OLIN CORP Form 10-Q August 01, 2018 Table of Contents

SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549

FORM 10-Q

(Mark One)

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF $^{\rm x}$ 1934

For the quarterly period ended June 30, 2018 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)

(314) 480-1400

(Registrant's telephone number, including area code)

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 x 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 (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes x No "

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 x Accelerated filer "Non-accelerated filer" (Do not check if a smaller reporting company)

Smaller reporting company "Emerging growth company"

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

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

As of June 30, 2018, 167,000,370 shares of the registrant's common stock were outstanding.

Table of Contents

TABLE OF	CONTENTS FOR FORM 10-Q	Page
Part I — Fi	nancial Information	<u>3</u>
Item 1.	Financial Statements	<u>3</u>
	Condensed Balance Sheets	<u>3</u>
	Condensed Statements of Operations	3 3 4 5 6 7 8
	Condensed Statements of Comprehensive Income (Loss)	<u>5</u>
	Condensed Statements of Shareholders' Equity	<u>6</u>
	Condensed Statements of Cash Flows	<u>7</u>
	Notes to Condensed Financial Statements	<u>8</u>
Item 2.	Management's Discussion and Analysis of Financial Condition and Results of Operations	<u>40</u>
	Business Background	<u>40</u>
	Executive Summary	<u>40</u>
	Consolidated Results of Operations	<u>42</u>
	Segment Results	<u>45</u>
	<u>Outlook</u>	<u>48</u>
	Environmental Matters	<u>50</u>
	Legal Matters and Contingencies	<u>50</u>
	Liquidity, Investment Activity and Other Financial Data	<u>51</u>
Item 3.	Quantitative and Qualitative Disclosures about Market Risk	515758
Item 4.	Controls and Procedures	<u>58</u>
	Cautionary Statement Regarding Forward-Looking Statements	<u>59</u>
Part II — C	ther Information	<u>61</u>
Item 1.	<u>Legal Proceedings</u>	<u>61</u>
Item 1A.	Risk Factors	<u>61</u>
Item 2.	<u>Unregistered Sales of Equity Securities and Use of Proceeds</u>	<u>61</u>
Item 3.	<u>Defaults Upon Senior Securities</u>	<u>61</u>
Item 4.	Mine Safety Disclosures	<u>61</u>
Item 5.	Other Information	<u>61</u>
Item 6.	<u>Exhibits</u>	<u>62</u>
SIGNATUI	<u>RES</u>	<u>63</u>

Part I — Financial Information

Item 1. Financial Statements.

OLIN CORPORATION AND CONSOLIDATED SUBSIDIARIES

Condensed Balance Sheets

(In millions, except per share data)

(Unaudited)

	June 30, 2018	December 31 2017	June 30, 2017
ASSETS			
Current assets:			
Cash and cash equivalents	\$144.2	\$ 218.4	\$184.5
Receivables, net	837.2	733.2	782.2
Income taxes receivable	17.8	16.9	20.9
Inventories, net	716.3	682.6	666.2
Other current assets	47.7	48.1	37.2
Total current assets	1,763.2	1,699.2	1,691.0
Property, plant and equipment (less accumulated depreciation of \$2,537.0, \$2,333.1 and \$2,117.6)	3,501.4	3,575.8	3,627.4
Deferred income taxes	39.7	36.4	125.2
Other assets	1,169.5	1,208.4	625.6
Intangible assets, net	544.3	578.5	605.6
Goodwill	2,119.7	2,120.0	2,119.5
Total assets	\$9,137.8	\$ 9,218.3	\$8,794.3
LIABILITIES AND SHAREHOLDERS' EQUITY			
Current liabilities:			
Current installments of long-term debt	\$0.9	\$ 0.7	\$81.7
Accounts payable	681.4	669.8	656.1
Income taxes payable	15.5	9.4	7.1
Accrued liabilities	284.4	274.4	261.5
Total current liabilities	982.2	954.3	1,006.4
Long-term debt	3,512.6	3,611.3	3,518.9
Accrued pension liability	602.7	635.9	625.6
Deferred income taxes	512.7	511.2	1,037.6
Other liabilities	764.5	751.9	347.2
Total liabilities	6,374.7	6,464.6	6,535.7
Commitments and contingencies			
Shareholders' equity:			
Common stock, par value \$1 per share: authorized, 240.0 shares; issued and outstanding, 167.0, 167.1 and 166.3 shares	167.0	167.1	166.3
Additional paid-in capital	2,280.5	2,280.9	2,262.7
Accumulated other comprehensive loss	(573.2)		(485.4)
Retained earnings	888.8	790.3	315.0
Total shareholders' equity	2,763.1	2,753.7	2,258.6
Total liabilities and shareholders' equity	\$9,137.8	\$ 9,218.3	\$8,794.3

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

OLIN CORPORATION AND CONSOLIDATED SUBSIDIARIES

Condensed Statements of Operations (In millions, except per share data) (Unaudited)

	Three Months Ended		Six Months Ended	
	June 30,		June 30,	
	2018	2017	2018	2017
Sales	\$1,728.4	\$1,526.5	\$3,438.7	\$3,093.6
Operating expenses:				
Cost of goods sold	1,460.7	1,407.9	2,989.4	2,805.4
Selling and administration	110.3	84.8	210.8	177.7
Restructuring charges	6.4	8.5	10.4	16.7
Acquisition-related costs	0.3	4.4	0.6	11.4
Other operating income (expense)		0.3	8.1	(0.1)
Operating income	150.7	21.2	235.6	82.3
Earnings (losses) of non-consolidated affiliates	(21.1)	0.5	(20.6)	1.0
Interest expense	61.1	52.5	124.8	104.9
Interest income	0.4	0.4	0.8	0.6
Non-operating pension income	5.4	8.6	10.8	17.1
Income (loss) before taxes	74.3	(21.8)	101.8	(3.9)
Income tax provision (benefit)	15.7	(15.9)	22.3	(11.4)
Net income (loss)	\$58.6	\$(5.9)	\$79.5	\$7.5
Net income (loss) per common share:				
Basic	\$0.35	\$(0.04)	\$0.48	\$0.05
Diluted	\$0.35	\$(0.04)	\$0.47	\$0.04
Dividends per common share	\$0.20	\$0.20	\$0.40	\$0.40
Average common shares outstanding:				
Basic	167.1	166.1	167.1	165.8
Diluted	168.8	166.1	169.1	168.0

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

OLIN CORPORATION AND CONSOLIDATED SUBSIDIARIES

Condensed Statements of Comprehensive Income (Loss) (In millions) (Unaudited)

	Three Months S		Six Months		
	Ended June		Ended June		
	30,		30,		
	2018	2017	2018	2017	
Net income (loss)	\$58.6	\$(5.9)	\$79.5	\$7.5	
Other comprehensive (loss) income, net of tax:					
Foreign currency translation adjustments, net	(26.1)	15.9	(13.7)	21.9	
Unrealized losses on derivative contracts, net	(2.4)	(3.7)	(2.5)	(5.7)	
Amortization of prior service costs and actuarial losses, net	8.1	4.5	13.5	8.4	
Total other comprehensive (loss) income, net of tax	(20.4)	16.7	(2.7)	24.6	
Comprehensive income	\$38.2	\$10.8	\$76.8	\$32.1	

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

OLIN CORPORATION AND CONSOLIDATED SUBSIDIARIES

Condensed Statements of Shareholders' Equity (In millions, except per share data) (Unaudited)

	Comm	on Stock	Additional	Accumulated		Total
	Shares Issued	Par Value	Paid-In Capital	Other Comprehensive Loss	Retained Earnings	Shareholders
Balance at January 1, 2017	165.4	\$165.4	\$2,243.8	\$ (510.0)	\$373.8	\$ 2,273.0
Net income					7.5	7.5
Other comprehensive income	_		_	24.6		24.6
Dividends paid:						
Common stock (\$0.40 per share)					(66.3)	(66.3)
Common stock issued for:						
Stock options exercised	0.9	0.9	14.9			15.8
Other transactions			0.6			0.6
Stock-based compensation			3.4			3.4
Balance at June 30, 2017	166.3	\$166.3	\$2,262.7	\$ (485.4)	\$315.0	\$ 2,258.6
Balance at January 1, 2018	167.1	\$167.1	\$2,280.9	\$ (484.6)	\$790.3	\$ 2,753.7
Income tax reclassification adjustment				(85.9)	85.9	_
Net income					79.5	79.5
Other comprehensive loss				(2.7)		(2.7)
Dividends paid:						
Common stock (\$0.40 per share)					(66.9)	(66.9)
Common stock repurchased and retired	(0.3)	(0.3)	(8.8)			(9.1)
Common stock issued for:						
Stock options exercised	0.2	0.2	2.0			2.2
Other transactions			0.6			0.6
Stock-based compensation			5.8		_	5.8
Balance at June 30, 2018	167.0	\$167.0	\$2,280.5	\$ (573.2)	\$888.8	\$ 2,763.1

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

Table of Contents

OLIN CORPORATION AND CONSOLIDATED SUBSIDIARIES

Condensed Statements of Cash Flows

(In millions)

(Unaudited)

	Six Months Ended June 30, 2018 2017
Operating Activities Net income	\$79.5 \$7.5
Adjustments to reconcile net income to net cash and cash equivalents provided by (used for)	Ψ17.3 Ψ1.3
operating activities:	
Losses (earnings) of non-consolidated affiliates	20.6 (1.0)
Losses on disposition of property, plant and equipment	0.1 0.3
Stock-based compensation	6.2 4.0
Depreciation and amortization	297.4 272.2
Deferred income taxes	(6.2) (11.6)
Qualified pension plan contributions	(1.1) (0.9)
Qualified pension plan income	(7.7) (13.7)
Change in:	
Receivables	(109.9) (97.9)
Income taxes receivable/payable	5.4 3.3
Inventories	(35.2) (26.3)
Other current assets	(5.1) (10.3)
Accounts payable and accrued liabilities	26.1 99.6
Other assets	(1.5) 5.8
Other noncurrent liabilities	(3.0) (9.2)
Other operating activities	(1.3) 5.6
Net operating activities	264.3 227.4
Investing Activities Conital expanditures	(176.0.) (150.0.)
Capital expenditures Proceeds from disposition of property, plant and equipment	(176.0) (150.9) 0.1 0.1
Net investing activities	(175.9) (150.8)
Financing Activities	(173.7) (130.6)
Long-term debt:	
Borrowings	570.0 1,875.0
Repayments	(650.1) (1,890.1)
Common stock repurchased and retired	(9.1) —
Stock options exercised	2.2 15.8
Dividends paid	(66.9) (66.3)
Debt issuance costs	(8.5) (11.2)
Net financing activities	(162.4) (76.8)
Effect of exchange rate changes on cash and cash equivalents	(0.2) 0.2
Net decrease in cash and cash equivalents	(74.2) —
Cash and cash equivalents, beginning of period	218.4 184.5
Cash and cash equivalents, end of period	\$144.2 \$184.5
Cash paid for interest and income taxes:	#105.4 #00.3
Interest, net	\$105.4 \$93.3
Income taxes, net of refunds	\$23.5 \$5.2

Non-cash investing activities:

Decrease (increase) in capital expenditures included in accounts payable and accrued liabilities \$(2.8) \$24.1

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

Table of Contents

OLIN CORPORATION AND CONSOLIDATED SUBSIDIARIES Notes to Condensed Financial Statements (Unaudited)

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 (EDC) 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.

We have prepared the condensed financial statements included herein, without audit, pursuant to the rules and regulations of the U.S. Securities and Exchange Commission (SEC). The preparation of the financial statements requires estimates and assumptions that affect amounts reported and disclosed in the financial statements and related notes. In our opinion, these financial statements reflect all adjustments (consisting only of normal accruals), which are necessary to present fairly the results for interim periods. Certain information and footnote disclosures normally included in financial statements prepared in accordance with generally accepted accounting principles have been condensed or omitted pursuant to such rules and regulations; however, we believe that the disclosures are appropriate. We recommend that you read these condensed financial statements in conjunction with the financial statements, accounting policies and the notes thereto and Management's Discussion and Analysis of Financial Condition and Results of Operations included in our Annual Report on Form 10-K for the year ended December 31, 2017. Certain reclassifications were made to prior year amounts to conform to the 2018 presentation.

ACCOUNTING POLICIES

Revenue Recognition

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2014-09, "Revenue from Contracts with Customers" (ASU 2014-09), which amends Accounting Standards Codification (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. We adopted these updates on January 1, 2018 using the modified retrospective transition method. The cumulative effect of applying the updates did not have a material impact on our consolidated financial statements. The most significant impact the updates had was on our accounting policies and disclosures on revenue recognition.

We derive our revenues primarily from the manufacturing and delivery of goods to customers. Revenues are recognized on sales of goods at the time when control of those goods is transferred to our customers at an amount that reflects the consideration to which we expect to be entitled in exchange for those goods. We primarily sell our goods directly to customers, and to a lesser extent, through distributors. Payment terms are typically 30 to 90 days from date of invoice. Our contracts do not typically have a significant financing component. Right to payment is determined at the point in time in which control has transferred to the customer.

A performance obligation is a promise in a contract to transfer a distinct good to the customer. At contract inception, we assess the goods promised in our contracts with customers and identify a performance obligation for each promise to transfer to the customer a good (or bundle of goods) that is distinct. A contract's transaction price is based on the price stated in the contract and allocated to each distinct performance obligation and revenue is recognized when the performance obligation is satisfied. The majority of our contracts have a single distinct performance obligation or multiple performance obligations which are distinct and represent individual promises within the contract. Substantially all of our performance obligations are satisfied at a single point in time, when control is transferred, which is generally upon shipment or delivery as stated in the contract terms.

Table of Contents

All taxes assessed by governmental authorities that are both imposed on and concurrent with our revenue-producing transactions and collected from our customers are excluded from the measurement of the transaction price. Shipping and handling fees billed to customers are included in revenue and are considered activities to fulfill the promise to transfer the good. Allowances for estimated returns, discounts and rebates are considered variable consideration, which may be constrained, and are estimated and recognized when sales are recorded. The estimates are based on various market data, historical trends and information from customers. Actual returns, discounts and rebates have not been materially different from estimates. For all contracts that have a duration of one year or less at contract inception, we do not adjust the promised amount of consideration for the effects of a significant financing component.

Substantially all of our revenue is derived from contracts with an original expected length of time of one year or less and for which we recognize revenue for the amount in which we have the right to invoice at the point in time in which control has transferred to the customer. However, a portion of our revenue is derived from long-term contracts which have contract periods that vary between one to multi-year. Certain of these contracts represent contracts with minimum purchase obligations, which can be substantially different than the actual revenue recognized. Such contracts consist of varying types of products across our chemical businesses. Certain contracts include variable volumes and/or variable pricing with pricing provisions tied to commodity, consumer price or other indices. The transaction price allocated to the remaining performance obligations related to our contracts was excluded from the disclosure of our remaining performance obligations based on the following practical expedients that we elected to apply: (i) contracts with index-based pricing or variable volume attributes in which such variable consideration is allocated entirely to a wholly unsatisfied performance obligation; and (ii) contracts with an original expected duration of one year or less.

Refer to the Note "Segment Information" for information regarding the disaggregation of revenue by primary geographical markets and major product lines.

ACQUISITION

On October 5, 2015 (the Closing Date), we completed the acquisition (the Acquisition) from DowDuPont Inc. (DowDuPont) (f/k/a The Dow Chemical Company) of 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.

We incurred costs related to the integration of the Acquired Business which consisted of advisory, legal, accounting and other professional fees of \$0.3 million and \$4.4 million for the three months ended June 30, 2018 and 2017, respectively, and \$0.6 million and \$11.4 million for the six months ended June 30, 2018 and 2017, respectively.

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 three months ended June 30, 2018 and 2017, we recorded pretax restructuring charges of \$6.1 million and \$7.4 million, respectively, for employee severance and related benefit costs, employee relocation costs, facility exit costs and lease and other contract termination costs related to these actions. For the six months ended June 30, 2018 and 2017, we recorded pretax restructuring charges of \$9.1 million and \$14.9 million, respectively, for employee severance and related benefit costs, employee relocation costs, facility exit costs and lease and other contract termination costs related to these actions. We expect to incur additional restructuring charges through 2020 of approximately \$17 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 three months ended June 30, 2018 and 2017, we recorded pretax restructuring charges of \$0.3 million and \$1.1 million, respectively, for facility exit costs related to this action. For the six months ended June 30, 2018 and 2017, we recorded pretax restructuring charges of \$1.3 million and \$1.8 million, respectively, for facility exit costs related to this action. We expect to incur additional restructuring charges through 2018 of approximately \$1 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 included 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.

The following table summarizes the 2018 and 2017 activities by major component of these restructuring actions and the remaining balances of accrued restructuring costs as of June 30, 2018 and 2017:

		Emplo severa and related benefit costs	Lease and other contract termination		•	ation	Facility exit costs	Total
		(\$ in r	nillions)					
Balance at Jan	uary 1, 2017	\$3.4	\$ 7.5		\$	_	\$ 1.8	\$12.7
Restructuring	charges:							
First quarter			5.7		0.2		2.3	8.2
Second quarte	r		5.8		0.1		2.6	8.5
Amounts utiliz	zed	(2.6)	(2.6)	(0.3))	(6.6)	(12.1)
Balance at Jun	ne 30, 2017	\$0.8	\$ 16.4		\$		\$ 0.1	\$17.3
Balance at Jan	uary 1, 2018	\$1.8	\$ 3.3		\$		\$ —	\$5.1
Restructuring	charges:							
First quarter	_		0.4				3.6	4.0
Second quarte	r	0.1	3.7				2.6	6.4
Amounts utiliz	zed	(1.0)	(1.3)			(5.1)	(7.4)
Balance at Jun	ne 30, 2018	\$0.9	\$ 6.1		\$		\$ 1.1	\$8.1

The following table summarizes the cumulative restructuring charges of these 2016, 2014 and 2010 restructuring actions by major component through June 30, 2018:

	Chlor	Alkali		
	Produ	cts and		
	Vinyl	S	Winchester	Total
	Becan	Capacity ncour Reductions		
	(\$ in r	millions)		
Write-off of equipment and facility	\$3.5	\$ 78.1	\$ —	\$81.6
Employee severance and related benefit costs	2.7	5.6	14.7	23.0
Facility exit costs	5.9	28.0	2.3	36.2
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	39.7	_	45.0
Total cumulative restructuring charges	\$17.4	\$ 153.1	\$ 27.1	\$197.6

As of June 30, 2018, we have incurred cash expenditures of \$103.4 million and non-cash charges of \$86.1 million related to these restructuring actions. The remaining balance of \$8.1 million is expected to be paid out through 2020.

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. In addition, the Receivables Financing Agreement incorporates the leverage and coverage covenants that are contained in the senior revolving credit facility. As of June 30, 2018, \$434.0 million of our trade receivables were

pledged as collateral and we had \$250.0 million drawn under the agreement. As of June 30, 2018, we had no additional borrowing capacity under the Receivables Financing Agreement. As of December 31, 2017, \$340.9 million of our trade receivables were pledged as collateral and \$249.7 million was drawn under the agreement.

Table of Contents

Olin also has trade accounts receivable factoring arrangements (AR Facilities) and 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 the outstanding accounts sold. 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 condensed statements of cash flows. The following table summarizes the AR Facilities activity:

	June 30,	
	2018	2017
	(\$ in mil	lions)
Balance at beginning of year	\$182.3	\$126.1
Gross receivables sold	851.1	777.6
Payments received from customers on sold accounts	(844.8)	(755.3)
Balance at end of period	\$188.6	\$148.4

The factoring discount paid under the AR Facilities is recorded as interest expense on the condensed statements of operations. The factoring discount was \$1.6 million and \$0.8 million for the three months ended June 30, 2018 and 2017, respectively, and \$2.8 million and \$1.5 million for the six months ended June 30, 2018 and 2017, respectively. The agreements are without recourse and therefore no recourse liability has been recorded as of June 30, 2018.

ALLOWANCE FOR DOUBTFUL ACCOUNTS RECEIVABLES

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.

Allowance for doubtful accounts receivable consisted of the following:

June 30,
2018 2017
(\$ in
millions)

Balance at beginning of year \$12.3 \$10.1

Provisions charged 1.3 2.1

Foreign currency translation adjustment (0.3)—

Balance at end of period \$13.3 \$12.2

Provisions charged to operations were \$0.2 million and \$0.7 million for the three months ended June 30, 2018 and 2017, respectively.

INVENTORIES

Inventories consisted of the following:

	June 30,	December 31,	June 30,
	2018	2017	2017
	(\$ in mil	lions)	
Supplies	\$62.7	\$ 66.1	\$59.7
Raw materials	76.5	75.3	74.9
Work in process	137.1	127.8	133.7
Finished goods	500.4	462.6	445.8
	776.7	731.8	714.1
LIFO reserve	(60.4)	(49.2)	(47.9)
Inventories, net	\$716.3	\$ 682.6	\$666.2

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 included raw materials, direct labor and manufacturing overhead. Inventories under the LIFO method are based on annual estimates of quantities and costs as of year-end; therefore, the condensed financial statements at June 30, 2018 reflect certain estimates relating to inventory quantities and costs at December 31, 2018. The replacement cost of our inventories would have been approximately \$60.4 million, \$49.2 million and \$47.9 million higher than reported at June 30, 2018, December 31, 2017 and June 30, 2017, respectively.

OTHER ASSETS

Included in other assets were the following:

	June 30,	December 31,	June 30,
	2018	2017	2017
	(\$ in mill	ions)	
Investments in non-consolidated affiliates	\$7.9	\$ 28.5	\$27.7
Deferred debt issuance costs	2.2	2.5	2.8
Tax-related receivables	5.0	10.2	16.0
Derivative contracts	2.8	3.6	4.7
Supply contracts	1,118.3	1,137.1	554.1
Other	33.3	26.5	20.3
Other assets	\$1,169.5	\$ 1,208.4	\$625.6

For the three months ended June 30, 2018, we recorded a \$21.5 million non-cash impairment charge related to an adjustment to the value of our 9.1% limited partnership interest in Bay Gas Storage Company, Ltd. (BayGas). BayGas 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. The general partner, Sempra Energy (Sempra), announced in the second quarter its plan to sell several assets including its 90.9% interest in BayGas. In connection with this decision, Sempra recorded an impairment charge related to BayGas adjusting the related assets' carrying values to an estimated fair value. We recorded a reduction in our investment in the non-consolidated affiliate for the proportionate share of the non-cash impairment charge. Olin has no other non-consolidated affiliates.

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 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 which increased the value of the long-term asset.

On February 27, 2017, we exercised the remaining option to reserve 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 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 additional estimated payment. The discounted amount of \$51.8 million will be recorded as interest expense through the fourth quarter of 2020. For the three and six months ended June 30, 2018, interest expense of \$4.0 million and \$7.9 million, respectively, was recorded for accretion on the 2020 payment discount.

Amortization expense of \$9.4 million and \$6.3 million for the three months ended June 30, 2018 and 2017, respectively, and \$18.8 million and \$12.6 million for the six months ended June 30, 2018 and 2017, respectively, was recognized within cost of goods sold related to these supply contracts and is reflected in depreciation and amortization on the condensed statements of cash flows. The long-term supply contracts are monitored for impairment each reporting period.

GOODWILL AND INTANGIBLE ASSETS

Changes in the carrying value of goodwill were as follows:

	Chlor		
	Alkali		
	Products	Epoxy	Total
	and		
	Vinyls		
	(\$ in million	ons)	
Balance at January 1, 2017	\$1,831.3	\$286.7	\$2,118.0
Foreign currency translation adjustment	1.2	0.3	1.5
Balance at June 30, 2017	\$1,832.5	\$287.0	\$2,119.5
Balance at January 1, 2018	\$1,832.9	\$287.1	2,120.0
Foreign currency translation adjustment	(0.2)	(0.1)	(0.3)
Balance at June 30, 2018	\$1,832.7	\$287.0	\$2,119.7

Intangible assets consisted of the following:

	June 30 Gross Amoun (\$ in m	Accumula tAmortizat	ite	Net		ber 31, 201 Accumula tAmortizat		d Net n	June 30 Gross Amoun), 2017 Accumula tAmortizat	ited ior	l Net
Customers, customer contracts and relationships	\$676.5	\$ (187.8)	\$488.7	\$679.5	\$ (163.6)	\$515.9	\$675.0	\$ (138.2)	\$536.8
Trade name	7.1	(3.9)	3.2	7.1	(3.2)	3.9	7.0	(2.5)	4.5
Acquired technology	85.7	(33.6)	52.1	86.1	(27.7)	58.4	85.3	(21.3)	64.0
Other	2.3	(2.0)	0.3	2.3	(2.0)	0.3	2.3	(2.0)	0.3
Total intangible assets	\$771.6	\$ (227.3)	\$544.3	\$775.0	\$ (196.5)	\$578.5	\$769.6	\$ (164.0)	\$605.6

EARNINGS PER SHARE

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

compensation.				
	Three	Months	Six M	onths
	Ended	June	Ended	June
	30,		30,	
	2018	2017	2018	2017
Computation of Income non Shore	(In mi	llions, ex	cept pe	er
Computation of Income per Share	share o	data)		
Net income (loss)	\$58.6	\$(5.9)	\$79.5	\$7.5
Basic shares	167.1	166.1	167.1	165.8
Basic net income (loss) per share	\$0.35	\$(0.04)	\$0.48	\$0.05
Diluted shares:				
Basic shares	167.1	166.1	167.1	165.8
Stock-based compensation	1.7		2.0	2.2
Diluted shares	168.8	166.1	169.1	168.0
Diluted net income (loss) per share	\$0.35	\$(0.04)	\$0.47	\$0.04

The computation of dilutive shares from stock-based compensation does not include 2.5 million and 6.9 million shares for the three months ended June 30, 2018 and 2017, respectively, and 2.5 million and 1.6 million shares for the six months ended June 30, 2018 and 2017, respectively, as their effect would have been anti-dilutive.

ENVIRONMENTAL

We are party to various government and private environmental actions associated with past manufacturing facilities and former waste disposal sites. The condensed balance sheets included reserves for future environmental expenditures to investigate and remediate known sites amounting to \$132.5 million, \$131.6 million and \$135.7 million at June 30, 2018, December 31, 2017 and June 30, 2017, respectively, of which \$112.5 million, \$111.6 million and \$118.7 million, respectively, were classified as other noncurrent liabilities.

Environmental provisions charged to income, which are included in cost of goods sold, were \$4.4 million and \$1.8 million for the three months ended June 30, 2018 and 2017, respectively, and \$6.7 million and \$4.4 million for the six months ended June 30, 2018 and 2017, respectively.

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 position or results of operations.

COMMITMENTS 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. As of June 30, 2018, December 31, 2017 and June 30, 2017, our condensed balance sheets included accrued liabilities for these legal actions of \$14.0 million, \$24.8 million

and \$15.9 million, respectively. These liabilities do not include costs associated with legal representation. 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 adversely affect our financial position, cash flows or results of operations.

Table of Contents

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" (ASC 450) and, therefore, do not record gain contingencies and recognize income until it is earned and realizable.

SHAREHOLDERS' EQUITY

On April 26, 2018, our board of directors authorized a share repurchase program for the purchase of shares of common stock at an aggregate price of up to \$500.0 million. This program will terminate upon the purchase of \$500.0 million of our common stock. For the six months ended June 30, 2018, 0.3 million shares were repurchased and retired at a cost of \$9.1 million. As of June 30, 2018, we had repurchased a total of \$9.1 million of our common stock, representing 0.3 million shares, and \$490.9 million of common stock remained authorized to be repurchased.

We issued 0.2 million and 0.9 million shares representing stock options exercised for the six months ended June 30, 2018 and 2017, respectively, with a total value of \$2.2 million and \$15.8 million, respectively.

In February 2018, the FASB issued ASU 2018-02, "Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income" (ASU 2018-02) which amends ASC 220 "Income Statement—Reporting Comprehensive Income." This update allows a reclassification from accumulated other comprehensive loss to retained earnings for the stranded tax effects resulting from the U.S. Tax Cuts and Jobs Act (the 2017 Tax Act) during each fiscal year or quarter in which the effect of the lower tax rate is recorded. We adopted this update in March 2018 and reclassified \$85.9 million related to the provisional deferred gain resulting from the 2017 Tax Act from accumulated other comprehensive loss to retained earnings.

Table of Contents

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

The following date represents the delivity included in a	camaaa	Unrealized	•	5.
	Foreign		•	
	_	cy(Losses)	Pension and	Accumulated
	Translat	• .	Other	Other
			Postretiremen	f
		n eDne rivative	Benefits	Comprehensive
		Contracts	(net of taxes)	Loss
	taxes)	(net of	()	
		taxes)		
	(\$ in mi	llions)		
Balance at January 1, 2017	\$(24.1)	\$ 12.8	\$ (498.7)	\$ (510.0)
Unrealized gains (losses):				
First quarter	8.3	(3.1)		5.2
Second quarter	28.1	(3.7)	_	24.4
Reclassification adjustments into income (gains) losses:				
First quarter		(0.1)	6.6	6.5
Second quarter		(2.3)	6.8	4.5
Tax (provision) benefit:				
First quarter	(2.3)	1.2	(2.7)	(3.8)
Second quarter	(12.2)	2.3	(2.3)	(12.2)
Net change	21.9	(5.7)	8.4	24.6
Balance at June 30, 2017	\$(2.2)	\$ 7.1	\$ (490.3)	\$ (485.4)
Balance at January 1, 2018	\$7.6	\$ 11.1	\$ (503.3)	\$ (484.6)
Unrealized gains (losses):				
First quarter	12.4	2.1		14.5
Second quarter	(26.1)	(0.4)		(26.5)
Reclassification adjustments into income (gains) losses:				
First quarter		(2.3)	9.4	7.1
Second quarter		(2.7)	9.1	6.4
Tax benefit (provision):				
First quarter		0.1	(4.0)	(3.9)
Second quarter		0.7	(1.0)	(0.3)
Net change	(13.7)	(2.5)	13.5	(2.7)
Income tax reclassification adjustment	15.3	2.4	(103.6)	(85.9)
Balance at June 30, 2018	\$9.2	\$ 11.0	\$ (593.4)	

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

Net income and non-operating pension income included the amortization of prior service costs and actuarial losses from accumulated other comprehensive loss.

SEGMENT INFORMATION

We define segment results as income (loss) before interest expense, interest income, other operating income (expense), non-operating pension income and income taxes, and includes the operating 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. Sales are attributed to geographic areas based on customer location.

	Three M	[01	nths Ende	ed	Six Mor	ıth	s Ended	
	June 30,				June 30,			
	2018		2017		2018		2017	
Sales:	(\$ in mil	lio	ons)					
Chlor Alkali Products and Vinyls	\$1,018.7	7	\$865.1		\$1,954.3	3	\$1,702.	0
Epoxy	543.8		492.0		1,147.1		1,059.6	
Winchester	165.9		169.4		336.8		332.0	
Total sales	\$1,728.4	1	\$1,526.3	5	\$3,438.	7	\$3,093.	6
Income (loss) before taxes:								
Chlor Alkali Products and Vinyls	\$149.4		\$52.8		\$279.9		\$140.3	
Epoxy	24.8		(8.1)	2.7		(9.3)
Winchester	11.8		19.0		23.8		44.1	
Corporate/other:								
Environmental expense	(4.4)	(1.8)	(6.7)	(4.4)
Other corporate and unallocated costs	(45.3)	(27.6)	(81.8))	(59.2)
Restructuring charges	(6.4)	(8.5)	(10.4)	(16.7)
Acquisition-related costs	(0.3)	(4.4)	(0.6))	(11.4)
Other operating income (expense)			0.3		8.1		(0.1)
Interest expense	(61.1)	(52.5)	(124.8)	(104.9)
Interest income	0.4		0.4		0.8		0.6	
Non-operating pension income	5.4		8.6		10.8		17.1	
Income (loss) before taxes	\$74.3		\$(21.8)	\$101.8		\$(3.9)

For the six months ended June 30, 2018, we recognized an insurance recovery of \$8.0 million in other operating income (expense) for a second quarter 2017 business interruption at our Freeport, TX vinyl chloride monomer facility.

Earnings (losses) of non-consolidated affiliates are included in the Chlor Alkali Products and Vinyls segment results consistent with management's monitoring of the operating segments. The losses of non-consolidated affiliates were \$21.1 million and \$20.6 million for the three and six months ended June 30, 2018, respectively, which reflect a \$21.5 million non-cash impairment charge recorded during the second quarter. The earnings of non-consolidated affiliates were \$0.5 million and \$1.0 million for the three and six months ended June 30, 2017, respectively.

Three Months Ended June 30, 2018 Chlor Epoxy Winchester Total Alkali Products and

Vinyls Primary geographical markets: (\$ in millions)

United States	\$665.1	\$200.4 \$ 146.1	\$1,011.6
Europe	50.3	195.2 4.2	249.7
Other foreign	303.3	148.2 15.6	467.1
Total Sales	\$1,018.7	7 \$543.8 \$ 165.9	\$1,728.4

Primary geographical markets United States Europe Other foreign Total Sales	Six Months Ended June 30, 2018 Chlor Alkali Products Epoxy and Vinyls : (\$ in millions) \$1,273.2 \$380.8 96.1 473.7 585.5 292.6 \$1,954.8 \$1,147.1	\$ 304.7 5.2 26.9	7	\$1,95 575.0 905.0 \$3,45	58.7)		
	Three Months Endo June 30, 2017 Chlor Alkali ProductsEpoxy Wi and Vinyls		: Tot	tal			
Primary geographical markets	•						
United States	\$560.4 \$165.0 \$	142.1	\$80	67.5			
Europe	31.9 208.7 4.9		245				
Other foreign	272.8 118.3 22	.4	413	3.5			
Total Sales	\$865.1 \$492.0 \$	169.4	\$1,	,526.5	;		
	Six Months Ended June 30, 2017 Chlor Alkali Products Epoxy and Vinyls	Winche	ester	Total	I		
Primary geographical markets	: (\$ in millions)						
United States	\$1,117.1 \$328.2	\$ 297.3	3	\$1,74			
Europe	61.1 478.3	5.7		545.1			
Other foreign	523.8 253.1	29.0		805.9			
Total Sales	\$1,702.0 \$1,059.6	\$ 332.0)	\$3,09	93.6		
Major product lines: Chlor Alkali Products and	Vinyle		Enc. 201		ne 30, 2017	Six Mont June 30, 2018	chs Ended 2017
Caustic soda	. 111,10		\$52	27.1	\$424.5	\$1,031.9	\$829.8
Chlorine, chlorine deriv	atives and other co-r	products			440.6	922.9	872.2
Total Chlor Alkali Pr	_			18.7	865.1	1,954.8	1,702.0
Epoxy	ž						

Phenolics and allylics	237.8	232.6	546.2	532.0
Epoxy resins	306.0	259.4	600.9	527.6
Total Epoxy	543.8	492.0	1,147.1	1,059.6
Winchester				
Commercial	105.9	117.5	217.1	235.4
Military and law enforcement	60.0	51.9	119.7	96.6
Total Winchester	165.9	169.4	336.8	332.0
Total Sales	\$1,728.4	\$1,526.5	\$3,438.7	\$3,093.6

STOCK-BASED COMPENSATION

Stock-based compensation granted includes stock options, performance stock awards, restricted stock awards and deferred directors' compensation. Stock-based compensation expense was as follows:

	Three Month Ended 30,	ns	Six Mo Ended . 30,	
	2018	2017	2018	2017
	(\$ in r	nillions	s)	
Stock-based compensation	\$4.4	\$4.2	\$10.9	\$11.5
Mark-to-market adjustments	s(1.3)	(1.3)	(4.3)	1.3
Total expense	\$3.1	\$2.9	\$6.6	\$12.8

The fair value of each stock 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 weighted-average assumptions:

Grant date	2018		2017	
Dividend yield	2.43	%	2.69	%
Risk-free interest rate	2.72	%	2.06	%
Expected volatility	32	%	34	%
Expected life (years)	6.0		6.0	
Weighted-average grant fair value (per option)	\$8.89		\$7.78	
Weighted-average exercise price	\$32.94	Ļ	\$29.82	
Shares granted	927,00	0	1,621,0	000

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 of future exercise patterns.

DEBT

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 \$1,375.0 million term loan facility (Term Loan Facility).

For the six months ended June 30, 2018, we recognized interest expense of \$2.6 million for the write-off of unamortized deferred debt issuance costs related to the redemption of \$550.0 million of debt under the Term Loan Facility. For the six months ended June 30, 2018, we paid debt issuance costs of \$8.5 million for the issuance of the 2030 Notes.

On March 9, 2017, we entered into a 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, and the aggregate commitments under the senior revolving credit

facility were increased from \$500.0 million to \$600.0 million (Senior Revolving Credit Facility and, together with the Term Loan Facility, the Senior Credit Facility). At June 30, 2018, we had \$594.9 million available under our \$600.0 million Senior Revolving Credit Facility because we had 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 term loan facility of \$1,282.5 million and a portion of the \$800.0 million Sumitomo Credit Facility (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. In connection with the \$550.0 million prepayment of the Term Loan Facility in January 2018, the required quarterly installments of the Term Loan Facility were eliminated.

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 June 30, 2018, 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 June 30, 2018, 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.

For the six months ended June 30, 2017, we recognized interest expense of \$2.7 million for the write-off of unamortized deferred debt issuance costs related to the issuance of the Senior Credit Facility and the repayment of the Sumitomo Credit Facility. For the six months ended June 30, 2017, we paid debt issuance costs of \$11.2 million relating to the Senior Credit Facility and the 2027 Notes.

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 5.0% and 7.5% of the employee's eligible compensation. The defined contribution plan expense for both the three months ended June 30, 2018 and 2017 was \$6.7 million and for the six months ended June 30, 2018 and 2017 was \$15.3 million and \$15.4 million, respectively.

Company matching contributions are invested in the same investment allocation as the employee's contribution. Our matching contributions for eligible employees for the three months ended June 30, 2018 and 2017 was \$3.7 million and \$2.8 million, respectively, and for the six months ended June 30, 2018 and 2017 was \$7.4 million and \$5.7 million, respectively.

PENSION PLANS AND RETIREMENT BENEFITS

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).

We also 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.

	Pensio Benefi		Other Postret Benefi	irement ts
	Three Ended 30,	Months June		Months June 30,
	2018	2017	2018	2017
Components of Net Periodic Benefit (Income) Cost	(\$ in n	nillions)		
Service cost	\$2.5	\$2.1	\$ 0.4	\$ 0.3
Interest cost	21.7	21.5	0.4	0.4
Expected return on plans' assets	(36.6)	(37.3)	—	_
Amortization of prior service cost		_		(0.7)
Recognized actuarial loss	8.5	6.8	0.6	0.7
Net periodic benefit (income) cost	\$(3.9)	\$(6.9)	\$ 1.4	\$ 0.7
	Pensio Benefi			etirement
		its	Postre Benef	etirement
	Benefi Six Mo	ts onths	Postro Benet Six M	etirement fits Ionths
	Benefi Six Mo	ts onths	Postro Benet Six M	etirement fits
Components of Net Periodic Benefit (Income) Cost	Benefit Six Me Ended 2018	its onths June 30	Postro Benef Six M O, Endeo 2018	etirement fits Ionths d June 30,
Components of Net Periodic Benefit (Income) Cost Service cost	Benefit Six Me Ended 2018	onths June 30 2017	Postro Benef Six M O, Endeo 2018	etirement fits Ionths d June 30,
-	Benefit Six Mo Ended 2018 (\$ in n	onths June 30 2017 nillions)	Postro Benet Six M O, Endeo 2018	etirement fits Ionths d June 30, 2017
Service cost	Six Mo Ended 2018 (\$ in n \$5.2 43.3	onths June 30 2017 nillions) \$4.5	Postro Benef Six M 0, Ended 2018 \$ 0.7 0.8	etirement fits Ionths d June 30, 2017 \$ 0.6
Service cost Interest cost	Six Mo Ended 2018 (\$ in n \$5.2 43.3	onths June 30 2017 nillions) \$4.5 43.2	Postro Benef Six M 0, Ended 2018 \$ 0.7 0.8	etirement fits Ionths d June 30, 2017 \$ 0.6
Service cost Interest cost Expected return on plans' assets	Six Mo Ended 2018 (\$ in n \$5.2 43.3	onths June 30 2017 nillions) \$4.5 43.2	Postro Benef Six M 0, Ended 2018 \$ 0.7 0.8	etirement fits Ionths d June 30, 2017 \$ 0.6 0.8

We made cash contributions to our international qualified defined benefit pension plans of \$1.1 million and \$0.9 million for the six months ended June 30, 2018 and 2017, respectively.

In March 2017, the FASB issued ASU 2017-07, "Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost" (ASU 2017-07) which amends ASC 715 "Compensation—Retirement Benefits." The adoption of ASU 2017-07 resulted in a change in our net periodic benefit (income) costs within operating income, which was offset by a corresponding change in non-operating pension income to reflect the impact of presenting the interest cost, expected return on plan assets, amortization of prior service cost and net actuarial loss components of net periodic benefit (income) costs outside of operating income. We adopted this update on January 1, 2018 using the retrospective method. For the three and six months ended June 30, 2017, the adoption of ASU 2017-07 resulted in a reclassification of \$3.8 million and \$7.6 million, respectively, from cost of goods sold and \$4.8 million and \$9.5 million, respectively, from selling and administration to non-operating pension income reflecting the aforementioned reclassification on our condensed statements of operations. The service cost component of net periodic benefit (income) costs continue to be included in the same income statement line item as other employee compensation costs arising from services rendered during the period.

INCOME TAXES

The effective tax rate for the three months ended June 30, 2018 included a benefit associated with stock-based compensation, a benefit from a change in tax contingencies, an expense associated with the estimated reduction of the one-time 2017 Tax Act provisional tax benefit, an expense from a net increase in the valuation allowance related to foreign net operating losses and an expense from the remeasurement of deferred taxes due to an increase in our state effective tax rates. These factors resulted in a net \$1.5 million tax benefit. After giving consideration to these items, the effective tax rate for the three months ended June 30, 2018 of 23.1% was higher than the 21% U.S. federal statutory rate, primarily due to state and foreign income taxes, partially offset by favorable permanent salt depletion deductions. The effective tax rate for the three months ended June 30, 2017 included benefits associated with an agreement reached with the Internal Revenue Service (IRS) for the years 2008, 2010 to 2012 tax examinations and stock-based compensation. These factors resulted in a net \$10.4 million tax benefit. After giving consideration to these items, the effective tax rate for the three months ended June 30, 2017 of 25.2% was lower than the 35% U.S. federal statutory rate, primarily due to favorable permanent tax deduction items, such as the salt depletion deduction and tax deductible dividends paid to the CEOP.

The effective tax rate for the six months ended June 30, 2018 included a benefit associated with stock-based compensation, a benefit from a change in tax contingencies, a benefit related to a foreign dividend payment, an expense associated with the estimated reduction of the one-time 2017 Tax Act provisional tax benefit, an expense from a net increase in the valuation allowance related to foreign net operating losses and an expense from the remeasurement of deferred taxes due to an increase in our state effective tax rates. These factors resulted in a net \$2.3 million tax benefit. After giving consideration to these items, the effective tax rate for the six months ended June 30, 2018 of 24.2% was higher than the 21% U.S. federal statutory rate primarily due to state and foreign income taxes, partially offset by favorable permanent salt depletion deductions. The effective tax rate for the six months ended June 30, 2017 included benefits associated with an agreement reached with the IRS for the years 2008, 2010 to 2012 tax examinations and stock-based compensation and an expense related to prior year tax positions. These factors resulted in a net \$10.9 million tax benefit. After giving consideration to these items, the effective tax rate for the six months ended June 30, 2017 of 12.8% was lower than the 35% U.S. federal statutory rate, primarily due to favorable permanent tax deduction items, such as the salt depletion deduction and tax deductible dividends paid to the CEOP.

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 Staff issued Accounting Bulletin No. 118, "Income Tax Accounting Implications of the Tax Cuts and Jobs Act" (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 June 30, 2018, 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 at December 31, 2017. This benefit included: (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.

On April 2, 2018, the Internal Revenue Service issued Notice 2018-26 "Questions and Answers about Reporting Related to Section 965 on 2017 Tax Returns." Based on this additional guidance, we increased our provisional deferred tax benefit from the 2017 Tax Act by \$0.3 million for the six months ended June 30, 2018 to reflect an estimated reduction of the one-time transition tax. For the three and six months ended June 30, 2018, we reduced the provisional deferred tax benefit by \$1.7 million as a result of the estimated impact of filing 2017 U.S. and foreign tax returns.

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 June 30, 2018 and 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.

As of June 30, 2018, we had \$33.2 million of gross unrecognized tax benefits, which would have a net \$32.4 million impact on the effective tax rate, if recognized. As of June 30, 2017, we had \$34.3 million of gross unrecognized tax benefits, of which \$32.8 million would have impacted the effective tax rate, if recognized. The amount of unrecognized tax benefits was as follows:

	June 30,			
	2018	2017		
	(\$ in m	illions)		
Balance at beginning of year	\$36.3	\$38.4		
Increases for prior year tax positions	_	4.9		
Decreases for prior year tax positions	(4.1)	(9.2)		
Increases for current year tax positions	1.0	1.4		
Settlement with taxing authorities		(1.0)		
Reductions due to statute of limitations	_	(0.2)		
Balance at end of period	\$33.2	\$34.3		

As of June 30, 2018, 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 taxing authorities and the expiration of federal, state and foreign statutes of limitation.

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. 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 - 2017
U.S. state income tax	2006 - 2017
Canadian federal income tax	2012 - 2017
Brazil	2014 - 2017
Germany	2015 - 2017
China	2014 - 2017
The Netherlands	2014 - 2017

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 "Derivatives and Hedging" (ASC 815) requires an entity to recognize all derivatives as either assets or liabilities in the condensed 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.

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 risk to offset our net exposures, by currency, related to the foreign currency denominated monetary assets and liabilities of our operations. At June 30, 2018, we had outstanding forward contracts to buy foreign currency with a notional value of \$166.7 million and to sell foreign currency with a notional value of \$114.3 million. All of the currency derivatives expire within one year and are for U.S. dollar (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, 2017, we had outstanding forward contracts to buy foreign currency with a notional value of \$97.7 million. At June 30, 2017, we had outstanding forward contracts to buy foreign currency with a notional value of \$97.8 million and to sell foreign currency with a notional value of \$90.4 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 in earnings. Gains and losses on the derivatives representing hedge ineffectiveness are recognized currently in earnings.

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

	June 30, 2018	December 31, 2017	June 30, 2017
		nillions)	2017
Natural gas	\$79.6	\$ 39.2	\$45.0
Copper	50.9	45.2	42.8
Zinc	8.6	8.4	7.9

As of June 30, 2018, the counterparties to these commodity contracts were Wells Fargo Bank, N.A. (Wells Fargo), Citibank, Merrill Lynch Commodities, Inc. and JPMorgan Chase Bank, National Association, all of which are major

financial institutions.

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 June 30, 2018, we had open positions in futures contracts through 2022. If all open futures contracts had been settled on June 30, 2018, we would have recognized a pretax gain of \$3.4 million.

If commodity prices were to remain at June 30, 2018 levels, approximately \$1.1 million of deferred gains 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 cash flow 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 outstanding swap agreements have been recorded at their fair market value of \$11.2 million and are included in other current assets and other assets on the accompanying condensed balance sheet as of June 30, 2018, with the corresponding gain deferred as a component of other comprehensive loss. For the three months ended June 30, 2018 and 2017, \$2.1 million and \$0.5 million, respectively, and for the six months ended June 30, 2018 and 2017, \$3.4 million and \$0.5 million, respectively, of income was recorded to interest expense on the accompanying condensed statements of operations related to these swap agreements.

At June 30, 2018, we had open interest rate swaps designated as cash flow hedges with maximum terms through 2019. If all open interest rate swap contracts had been settled on June 30, 2018, we would have recognized a pretax gain of \$11.2 million.

If interest rates were to remain at June 30, 2018 levels, \$6.3 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 June 30, 2018, December 31, 2017 and June 30, 2017, 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 \$44.1 million and are included in other long-term liabilities on the accompanying condensed balance sheet as of June 30, 2018, with a corresponding

decrease in the carrying amount of the related debt. For the three and six months ended June 30, 2018, \$0.5 million and \$0.3 million, respectively, of expense and for the three and six months ended June 30, 2017, \$0.7 million and \$1.9 million, respectively, of income was recorded to interest expense on the accompanying condensed statements of operations related to these swap agreements.

Financial statement impacts

We present our derivative assets and liabilities in our condensed 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.

Table of Contents

The following table summarizes the location and fair value of the derivative instruments on our condensed 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:

	2018	December 31 2017 iillions)	June 30, 2017
Asset Derivatives:			
Other current assets			
Derivatives designated as hedging instruments:			
Interest rate contracts - gains	\$8.4	\$ 6.9	\$ 5.0
Commodity contracts - gains	6.5	11.4	4.9
Commodity contracts - losses	(2.2)	(0.1)	(0.9)
Derivatives not designated as hedging instruments:			
Foreign exchange contracts - gains	1.8	2.0	1.7
Foreign exchange contracts - losses	(0.6)	(1.0)	(0.5)
Total other current assets	13.9	19.2	10.2
Other assets			
Derivatives designated as hedging instruments:			
Interest rate contracts - gains	2.8	3.6	4.6
Total other assets	2.8	3.6	4.6
Total Asset Derivatives ⁽¹⁾	\$16.7	\$ 22.8	\$ 14.8
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	0.1	3.8	2.3
Commodity contracts - gains		_	(0.1)
Derivatives not designated as hedging instruments:			
Foreign exchange contracts - losses	1.6	_	
Foreign exchange contracts - gains	(1.1)	_	
Total accrued liabilities	0.6	3.8	2.2
Other liabilities			
Derivatives designated as hedging instruments:			
Interest rate contracts - losses	44.1	28.1	24.9
Commodity contracts - losses	1.0	_	
Commodity contracts - gains	(0.2)	_	
Total other liabilities	44.9	28.1	24.9
Total Liability Derivatives ⁽¹⁾	\$45.5	\$ 31.9	\$ 27.2

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

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

		Amount of (Loss) Gain				
		Three I	Three Months Six Months			
		Ended June Ended				
		30,		June 30),	
	Location of (Loss) Gain	2018	2017	2018	2017	
Derivatives - Cash Flow H	edges	(\$ in m	illions)			
Recognized in other compr	ehensive income (effective					
portion):		¢ (1 5)	¢(2.4)	¢ (2.5)	¢ (7.4)	
Commodity contracts		. ,	` ′	\$(2.5)	` ′	
Interest rate contracts		1.1	(1.3)	4.2	0.6	
		\$(0.4)	\$(3.7)	\$1.7	\$(6.8)	
Reclassified from accumula	ated other comprehensive					
loss into income (effective	portion):					
Interest rate contracts	Interest expense	\$2.1	\$0.5	\$3.4	\$0.5	
Commodity contracts	Cost of goods sold	0.6	1.8	1.6	1.9	
	-	\$2.7	\$2.3	\$5.0	\$2.4	
Derivatives – Fair Value H	edges					
Interest rate contracts	Interest expense	\$(0.5)	\$0.8	\$(0.3)	\$2.0	
Derivatives Not Designated as Hedging Instruments						
Foreign exchange contracts	Selling and administration	\$(1.1)	\$5.0	\$(0.6)	\$0.5	

The ineffective portion of changes in fair value resulted in zero charged or credited to earnings for the three and six months ended June 30, 2018 and 2017.

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 nonperformance 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 June 30, 2018, December 31, 2017 and June 30, 2017, 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.

FAIR VALUE MEASUREMENTS

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 condensed 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 Measurements and Disclosures" (ASC 820) are directly related to the amount of subjectivity associated with the inputs to fair valuation of these assets and liabilities, and 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.

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. We evaluate our hierarchy disclosures each quarter. The following table summarizes the assets and liabilities measured at fair value in the condensed balance sheets:

the condensed buildine sheets.				
	Fair Value			
	Measurements			
Dalamas at Luna 20, 2019	Le ke lvel	Level	Total	
Balance at June 30, 2018	1 2	3	Totai	
Assets	(\$ in mil	lions)		
Interest rate swaps	\$ -\$ 11.2	\$ -	\$11.2	
Commodity contracts	—4.3		4.3	
Foreign exchange contracts	-1.2		1.2	
Liabilities				
Interest rate swaps	\$ -\$ 44.1	\$ -	\$44.1	
Commodity contracts	-0.9		0.9	
Foreign exchange contracts	0.5		0.5	
Balance at December 31, 2017				
Assets				
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 June 30, 2017				
Assets				
Interest rate swaps	\$ -\$ 9.6	\$ -	\$ 9.6	
Commodity contracts	-4.0		4.0	
Foreign exchange contracts	-1.2		1.2	
Liabilities				
Interest rate swaps	\$-\$25.0	\$ -	\$25.0	
Commodity contracts	-2.2	_	2.2	

For the six months ended June 30, 2018, there were no transfers into or out of Level 1, Level 2 or 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.

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 condensed balance sheets:

	Fair Value I	Amount				
			recorded			
	Level 2	Level 3	Total	on		
	1 Level 2		Total	balance		
				sheets		
	(\$ in millions)					
Balance at June 30, 2018	\$-\$3,521.6	\$153.0	\$3,674.6	\$3,513.5		
Balance at December 31, 2017	3,758.0	153.0	3,911.0	3,612.0		
Balance at June 30, 2017	-3,777.8	153.0	3,930.8	3,600.6		

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 June 30, 2018, December 31, 2017 and June 30, 2017.

SUPPLEMENTAL GUARANTOR FINANCIAL INFORMATION

In October 2015, Blue Cube Spinco LLC (the Issuer) 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). 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 Exchange Notes are fully and unconditionally guaranteed by the Parent Guarantor.

The following condensed consolidating financial information presents the condensed consolidating balance sheets as of June 30, 2018, December 31, 2017 and June 30, 2017, the related condensed consolidating statements of operations, comprehensive income (loss) for each of the three and six months ended June 30, 2018 and 2017, and the related statements of cash flows for the six months ended June 30, 2018 and 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.

CONDENSED CONSOLIDATING BALANCE SHEETS

June 30, 2018 (In millions) (Unaudited)

	Parent Guarantor	Issuer	Subsidiary Non-Guarantor	Eliminations	Total
Assets					
Current assets:					
Cash and cash equivalents	\$74.3	\$ —	\$ 69.9	\$—	\$144.2
Receivables, net	109.6		727.6		837.2
Intercompany receivables	_	_	2,305.8	(2,305.8)	
Income taxes receivable	11.8		6.3	(0.3)	17.8
Inventories, net	170.4		545.9		716.3
Other current assets	216.2		6.7	(175.2)	47.7
Total current assets	582.3		3,662.2	(2,481.3)	1,763.2
Property, plant and equipment, net	577.8	_	2,923.6	_	3,501.4
Investment in subsidiaries	6,737.5	4,107.6	_	(10,845.1)	_
Deferred income taxes	28.3	1.0	40.5	(30.1)	39.7
Other assets	24.7		1,144.8	_	1,169.5
Long-term receivables—affiliates		1,462.2	_	(1,462.2)	
Intangible assets, net	0.3	5.7	538.3		544.3
Goodwill		966.3	1,153.4		2,119.7
Total assets	\$7,950.9	\$6,542.8	\$ 9,462.8	\$(14,818.7)	\$9,137.8
Liabilities and Shareholders' Equity					
Current liabilities:					
Current installments of long-term debt	\$0.9	\$—	\$ —	\$	\$0.9
Accounts payable	75.7		609.0	(3.3)	681.4
Intercompany payables	2,305.8			(2,305.8)	
Income taxes payable			15.8		15.5
Accrued liabilities	116.6		340.8	,	284.4
Total current liabilities	2,499.0		965.6	,	982.2
Long-term debt	1,350.4	1,912.2	250.0		3,512.6
Accrued pension liability	376.2		226.5	_	602.7
Deferred income taxes		4.1	538.7	(30.1)	512.7
Long-term payables—affiliates	640.0		822.2	(1,462.2)	
Other liabilities	322.2	5.6	436.7		764.5
Total liabilities	5,187.8	1,921.9	3,239.7	(3,974.7)	6,374.7
Commitments and contingencies	,	,-	,	(-)	- ,
Shareholders' equity:					
Common stock	167.0		14.6	(14.6)	167.0
Additional paid-in capital	2,280.5	4,125.7	4,808.2		2,280.5
Accumulated other comprehensive loss	•		•	1.1	(573.2)
Retained earnings	888.8	495.2	1,401.4		888.8
Total shareholders' equity	2,763.1	4,620.9	6,223.1	,	2,763.1
Total liabilities and shareholders' equity	,		\$ 9,462.8	\$(14,818.7)	

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		9.4
Accrued liabilities	117.7	_	318.1	(161.4)	274.4
Total current liabilities	2,294.8		918.6		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		2,280.9
Accumulated other comprehensive loss	(484.6)	_	(4.6)	4.6	(484.6)
Retained earnings	790.3	539.9	1,287.5		790.3
Total shareholders' equity	2,753.7	4,665.6	6,105.7		2,753.7
Total liabilities and shareholders' equity			\$ 9,385.5	\$(15,198.7)	

CONDENSED CONSOLIDATING BALANCE SHEETS

June 30, 2017 (In millions) (Unaudited)

	Parent Guarantor	Issuer	Subsidiary Non-Guarantor	Eliminations	Total
Assets					
Current assets:					
Cash and cash equivalents	\$28.9	\$	\$ 155.6	\$ —	\$184.5
Receivables, net	101.7		680.5		782.2
Intercompany receivables	_	2.9	2,052.9	(2,055.8)	_
Income taxes receivable	18.8	_	7.2	(5.1)	20.9
Inventories, net	178.2	_	488.0	_	666.2
Other current assets	183.1	_	7.0	(152.9)	37.2
Total current assets	510.7	2.9	3,391.2	(2,213.8)	1,691.0
Property, plant and equipment, net	509.1		3,118.3	_	3,627.4
Investment in subsidiaries	6,082.7	3,774.0	_	(9,856.7)	
Deferred income taxes	151.8		97.8	(124.4)	125.2
Other assets	46.9		578.7		625.6
Long-term receivables—affiliates		2,204.3		(2,204.3)	
Intangible assets, net	0.4	5.7	599.5	<u> </u>	605.6
Goodwill		966.3	1,153.2		2,119.5
Total assets	\$7,301.6	\$6,953.2	\$ 8,938.7	\$(14,399.2)	-
Liabilities and Shareholders' Equity	,	,	,	,	•
Current liabilities:					
Current installments of long-term debt	\$0.8	\$68.8	\$ 12.1	\$ —	\$81.7
Accounts payable	58.0		603.7	(5.6)	656.1
Intercompany payables	2,055.8			` ,	_
Income taxes payable	_		12.2		7.1
Accrued liabilities	116.1		296.6	,	261.5
Total current liabilities	2,230.7	68.8	924.6		1,006.4
Long-term debt	822.3	2,487.4	209.2		3,518.9
Accrued pension liability	421.7	_	203.9		625.6
Deferred income taxes		237.9	924.1	(124.4)	1,037.6
Long-term payables—affiliates	1,284.4	_	919.9	(2,204.3)	_
Other liabilities	283.9	8.1	55.2		347.2
Total liabilities	5,043.0	2,802.2	3,236.9	(4,546.4)	6,535.7
Commitments and contingencies	,	,	,	,	,
Shareholders' equity:					
Common stock	166.3		14.6	(14.6)	166.3
Additional paid-in capital	2,262.7	4,125.7	4,808.2		2,262.7
Accumulated other comprehensive loss	*		(8.6		(485.4)
Retained earnings	315.0	25.3	887.6		315.0
Total shareholders' equity	2,258.6	4,151.0	5,701.8	` /	2,258.6
Total liabilities and shareholders' equity			\$ 8,938.7	\$(14,399.2)	
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CONDENSED CONSOLIDATING STATEMENTS OF OPERATIONS

Three Months Ended June 30, 2018

(In millions)

(Unaudited)

	Parent Guarantor	Issuer	Subsidiary Non-Guaranton	Elimination	ıs	Total
Sales	\$ 369.5	\$—	\$ 1,465.9	\$ (107.0)	\$1,728.4
Operating expenses:						
Cost of goods sold	332.9	_	1,234.8	(107.0)	1,460.7
Selling and administration	53.2		57.1			110.3
Restructuring charges	_		6.4	_		6.4
Acquisition-related costs	0.3					0.3
Other operating (expense) income	(3.2)		3.2			_
Operating (loss) income	(20.1)		170.8			150.7
Losses of non-consolidated affiliates	(21.1)					(21.1)
Equity income in subsidiaries	98.5	88.1		(186.6)	_
Interest expense	18.1	37.8	6.8	(1.6)	61.1
Interest income	1.9		0.1	(1.6)	0.4
Non-operating pension income (expense)	6.7		(1.3)	_		5.4
Income before taxes	47.8	50.3	162.8	(186.6)	74.3
Income tax (benefit) provision	(10.8)	(9.2)	35.7	_		15.7
Net income	\$ 58.6	\$59.5	\$ 127.1	\$ (186.6)	\$58.6

CONDENSED CONSOLIDATING STATEMENTS OF OPERATIONS

Six Months Ended June 30, 2018

(In millions)

	Parent Guarantor	Issuer	Subsidiary Non-Guarantor	Elimination	ıs	Total
Sales	\$ 722.2	\$	\$ 2,932.9	\$ (216.4)	\$3,438.7
Operating expenses:						
Cost of goods sold	644.9	_	2,560.9	(216.4)	2,989.4
Selling and administration	100.3	_	110.5			210.8
Restructuring charges	_	_	10.4			10.4
Acquisition-related costs	0.6					0.6
Other operating income	2.6		5.5			8.1
Operating (loss) income	(21.0)	_	256.6			235.6
Losses of non-consolidated affiliates	(20.6)	_				(20.6)
Equity income in subsidiaries	126.9	110.3		(237.2)	_
Interest expense	35.1	79.1	13.7	(3.1)	124.8
Interest income	2.9	_	1.0	(3.1)	0.8
Non-operating pension income (expense)	13.4	_	(2.6)			10.8
Income before taxes	66.5	31.2	241.3	(237.2)	101.8
Income tax (benefit) provision	(13.0)	(19.1)	54.4	_		22.3
Net income	\$ 79.5	\$50.3	\$ 186.9	\$ (237.2)	\$79.5

CONDENSED CONSOLIDATING STATEMENTS OF OPERATIONS

Three Months Ended June 30, 2017

(In millions)

(Unaudited)

	Parent	Issuer	Subsidiary	Eliminations	Total	
	Guarantor		Non-Guarantor	Liminations	Total	
Sales	\$ 338.1	\$ —	\$ 1,294.7	\$ (106.3)	\$1,526.5	
Operating expenses:						
Cost of goods sold	299.5		1,214.7	(106.3)	1,407.9	
Selling and administration	32.3		52.5		84.8	
Restructuring charges	_	_	8.5		8.5	
Acquisition-related costs	4.4				4.4	
Other operating (expense) income	(4.0)		4.3		0.3	
Operating (loss) income	(2.1)		23.3		21.2	
Earnings of non-consolidated affiliates	0.5				0.5	
Equity (loss) income in subsidiaries	(7.8)	4.2	_	3.6	_	
Interest expense	9.4	41.9	3.1	(1.9)	52.5	
Interest income	2.3			(1.9)	0.4	
Non-operating pension income (expense)	9.6		(1.0)		8.6	
Income (loss) before taxes	(6.9)	(37.7)	19.2	3.6	(21.8)	
Income tax (benefit) provision	(1.0)	(15.5)	0.6	_	(15.9)	
Net (loss) income	\$ (5.9)	\$(22.2)	\$ 18.6	\$ 3.6	\$(5.9)	

CONDENSED CONSOLIDATING STATEMENTS OF OPERATIONS

Six Months Ended June 30, 2017

(In millions)

	Parent Guarantor	Issuer	Subsidiary Non-Guarantor	Elimination	S	Total	
Sales	\$ 652.9	\$ —	\$ 2,655.1	\$ (214.4)	\$3,093.6	į
Operating expenses:							
Cost of goods sold	579.1		2,440.7	(214.4)	2,805.4	
Selling and administration	78.1		99.6			177.7	
Restructuring charges	_		16.7			16.7	
Acquisition-related costs	11.4		_			11.4	
Other operating (expense) income	(4.5)		4.4			(0.1)
Operating (loss) income	(20.2)		102.5			82.3	
Earnings of non-consolidated affiliates	1.0					1.0	
Equity income in subsidiaries	18.4	39.3		(57.7)		
Interest expense	21.4	82.8	4.0	(3.3)	104.9	
Interest income	3.0		0.9	(3.3)	0.6	
Non-operating pension income (expense)	19.1		(2.0)			17.1	
Income (loss) before taxes	(0.1)	(43.5)	97.4	(57.7)	(3.9)
Income tax (benefit) provision	(7.6)	(30.7)	26.9			(11.4)
Net income (loss)	\$ 7.5	\$(12.8)	\$ 70.5	\$ (57.7)	\$7.5	

Table of Contents

CONDENSED CONSOLIDATING STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

Three Months Ended June 30, 2018

(In millions)

	Parent Guarantor	Issuer	Subsidiary Non-Guarantor	Eliminations	Total
Net income	\$ 58.6	\$59.5	\$ 127.1	\$ (186.6)	\$58.6
Other comprehensive income (loss), net of tax:					
Foreign currency translation adjustments, net	_		(26.1)	_	(26.1)
Unrealized losses on derivative contracts, net	(2.4)		_	_	(2.4)
Amortization of prior service costs and actuarial losses, net	7.7		0.4	_	8.1
Total other comprehensive income (loss), net of tax	5.3		(25.7		