank, National Association, as administrative agent—Exhibit 10.2 to Olin’s Form 8-K dated March 9, 2017.\*
- (ww) Guaranty Agreement dated October 5, 2015 among Blue Cube Spinco Inc., Olin Corporation and Wells Fargo Bank, National Association, as administrative agent—Exhibit 10.2 to Olin’s Form 8-K dated October 5, 2015.\*
- (xx) Borrowing Subsidiary Agreement dated October 5, 2015 among Olin Corporation, Blue Cube Spinco Inc. and Wells Fargo Bank, National Association, as administrative agent—Exhibit 10.3 to Olin’s Form 8-K dated October 5, 2015.\*
- (yy)

Guaranty Joinder dated October 5, 2015 among Olin subsidiaries, Blue Cube Spinco Inc. and Sumitomo Mitsui Banking Corporation, as administrative agent—Exhibit 10.4 to Olin’s Form 8-K dated October 5, 2015.\*

(zz) Incremental Term Loan Agreement dated November 3, 2015 among Olin Corporation, Blue Cube Spinco Inc., the Lenders (as defined therein) and Sumitomo Mitsui Banking Corporation, as administrative agent—Exhibit 10.1 to Olin’s Form 8-K dated November 9, 2015.\*

11 Computation of Per Share Earnings (included in the Note—“Earnings Per Share” to Notes to Consolidated Financial Statements in Item 8).

12 Computation of Ratio of Earnings to Fixed Charges (Unaudited).

125

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Table of Contents

21	<u>List of Subsidiaries.</u>
23	<u>Consent of KPMG LLP.</u>
31.1	<u>Section 302 Certification Statement of Chief Executive Officer.</u>
31.2	<u>Section 302 Certification Statement of Chief Financial Officer.</u>
32	<u>Section 906 Certification Statement of Chief Executive Officer and Chief Financial Officer.</u>
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

\*Previously filed as indicated and incorporated herein by reference. Exhibits incorporated by reference are located in SEC file No. 1-1070 unless otherwise indicated.

Any exhibit is available from Olin by writing to the Secretary, Olin Corporation, 190 Carondelet Plaza, Suite 1530, Clayton, MO 63105 USA.

Shareholders may obtain information from EQ Shareowner Services, our registrar and transfer agent, who also manages our Automatic Dividend Reinvestment Plan by writing to: EQ Shareowner Services, 1110 Centre Pointe Curve, Suite 101, MAC N9173-010, Mendota Heights, MN 55120 USA, by telephone from the United States at 1-800-468-9716 or outside the United States at 1-651-450-4064 or via the Internet at [www.shareowneronline.com](http://www.shareowneronline.com), click on "contact us".

Item 16. FORM 10-K SUMMARY

None.

126

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Table of Contents

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.

Date: February 26, 2018

OLIN CORPORATION

By: /s/ John E. Fischer

John E. Fischer

Chairman, 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 date indicated.

127

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Table of Contents

Signature	Title	Date
/s/ JOHN E. FISCHER John E. Fischer	Chairman, President and Chief Executive Officer and Director (Principal Executive Officer)	February 26, 2018
/s/ GRAY G. BENOIST Gray G. Benoist	Director	February 26, 2018
/s/ DONALD W. BOGUS Donald W. Bogus	Director	February 26, 2018
/s/ C. ROBERT BUNCH C. Robert Bunch	Director	February 26, 2018
/s/ RANDALL W. LARRIMORE Randall W. Larrimore	Director	February 26, 2018
/s/ JOHN M. B. O'CONNOR John M. B. O'Connor	Director	February 26, 2018
/s/ RICHARD M. ROMPALA Richard M. Rompala	Director	February 26, 2018
/s/ EARL L. SHIPP Earl L. Shipp	Director	February 26, 2018
/s/ VINCENT J. SMITH Vincent J. Smith	Director	February 26, 2018
/s/ WILLIAM H. WEIDEMAN William H. Weideman	Director	February 26, 2018
/s/ CAROL A. WILLIAMS Carol A. Williams	Director	February 26, 2018

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/s/ TODD A. SLATER	Vice President and Chief Financial Officer (Principal Financial Officer)	February 26, 2018
Todd A. Slater		
/s/ RANDEE N. SUMNER	Vice President and Controller (Principal Accounting Officer)	February 26, 2018
Randee N. Sumner		