
UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, DC 20549

FORM 10-Q

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

For the quarterly period ended March 31, 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 1-5667

Cabot Corporation

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

04-2271897
(I.R.S. Employer
Identification No.)

Two Seaport Lane
Boston, Massachusetts
(Address of principal executive offices)

02210-2019
(Zip Code)

Registrant's telephone number, including area code: (617) 345-0100

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§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 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	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/> (Do not check if smaller reporting company)	Smaller reporting company	<input type="checkbox"/>
Emerging growth company	<input type="checkbox"/>		

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

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

The Company had 61,820,454 shares of common stock, \$1.00 par value per share, outstanding as of May 7, 2018.

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Part I. Financial Information

Item 1. Financial Statements

CABOT CORPORATION
CONSOLIDATED STATEMENTS OF OPERATIONS
UNAUDITED

	Three Months Ended March 31		Six Months Ended March 31	
	2018	2017	2018	2017
	(In millions, except per share amounts)			
Net sales and other operating revenues	\$ 818	\$ 678	\$ 1,538	\$ 1,289
Cost of sales	628	509	1,170	961
Gross profit	190	169	368	328
Selling and administrative expenses	78	65	147	128
Research and technical expenses	16	14	31	26
Purification Solutions long-lived assets impairment (Note E)	162	—	162	—
Purification Solutions goodwill impairment (Note E)	92	—	92	—
Income (loss) from operations	(158)	90	(64)	174
Interest and dividend income	3	2	6	4
Interest expense	(14)	(13)	(27)	(26)
Other income (expense)	(2)	(1)	6	1
Income (loss) from continuing operations before income taxes and equity in earnings of affiliated companies	(171)	78	(79)	153
(Provision) benefit for income taxes	7	1	(198)	(17)
Equity in earnings of affiliated companies, net of tax	1	1	2	3
Net income (loss)	(163)	80	(275)	139
Net income (loss) attributable to noncontrolling interests, net of tax	10	6	20	10
Net income (loss) attributable to Cabot Corporation	\$ (173)	\$ 74	\$ (295)	\$ 129
Weighted-average common shares outstanding:				
Basic	61.8	62.4	61.8	62.3
Diluted	61.8	62.8	61.8	62.8
Earnings per common share:				
Basic	\$ (2.80)	\$ 1.19	\$ (4.78)	\$ 2.06
Diluted	\$ (2.80)	\$ 1.19	\$ (4.78)	\$ 2.05
Dividends per common share	\$ 0.315	\$ 0.30	\$ 0.63	\$ 0.60

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

CABOT CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
UNAUDITED

	Three Months Ended March 31		Six Months Ended March 31	
	2018	2017	2018	2017
	(In millions)			
Net income (loss)	\$ (163)	\$ 80	\$ (275)	\$ 139
Other comprehensive income (loss), net of tax				
Foreign currency translation adjustment, net of tax provision (benefit) of \$(2), \$1, \$(4) and \$3	59	56	59	(69)
Derivatives: net investment hedges				
(Gains) losses reclassified to interest expense, net of tax provision of \$—, \$—, \$— and \$—	(1)	—	(2)	—
Pension and other postretirement benefit liability adjustments				
Amortization of net loss and prior service credit included in net periodic benefit cost, net of tax	—	1	—	2
Other comprehensive income (loss)	58	57	57	(67)
Comprehensive income (loss)	(105)	137	(218)	72
Net income (loss) attributable to noncontrolling interests, net of tax	10	6	20	10
Foreign currency translation adjustment attributable to noncontrolling interests, net of tax	4	1	7	(3)
Comprehensive income (loss) attributable to noncontrolling interests, net of tax	14	7	27	7
Comprehensive income (loss) attributable to Cabot Corporation	\$ (119)	\$ 130	\$ (245)	\$ 65

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

CABOT CORPORATION
CONSOLIDATED BALANCE SHEETS
ASSETS
UNAUDITED

	<u>March 31, 2018</u>	<u>September 30, 2017</u>
	(In millions)	
Current assets:		
Cash and cash equivalents	\$ 179	\$ 280
Accounts and notes receivable, net of reserve for doubtful accounts of \$10 and \$9	637	527
Inventories:		
Raw materials	116	93
Work in process	2	2
Finished goods	332	293
Other	48	45
Total inventories	<u>498</u>	<u>433</u>
Prepaid expenses and other current assets	73	59
Total current assets	<u>1,387</u>	<u>1,299</u>
Property, plant and equipment, net	1,274	1,305
Goodwill	97	154
Equity affiliates	54	56
Intangible assets, net	103	137
Assets held for rent	107	104
Deferred income taxes	49	237
Other assets	46	46
Total assets	<u>\$ 3,117</u>	<u>\$ 3,338</u>

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

CABOT CORPORATION
CONSOLIDATED BALANCE SHEETS
LIABILITIES AND STOCKHOLDERS' EQUITY
UNAUDITED

	March 31, 2018	September 30, 2017
	(In millions, except share and per share amounts)	
Current liabilities:		
Notes payable	\$ 268	\$ 7
Accounts payable and accrued liabilities	505	457
Income taxes payable	24	22
Current portion of long-term debt	36	256
Total current liabilities	<u>833</u>	<u>742</u>
Long-term debt	631	661
Deferred income taxes	19	38
Other liabilities	265	245
Redeemable preferred stock	26	27
Commitments and contingencies (Note I)		
Stockholders' equity:		
Preferred stock:		
Authorized: 2,000,000 shares of \$1 par value	—	—
Issued and Outstanding: None and none		
Common stock:		
Authorized: 200,000,000 shares of \$1 par value		
Issued: 62,019,859 and 62,087,627 shares		
Outstanding: 61,818,776 and 61,884,347 shares	62	62
Less cost of 201,083 and 203,280 shares of common treasury stock	(7)	(6)
Additional paid-in capital	—	—
Retained earnings	1,370	1,707
Accumulated other comprehensive income (loss)	(209)	(259)
Total Cabot Corporation stockholders' equity	<u>1,216</u>	<u>1,504</u>
Noncontrolling interests	127	121
Total stockholders' equity	<u>1,343</u>	<u>1,625</u>
Total liabilities and stockholders' equity	<u>\$ 3,117</u>	<u>\$ 3,338</u>

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

CABOT CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS
UNAUDITED

	Six Months Ended March 31	
	2018	2017
	(In millions)	
Cash Flows from Operating Activities:		
Net income (loss)	\$ (275)	\$ 139
Adjustments to reconcile net income (loss) to cash provided by operating activities:		
Depreciation and amortization	79	76
Long-lived assets impairment charge	162	—
Goodwill impairment charge	92	—
Deferred tax provision (benefit)	157	(26)
Gain on sale of investments	(10)	—
Gain on sale of land	(11)	—
Equity in net income of affiliated companies	(2)	(3)
Non-cash compensation	12	6
Other non-cash (income) expense	14	—
Changes in assets and liabilities:		
Accounts and notes receivable	(87)	(78)
Inventories	(61)	(65)
Prepaid expenses and other current assets	(12)	(9)
Accounts payable and accrued liabilities	33	23
Income taxes payable	1	7
Other liabilities	(18)	(18)
Cash dividends received from equity affiliates	7	6
Cash provided by operating activities	81	58
Cash Flows from Investing Activities:		
Additions to property, plant and equipment	(109)	(45)
Cash paid for acquisition of business, net of cash acquired of \$1	(64)	—
Proceeds from sale of investments	10	—
Proceeds from sale of land	13	—
Change in assets held for rent	(3)	(4)
Other	(4)	2
Cash used in investing activities	(157)	(47)
Cash Flows from Financing Activities:		
Repayments under financing arrangements	—	(4)
Increase in notes payable, net	2	8
Proceeds from (repayments of) issuance of commercial paper, net	258	4
Repayments of long-term debt	(251)	(1)
Purchases of common stock	(16)	(30)
Proceeds from sales of common stock	1	21
Cash dividends paid to noncontrolling interests	(6)	(2)
Cash dividends paid to common stockholders	(39)	(38)
Cash used in financing activities	(51)	(42)
Effects of exchange rate changes on cash	26	(36)
Increase (decrease) in cash and cash equivalents	(101)	(67)
Cash and cash equivalents at beginning of period	280	200
Cash and cash equivalents at end of period	\$ 179	\$ 133

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

CABOT CORPORATION
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
March 31, 2018
UNAUDITED

A. Basis of Presentation

The consolidated financial statements have been prepared in conformity with accounting policies generally accepted in the United States (“U.S.”) and include the accounts of Cabot Corporation (“Cabot” or the “Company”) and its wholly owned subsidiaries and majority-owned and controlled U.S. and non-U.S. subsidiaries. Additionally, Cabot considers consolidation of entities over which control is achieved through means other than voting rights. Intercompany transactions have been eliminated in consolidation.

The unaudited consolidated financial statements have been prepared in accordance with the requirements of Form 10-Q and consequently do not include all disclosures required by Form 10-K. Additional information may be obtained by referring to Cabot’s Annual Report on Form 10-K for its fiscal year ended September 30, 2017 (“2017 10-K”).

The financial information submitted herewith is unaudited and reflects all adjustments which are, in the opinion of management, necessary to provide a fair statement of the results for the interim periods ended March 31, 2018 and 2017. All such adjustments are of a normal recurring nature. The results for interim periods are not necessarily indicative of the results to be expected for the fiscal year.

Effective October 1, 2017, the Company changed its method of accounting for its U.S. carbon black inventories from the last-in, first-out (“LIFO”) method to the first-in, first-out (“FIFO”) method. The Company applied this change retrospectively to all prior periods presented, which is discussed in further detail in Note B.

As discussed in Note C, in November 2017, the Company acquired all of the issued and outstanding shares of 8755329 Canada Inc. (“Tech Blend”), a North American producer of black masterbatches. The financial position, results of operations and cash flows of Tech Blend are included in the Company’s consolidated financial statements from the date of acquisition.

B. Significant Accounting Policies

Revenue Recognition and Accounts Receivable

Cabot recognizes revenue when persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the price is fixed or determinable and collectability is reasonably assured. Cabot generally is able to ensure that products meet customer specifications prior to shipment. If the Company is unable to determine that the product has met the specified objective criteria prior to shipment or if title has not transferred because of sales terms, the revenue is considered “unearned” and is deferred until the revenue recognition criteria are met.

Shipping and handling charges related to sales transactions are recorded as sales revenue when billed to customers or included in the sales price. Taxes collected on sales to customers are excluded from revenues.

The following table shows the relative size of the revenue recognized in each of the Company’s reportable segments.

	Three Months Ended March 31		Six Months Ended March 31	
	2018	2017	2018	2017
Reinforcement Materials	57%	54%	57%	52%
Performance Chemicals	34%	35%	33%	35%
Purification Solutions	8%	10%	9%	11%
Specialty Fluids	1%	1%	1%	2%

Cabot derives the substantial majority of its revenues from the sale of products in its Reinforcement Materials, Performance Chemicals, and Purification Solutions segments. Revenue from these products is typically recognized when the product is shipped and title and risk of loss have passed to the customer. The Company offers certain of its customers cash discounts and volume rebates as sales incentives. The discounts and volume rebates are recorded as a reduction in sales at the time revenue is recognized and are estimated based on historical experience and contractual obligations. Cabot periodically reviews the assumptions underlying its estimates of discounts and volume rebates and adjusts its revenues accordingly.

For major activated carbon injection systems projects in Purification Solutions, revenue is recognized using the percentage-of-completion method.

Revenue in Specialty Fluids arises primarily from the rental of cesium formate. This revenue is recognized throughout the rental period based on the contracted rental terms. Customers are also billed and revenue is recognized, typically at the end of the job, for cesium formate product that is not returned. The Company also generates revenues from cesium formate sold outside of the rental process and from the sale of fine cesium chemicals. This revenue is recognized upon delivery of the product.

Cabot maintains allowances for doubtful accounts based on an assessment of the collectability of specific customer accounts, the aging of accounts receivable and other economic information on both a historical and prospective basis. Customer account balances are charged against the allowance when it is probable the receivable will not be recovered. There were no material changes in the allowance for any of the periods presented. There is no material off-balance sheet credit exposure related to customer receivable balances.

Intangible Assets and Goodwill Impairment

The Company records tangible and intangible assets acquired and liabilities assumed in business combinations under the acquisition method of accounting. Amounts paid for an acquisition are allocated to the assets acquired and liabilities assumed based on their fair values at the date of acquisition. The Company uses assumptions and estimates in determining the fair value of assets acquired and liabilities assumed in a business combination. The determination of the fair value of intangible assets requires the use of significant judgment with regard to assumptions used in the valuation model. The Company estimates the fair value of identifiable acquisition-related intangible assets principally based on projections of cash flows that will arise from these assets. The projected cash flows are discounted to determine the fair value of the assets at the dates of acquisition. The Company acquired Tech Blend in November 2017, which included separately identifiable intangible assets of \$29 million as part of the preliminary purchase price allocation as discussed in Note C.

Definite-lived intangible assets, which are comprised of trademarks, customer relationships and developed technologies, are amortized over their estimated useful lives and are reviewed for impairment when indication of potential impairment exists, such as a significant reduction in cash flows associated with the assets.

Goodwill is comprised of the purchase price of business acquisitions in excess of the fair value assigned to the net tangible and identifiable intangible assets acquired. Goodwill is not amortized, but is reviewed for impairment annually as of May 31, or when events or changes in the business environment indicate that the carrying value of the reporting unit may exceed its fair value. A reporting unit, for the purpose of the impairment test, is at or below the operating segment level, and constitutes a business for which discrete financial information is available and regularly reviewed by segment management. As part of the Tech Blend acquisition, goodwill of \$33 million was generated and is reflected in the Specialty Compounds reporting unit. The other reporting units with goodwill balances are Reinforcement Materials and Fumed Metal Oxides. The separate businesses included within Performance Chemicals are considered separate reporting units. As such, the goodwill balances relative to Performance Chemicals are recorded in the Fumed Metal Oxides and Specialty Compounds reporting units.

Based on the Company's most recent annual goodwill impairment test performed as of May 31, 2017, the fair values of the Reinforcement Materials and Fumed Metal Oxides reporting units were substantially in excess of their carrying values. The fair value of the Purification Solutions reporting unit exceeded its carrying amount by 13%. In the second quarter of fiscal 2018, the Company determined that it was more likely than not that the carrying value of the Purification Solutions reporting unit exceeded its fair value. Accordingly, the Company performed the quantitative goodwill impairment test. Refer to Note E for details on the Purification Solutions goodwill impairment test and the resulting impairment charge recorded.

For the purpose of the goodwill impairment test, the Company first assesses qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If an initial qualitative assessment identifies that it is more likely than not that the carrying value of a reporting unit exceeds its estimated fair value, an additional quantitative evaluation is performed. Alternatively, the Company may elect to proceed directly to the quantitative goodwill impairment test. If based on the quantitative evaluation the fair value of the reporting unit is less than its carrying amount, a goodwill impairment loss would result. The goodwill impairment loss would be the amount by which the carrying value of the reporting unit, including goodwill, exceeds its fair value, limited to the total amount of goodwill allocated to that reporting unit. The fair value of a reporting unit is based on discounted estimated future cash flows. The fair value is also benchmarked against a market approach using the guideline public companies method. The assumptions used to estimate fair value include management's best estimates of future growth rates, operating cash flows, capital expenditures and discount rates over an estimate of the remaining operating period at the reporting unit level.

Long-lived Assets Impairment

The Company's long-lived assets primarily include property, plant and equipment, intangible assets, long-term investments and assets held for rent. The carrying values of long-lived assets are reviewed for impairment whenever events or changes in business circumstances indicate that the carrying amount of an asset may not be recoverable.

To test for impairment of assets, the Company generally uses a probability-weighted estimate of the future undiscounted net cash flows of the assets over their remaining lives to determine if the value of the asset is recoverable. Long-lived assets are grouped with other assets and liabilities at the lowest level for which independent identifiable cash flows are determinable.

An asset impairment is recognized when the carrying value of the asset is not recoverable based on the analysis described above, in which case the asset is written down to its fair value. If the asset does not have a readily determinable market value, a discounted cash flow model may be used to determine the fair value of the asset. In circumstances when an asset does not have separately identifiable cash flows, an impairment charge is recorded when the Company no longer intends to use the asset. In the second quarter of fiscal 2018, the Company determined that the long-lived asset group of Purification Solutions was not recoverable. Accordingly, the Company recorded an impairment charge for the carrying value in excess of the fair value of the asset group. Refer to Note E regarding the results of the recoverability test performed on the long-lived assets of the Purification Solutions segment and the resulting impairment charge recorded.

Property, Plant and Equipment

Property, plant and equipment are recorded at cost. Depreciation of property, plant and equipment is calculated using the straight-line method over the estimated useful lives of the related assets. The depreciable lives for buildings, machinery and equipment, and other fixed assets are between twenty and twenty-five years, ten and twenty-five years, and three and twenty-five years, respectively. The cost and accumulated depreciation for property, plant and equipment sold, retired, or otherwise disposed of are removed from the Consolidated Balance Sheets and resulting gains or losses are included in earnings in the Consolidated Statements of Operations. Expenditures for repairs and maintenance are charged to expenses as incurred. Expenditures for major renewals and betterments, which significantly extend the useful lives of existing plant and equipment, are capitalized and depreciated.

Income Tax in Interim Periods

The Company records its tax provision or benefit on an interim basis using an estimated annual effective tax rate. This rate is applied to the current period ordinary income or loss to determine the income tax provision or benefit allocated to the interim period. Losses from jurisdictions for which no benefit can be recognized and the income tax effects of unusual or infrequent items are excluded from the estimated annual effective tax rate and are recognized in the impacted interim period.

Valuation allowances are provided against the future tax benefits that arise from the deferred tax assets in jurisdictions for which no benefit can be recognized. The estimated annual effective tax rate may be significantly impacted by nondeductible expenses and the Company's projected earnings mix by tax jurisdiction. Adjustments to the estimated annual effective income tax rate are recognized in the period when such estimates are revised.

Inventory Valuation

Inventories are stated at the lower of cost or market. Effective October 1, 2017, the Company changed its method of accounting for its U.S. carbon black inventories from the LIFO method to the FIFO method. Total U.S. inventories accounted for utilizing the LIFO cost flow assumption represented 7% of the Company's total worldwide inventories as of September 30, 2017 prior to this change in method. The Company believes the FIFO method is preferable because it: (i) conforms the accounting for U.S. carbon black inventories to the Company's inventory valuation methodology for the majority of its other inventories; (ii) better represents how management assesses and reports on the performance of the Reinforcement Materials and Performance Chemicals operating segments that carry the Company's U.S. carbon black inventories, as the impact of accounting for this inventory on a LIFO basis has historically been excluded from segment results; (iii) better aligns the accounting for U.S. carbon black inventories with the physical flow of that inventory; and (iv) improves comparability with many of the Company's peers.

The Company applied this change retrospectively to all prior periods presented. This change resulted in a \$17 million increase in retained earnings as of October 1, 2016, from \$1,544 million to \$1,561 million. In addition, the following financial statement line items in the Company's Consolidated Statements of Operations for the three and six months ended March 31, 2017, its Consolidated Balance Sheets as of September 30, 2017, and its Consolidated Statements of Cash Flows for the six months ended March 31, 2017 were adjusted as follows:

Consolidated Statements of Operations	Three Months Ended March 31			
	2017			As Adjusted
	As Originally Reported	Effect of Change		
	(In millions, except per share amounts)			
Cost of sales	\$ 509	\$ —	\$	509
Income (loss) from continuing operations before income taxes and equity in earnings of affiliated companies	\$ 78	\$ —	\$	78
(Provision) benefit for income taxes	\$ 1	\$ —	\$	1
Net income (loss)	\$ 80	\$ —	\$	80
Net income (loss) attributable to Cabot Corporation	\$ 74	\$ —	\$	74
Earnings per common share:				
Basic	\$ 1.19	\$ —	\$	1.19
Diluted	\$ 1.18	\$ 0.01	\$	1.19

Consolidated Statements of Operations	Six Months Ended March 31			
	2017			As Adjusted
	As Originally Reported	Effect of Change		
	(In millions)			
Cost of sales	\$ 963	\$ (2)	\$	961
Income (loss) from continuing operations before income taxes and equity in earnings of affiliated companies	\$ 151	\$ 2	\$	153
(Provision) benefit for income taxes	\$ (16)	\$ (1)	\$	(17)
Net income (loss)	\$ 138	\$ 1	\$	139
Net income (loss) attributable to Cabot Corporation	\$ 128	\$ 1	\$	129
Earnings per common share:				
Basic	\$ 2.04	\$ 0.02	\$	2.06
Diluted	\$ 2.03	\$ 0.02	\$	2.05

Consolidated Balance Sheets	September 30, 2017			
	2017			As Adjusted
	As Originally Reported	Effect of Change		
	(In millions)			
Inventories	\$ 396	\$ 37	\$	433
Deferred income taxes (assets)	\$ 250	\$ (13)	\$	237
Retained earnings	\$ 1,683	\$ 24	\$	1,707

Consolidated Statements of Cash Flows	Six Months Ended March 31			
	2017			As Adjusted
	As Originally Reported	Effect of Change		
	(In millions)			
Net income (loss)	\$ 138	\$ 1	\$	139
Deferred tax provision (benefit)	\$ (27)	\$ 1	\$	(26)
Inventories	\$ (63)	\$ (2)	\$	(65)

If the Company had continued to account for its U.S. carbon black inventories under LIFO, there would have been an increase in Cost of Sales of \$2 million and \$3 million, an additional benefit to the (Provision) benefit for income taxes of \$1 million and \$1 million, an impact to the Net income (loss) attributable to Cabot Corporation of \$1 million and \$2 million, and a decrease of \$0.02 and \$0.03 in both basic and diluted earnings per common share in the Consolidated Statements of Operations for the three and six months ended March 31, 2018, respectively. The impact to the Consolidated Balance Sheets as of March 31, 2018 would have been a decrease of \$40 million in Inventories, an increase of \$14 million in Deferred income taxes, and a decrease of \$26 million in Retained earnings.

The cost of Specialty Fluids inventories that are classified as assets held for rent is determined using the average cost method. The cost of all other inventories is determined using the FIFO method.

Cabot periodically reviews inventory for both potential obsolescence and potential declines in anticipated selling prices. In this review, the Company makes assumptions about the future demand for and market value of the inventory, and based on these assumptions estimates the amount of any obsolete, unmarketable, slow moving, or overvalued inventory. Cabot writes down the value of these inventories by an amount equal to the difference between the cost of the inventory and its estimated net realizable value.

Pensions and Other Postretirement Benefits

The Company recognizes the funded status of defined benefit pension and other postretirement benefit plans as an asset or liability. This amount is defined as the difference between the fair value of plan assets and the benefit obligation. The Company is required to recognize as a component of other comprehensive income (loss), net of tax, the actuarial gains/losses and prior service costs/credits that arise but were not previously required to be recognized as components of net periodic benefit cost. Other comprehensive income (loss) is adjusted as these amounts are later recognized in income as components of net periodic benefit cost.

Accumulated Other Comprehensive Income (Loss)

Accumulated other comprehensive income (loss) ("AOCI"), which is included as a component of stockholders' equity, includes unrealized gains or losses on available-for-sale marketable securities and derivative instruments, currency translation adjustments in foreign subsidiaries, translation adjustments on foreign equity securities and minimum pension liability adjustments.

Recently Adopted Accounting Standards

In March 2016, the Financial Accounting Standards Board ("FASB") issued a new standard that amends the accounting standard for stock compensation by simplifying several aspects of the accounting for employee share-based payment transactions, including the related accounting for income taxes, forfeitures, and the withholding of shares to satisfy the employer's tax withholding requirements, as well as classification in the statements of cash flows. The Company adopted the standard on October 1, 2017. The following guidance was updated under the new standard, and its impact to Cabot is described below:

- When accounting for forfeitures the Company may elect to estimate the number of forfeitures to be recognized over the term of an award, which was also permitted under the previous guidance, or account for forfeitures as they occur. The Company elected to modify its accounting policy and account for forfeitures as they occur. The Company applied the accounting change on a modified retrospective basis, which resulted in a cumulative-effect charge of less than \$1 million to Retained earnings as of October 1, 2017.
- Excess tax benefits or deficiencies related to stock compensation that were previously recorded to Additional paid-in capital are now recognized as a discrete tax benefit or expense in (Provision) benefit for income taxes within the Consolidated Statements of Operations. The impact on the (Provision) benefit for income taxes was a discrete tax benefit of \$1 million during the first six months of fiscal 2018.
- Excess tax benefits are no longer reclassified out of cash flows from operating activities to financing activities in the Consolidated Statement of Cash Flows. The Company elected to apply this cash flow presentation requirement retrospectively, which resulted in the reclassification of \$7 million of tax benefit from share-based compensation awards from cash flows from financing activities to cash flows from operating activities in the Consolidated Statements of Cash Flows for the six months ended March 31, 2017.
- Cash paid by an employer when directly withholding shares for tax withholding purposes are required to be classified as a financing activity in the Consolidated Statements of Cash Flows. This method of presentation is consistent with the Company's historical presentation.

In August 2017, the FASB issued a new standard that amends the hedge accounting recognition and presentation requirements under hedge accounting. The new standard will make more financial and nonfinancial hedging strategies eligible for hedge accounting, amends the presentation and disclosure requirements, and simplifies how companies assess effectiveness. The Company adopted the standard on October 1, 2017. The adoption of this standard did not impact the Company's consolidated financial statements.

Recent Accounting Pronouncements

In May 2014, the FASB issued a new standard that amends the existing accounting standards for revenue recognition. The standard requires entities to recognize revenue when they transfer promised goods or services to customers in an amount that reflects the consideration the entity expects to be entitled to in exchange for those goods or services. This standard is applicable for fiscal years beginning after December 15, 2017. The Company has completed its preliminary assessment of the new standard, which included reviewing a sample of contracts across the Company's four business segments. Based on this assessment, the Company does not expect adoption of this standard to have a material impact on how it recognizes revenue. The Company is continuing its assessment of the new standard and preparing to implement the updates that will be necessary to its revenue recognition policy, internal controls, processes and financial statement disclosures. The Company will adopt this standard on October 1, 2018 and expects to apply a modified retrospective approach.

In February 2016, the FASB issued a new standard for the accounting for leases. This new standard requires lessees to recognize assets and liabilities for most leases, but recognize expenses on their income statements in a manner that is similar to the current accounting treatment for leases. The standard is applicable for fiscal years beginning after December 15, 2018 and for interim periods within those years, and early adoption is permitted. The Company expects to adopt the standard on October 1, 2019. The Company is currently evaluating the impact of the adoption of this standard on its consolidated financial statements.

In August 2016, the FASB issued final amendments to clarify how entities should classify certain cash receipts and cash payments on the statement of cash flows, such as distributions received from equity method investees, proceeds from the settlement of insurance claims, and proceeds from the settlement of corporate-owned life insurance policies. The new standard is effective for fiscal years beginning after December 15, 2017, including interim periods within those years, and early adoption is permitted. The Company will adopt this standard on October 1, 2018. The adoption of this standard is not expected to materially impact the Company's consolidated financial statements.

In March 2017, the FASB issued a new standard that amends the requirements on the presentation of net periodic pension and postretirement benefit cost. Currently, net benefit costs are reported as employee costs within operating income. The new standard requires the service cost component to be presented with other employee compensation costs. The other components will be reported separately outside of operations. The new standard is effective for fiscal years beginning after December 15, 2017. The Company will adopt this standard on October 1, 2018. The adoption of this standard is not expected to materially impact the Company's consolidated financial statements.

In February 2018, the FASB issued a new standard that allows entities to reclassify from accumulated other comprehensive income to retained earnings for stranded tax effects resulting from enactment of H.R. 1 (the "Act"), commonly referred to as the Tax Cuts and Jobs Act of 2017. The amendments in this new standard also require certain disclosures about stranded tax effects. The new standard is effective for all entities for fiscal years beginning after December 15, 2018, including interim periods within those years, and early adoption is permitted. The Company is evaluating this standard and the timing of its adoption. The adoption of this standard is not expected to materially impact the Company's consolidated financial statements.

C. Acquisition of Tech Blend

In November 2017, the Company acquired all of the issued and outstanding shares and cash of Tech Blend, a North American producer of black masterbatches, for a preliminary purchase price of \$65 million, paid in cash. The preliminary purchase price is subject to a working capital adjustment, which has not been finalized as of March 31, 2018. The operating results of the business are included in the Company's Performance Chemicals segment. The acquisition extends the Company's global footprint in black masterbatch and compounds and provides a platform to serve global customers and grow in conductive formulations. Since the acquisition, Tech Blend revenues totaled approximately \$12 million in the five-month period ended March 31, 2018.

The Company incurred acquisition costs of less than \$1 million through March 31, 2018 associated with the transaction, which are included in Selling and administrative expenses and Other income (expense) in the Consolidated Statements of Operations.

The allocation of the preliminary purchase price set forth below was based on preliminary estimates of the fair value of assets acquired and liabilities assumed. The Company is continuing to obtain information to complete its valuation of these accounts and the associated tax accounting.

	(In millions)
Assets	
Cash	\$ 1
Accounts Receivable	5
Inventories	3
Property, plant and equipment	7
Intangible assets	29
Goodwill	33
Total assets acquired	<u>78</u>
Liabilities	
Current liabilities	(3)
Deferred tax liabilities	(10)
Total liabilities assumed	<u>(13)</u>
Cash consideration paid	<u>\$ 65</u>

As part of the preliminary purchase price allocation, the Company determined the separately identifiable intangible assets are comprised of developed technologies of \$21 million, which will be amortized over 25 years, and customer relationships of \$8 million, which will be amortized over 12 years. The Company estimated the fair values of the identifiable acquisition-related intangible assets based on projections of cash flows that will arise from those assets. The projected cash flows are discounted to determine the fair value of the assets at the date of acquisition. The determination of the fair value of the intangible assets acquired required the use of significant judgment with regard to (i) assumptions in the discounted cash flow model used and (ii) determination of the useful lives of the developed technologies and customer relationships.

The excess of the preliminary purchase price over the fair value of the tangible net assets and intangible assets acquired was recorded as goodwill. The goodwill recognized is attributable to the growth and operating synergies that the Company expects to realize from this acquisition. Goodwill generated from the acquisition will not be deductible for tax purposes.

D. Employee Benefit Plans

Net periodic defined benefit pension and other postretirement benefit costs include the following:

	Three Months Ended March 31							
	2018		2017		2018		2017	
	Pension Benefits				Postretirement Benefits			
	U.S.	Foreign	U.S.	Foreign	U.S.	Foreign	U.S.	Foreign
	(In millions)							
Service cost	\$ —	\$ 2	\$ —	\$ 3	\$ —	\$ —	\$ —	\$ —
Interest cost	1	2	1	2	—	—	—	—
Expected return on plan assets	(3)	(3)	(2)	(4)	—	—	—	—
Amortization of prior service credit	—	—	—	—	—	—	(1)	—
Amortization of actuarial loss	—	—	—	2	—	—	—	—
Net periodic benefit (credit) cost	<u>\$ (2)</u>	<u>\$ 1</u>	<u>\$ (1)</u>	<u>\$ 3</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ (1)</u>	<u>\$ —</u>

Six Months Ended March 31

	2018		2017		2018		2017	
	Pension Benefits				Postretirement Benefits			
	U.S.	Foreign	U.S.	Foreign	U.S.	Foreign	U.S.	Foreign
	(In millions)							
Service cost	\$ —	\$ 4	\$ —	\$ 5	\$ —	\$ —	\$ —	\$ —
Interest cost	2	4	2	3	—	—	—	—
Expected return on plan assets	(5)	(7)	(5)	(7)	—	—	—	—
Amortization of prior service credit	—	—	—	—	(1)	—	(1)	—
Amortization of actuarial loss	—	1	—	3	—	—	—	—
Net periodic benefit (credit) cost	<u>\$ (3)</u>	<u>\$ 2</u>	<u>\$ (3)</u>	<u>\$ 4</u>	<u>\$ (1)</u>	<u>\$ —</u>	<u>\$ (1)</u>	<u>\$ —</u>

E. Purification Solutions Goodwill and Long-Lived Assets Impairment Charges

During the second quarter of fiscal 2018, the Company recorded impairment charges relating to the goodwill and long-lived assets of the Purification Solutions reporting unit, and an associated deferred tax benefit, in the Consolidated Statement of Operations as follows:

	Three Months Ended March 31, 2018 (In millions)
Purification Solutions goodwill impairment charge	\$ 92
Purification Solutions long-lived assets impairment charge	162
Provision (benefit) for income taxes	(30)
Impairment charges, after tax	<u>\$ 224</u>

In the second quarter of fiscal 2018, the Purification Solutions reporting unit experienced further share losses, lower customer demand and declining prices in the mercury removal and North America powdered activated carbon applications, which led the Company to reassess its previous estimates for expected growth in volumes, prices and margins in the reporting unit. The forecasted demand and profit margins in mercury removal applications were lowered reflecting further unit closures at coal-fired utility plants, lower usage levels of activated carbon and lower capacity factors for coal-fired utilities, as well as lower pricing due to industry overcapacity, among other factors. While development programs continue to progress, growth estimates in other environmental and specialty applications were also lowered, reflecting heightened competition and updated timelines to commercialize certain new products. Due to these revised forecasts, the Company performed the quantitative goodwill impairment test and determined that the estimated fair value of the Purification Solutions reporting unit was lower than the reporting unit's carrying value, resulting in a goodwill impairment charge of \$92 million.

In determining the fair value of the Purification Solutions reporting unit, the Company used an income approach (a discounted cash flow analysis) which incorporated significant estimates and assumptions related to future periods, including growth rates in environmental and specialty applications and pricing assumptions of activated carbon, among others. In addition, an estimate of the reporting unit's weighted average cost of capital ("WACC") was used to discount future estimated cash flows to their present value. The WACC was based upon externally available data considering market participants' cost of equity and debt, optimal capital structure and risk factors specific to the Purification Solutions reporting unit.

Prior to determining the goodwill impairment charge, the Company considered whether the assets of the reporting unit were recoverable. As a result of this assessment, the Company recorded an inventory reserve adjustment of \$13 million and impairments to long lived assets of \$162 million. The adjustment to inventory carrying value was determined based on reassessments of volumes, pricing, and margin described above and was recorded in Cost of sales in the Consolidated Statements of Operations. The impairment analysis to assess if definite-lived intangible assets and property, plant and equipment were recoverable was based on the estimated undiscounted cash flows of the reporting unit, and these cash flows were not sufficient to recover the carrying value of the long-lived assets over their remaining useful lives. Accordingly, the Company recorded impairment charges of \$64 million and \$98 million, to its definite-lived intangible assets and property, plant and equipment, respectively, in the quarter ended March 31, 2018 based on the lower of the carrying amount or fair value of the long-lived assets.

The Company used the income approach to determine the fair value of the definite-lived intangible assets and the cost approach to determine the fair value of its property, plant and equipment.

As previously disclosed in the Company's first quarter fiscal 2018 Form 10-Q, the Company has continued to review its strategic options for this business and look for opportunities to better position the business for growth and long-term value enhancement. The Company will continue to monitor for events or changes in business circumstances that may indicate that the remaining carrying value of the asset group may not be recoverable.

F. Goodwill and Intangible Assets

The carrying amount of goodwill attributable to each reportable segment with goodwill balances and the changes in those balances during the six month period ended March 31, 2018 are as follows:

	Reinforcement Materials	Performance Chemicals	Purification Solutions	Total
	(In millions)			
Balance at September 30, 2017	\$ 53	\$ 9	\$ 92	\$ 154
Goodwill acquired ⁽¹⁾	—	33	—	33
Impairment charge ⁽²⁾	—	—	(92)	(92)
Foreign currency impact	1	1	—	2
Balance at March 31, 2018	<u>\$ 54</u>	<u>\$ 43</u>	<u>\$ —</u>	<u>\$ 97</u>

(1) Consists of goodwill acquired in the acquisition of Tech Blend as described in Note C.

(2) In the second quarter of fiscal 2018, the Company determined that it was more likely than not that the carrying value of the Purification Solutions reporting unit exceeded its fair value. Accordingly, the Company performed the quantitative goodwill impairment test. Refer to Note E for details on the Purification Solutions goodwill impairment test and the resulting impairment charge recorded.

The following table provides information regarding the Company's intangible assets:

	March 31, 2018			September 30, 2017		
	Gross Carrying Value	Accumulated Amortization	Net Intangible Assets	Gross Carrying Value	Accumulated Amortization	Net Intangible Assets
	(In millions)					
Intangible assets with finite lives ⁽¹⁾						
Developed technologies	\$ 52	\$ —	\$ 52	\$ 49	\$ (7)	\$ 42
Trademarks	9	—	9	16	(1)	15
Customer relationships	52	(10)	42	94	(14)	80
Total intangible assets	<u>\$ 113</u>	<u>\$ (10)</u>	<u>\$ 103</u>	<u>\$ 159</u>	<u>\$ (22)</u>	<u>\$ 137</u>

(1) Refer to Note E for intangible assets impairment charges recorded in the second fiscal quarter of 2018.

Intangible assets are amortized over their estimated useful lives, which range between twelve and twenty-five years, with a weighted average amortization period of approximately nineteen years. Amortization expense for the three month periods ended March 31, 2018 and 2017 was \$3 million and \$2 million, respectively, and is included in Cost of sales and Selling and administrative expenses in the Consolidated Statements of Operations. Amortization expense for the six month periods ended March 31, 2018 and 2017 was \$5 million and \$4 million, respectively, and is included in Cost of sales and Selling and administrative expenses in the Consolidated Statements of Operations. Total amortization expense is estimated to be approximately \$6 million each year for the next five fiscal years.

G. Stockholders' Equity

In January 2015, the Board of Directors authorized Cabot to repurchase up to five million shares of its common stock in the open market or in privately negotiated transactions. As of March 31, 2018, under the current authorization, Cabot has repurchased 3,491,902 shares of its common stock and 1,508,098 shares remain available for repurchase. The Company retired the repurchased shares and recorded the excess of the purchase price over par value to additional paid-in capital until such amount was reduced to zero and then charged the remainder against retained earnings.

During the first six months of fiscal 2018 and 2017, Cabot paid cash dividends in the aggregate amount of \$0.63 and \$0.60, respectively, per share of common stock, with a total cost of \$39 million and \$38 million, respectively.

Noncontrolling Interest

The following table illustrates the noncontrolling interest activity for the periods presented:

	Six Months Ended March 31	
	2018	2017
	(In millions)	
Noncontrolling interests at beginning of period	\$ 121	\$ 98
Net income (loss) attributable to noncontrolling interests	20	10
Foreign currency translation adjustment attributable to noncontrolling interests, net of tax	7	(3)
Dividends declared to noncontrolling interests	(21)	(14)
Contribution from noncontrolling interest	—	2
Noncontrolling interests at end of period	<u>\$ 127</u>	<u>\$ 93</u>

During the six months ended March 31, 2018, \$6 million of the dividends declared to noncontrolling interests during the period were paid. During the six months ended March 31, 2017, \$2 million of the dividends declared to noncontrolling interests during the period were paid.

H. Accumulated Other Comprehensive Income (Loss)

Comprehensive income combines net income (loss) and other comprehensive income items, which are reported as components of stockholders' equity in the accompanying Consolidated Balance Sheets.

Changes in each component of AOCI, net of tax, were as follows:

	Currency Translation Adjustment	Unrealized Gains on Investments	Pension and Other Postretirement Benefit Liability Adjustments	Total
	(In millions)			
Balance at September 30, 2017, attributable to Cabot Corporation	\$ (204)	\$ 2	\$ (57)	\$ (259)
Other comprehensive income (loss) before reclassifications	—	—	—	—
Amounts reclassified from AOCI	(1)	—	—	(1)
Less: Other comprehensive income (loss) attributable to noncontrolling interests	3	—	—	3
Balance at December 31, 2017, attributable to Cabot Corporation	(208)	2	(57)	(263)
Other comprehensive income (loss) before reclassifications	59	—	—	59
Amounts reclassified from AOCI	(1)	—	—	(1)
Less: Other comprehensive income (loss) attributable to noncontrolling interests	4	—	—	4
Balance at March 31, 2018, attributable to Cabot Corporation	<u>\$ (154)</u>	<u>\$ 2</u>	<u>\$ (57)</u>	<u>\$ (209)</u>

The amounts reclassified out of AOCI and into the Consolidated Statements of Operations in the three and six months ended March 31, 2018 and 2017 were as follows:

	Affected Line Item in the Consolidated Statements of Operations	Three Months Ended March 31		Six Months Ended March 31	
		2018	2017	2018	2017
(In millions)					
Derivatives: net investment hedges					
	(Gains) losses reclassified to interest expense	\$ (1)	\$ —	\$ (2)	\$ —
Pension and other postretirement benefit liability adjustment					
	Amortization of actuarial losses		Net Periodic Benefit Cost - see Note D for details		
		—	2	1	3
	Amortization of prior service credit		Net Periodic Benefit Cost - see Note D for details		
		—	(1)	(1)	(1)
	Total before tax	(1)	1	(2)	2
	Tax impact		Provision (benefit) for income taxes		
		—	—	—	—
	Total after tax	\$ (1)	\$ 1	\$ (2)	\$ 2

I. Commitments and Contingencies

Purchase Commitments

Cabot has entered into long-term purchase agreements primarily for the purchase of raw materials. Under certain of these agreements, the quantity of material being purchased is fixed, but the price paid changes as market prices change. For these purchase commitments, the amounts included in the table below are based on market prices at March 31, 2018, which may differ from actual market prices at the time of purchase.

	Payments Due by Fiscal Year						
	Remainder of Fiscal 2018	2019	2020	2021	2022	Thereafter	Total
(In millions)							
Reinforcement Materials	\$ 159	\$ 289	\$ 173	\$ 136	\$ 136	\$ 1,947	\$ 2,840
Performance Chemicals	34	63	58	57	57	482	751
Purification Solutions	4	7	7	1	—	—	19
Total	\$ 197	\$ 359	\$ 238	\$ 194	\$ 193	\$ 2,429	\$ 3,610

Guarantee Agreements

Cabot has provided certain indemnities pursuant to which it may be required to make payments to an indemnified party in connection with certain transactions and agreements. In connection with certain acquisitions and divestitures, Cabot has provided routine indemnities with respect to such matters as environmental, tax, insurance, product and employee liabilities. In connection with various other agreements, including service and supply agreements with customers, Cabot has provided indemnities for certain contingencies and routine warranties. Cabot is unable to estimate the maximum potential liability for these types of indemnities as a maximum obligation is not explicitly stated in most cases and the amounts, if any, are dependent upon the outcome of future contingent events, the nature and likelihood of which cannot be reasonably estimated. The duration of the indemnities vary, and in many cases are indefinite. Cabot has not recorded any liability for these indemnities in the consolidated financial statements, except as otherwise disclosed.

Contingencies

Cabot is a defendant, or potentially responsible party, in various lawsuits and environmental proceedings wherein substantial amounts are claimed or at issue.

Environmental Matters

As of March 31, 2018 and September 30, 2017, Cabot had \$16 million and \$12 million, respectively, reserved for environmental matters. These environmental matters mainly relate to former operations. During the three months ended March 31, 2018, the scope and cost of additional remediation activities being performed at a former manufacturing site became probable and estimable, resulting in the recognition of an additional charge of \$6 million for these actions in Cost of sales in the Consolidated Statements of Operations. The Company's reserves for environmental matters represent Cabot's best estimates of the probable costs to be incurred at those sites where costs are reasonably estimable based on the Company's analysis of the extent of clean up required, alternative clean-up methods available, abilities of other responsible parties to contribute and its interpretation of laws and regulations applicable to each site.

Cash payments related to these environmental matters were \$2 million in the first six months of fiscal 2018 and less than \$1 million in the first six months of fiscal 2017. Cabot reviews the adequacy of the reserves as circumstances change at individual sites and adjusts the reserves as appropriate. Almost all of Cabot's environmental issues relate to sites that are mature and have been investigated and studied and, in many cases, are subject to agreed upon remediation plans. However, depending on the results of future testing, changes in risk assessment practices, remediation techniques and regulatory requirements, newly discovered conditions, and other factors, it is reasonably possible that the Company could incur additional costs in excess of environmental reserves currently recorded. Management estimates, based on the latest available information, that any such future environmental remediation costs that are reasonably possible to be in excess of amounts already recorded would be immaterial to the Company's consolidated financial statements.

Respirator Liabilities

Cabot has exposure in connection with a safety respiratory products business that a subsidiary acquired from American Optical Corporation ("AO") in an April 1990 asset purchase transaction. The subsidiary manufactured respirators under the AO brand and disposed of that business in July 1995. In connection with its acquisition of the business, the subsidiary agreed, in certain circumstances, to assume a portion of AO's liabilities, including costs of legal fees together with amounts paid in settlements and judgments, allocable to AO respiratory products used prior to the 1990 purchase by the Cabot subsidiary. In exchange for the subsidiary's assumption of certain of AO's respirator liabilities, AO agreed to provide to the subsidiary the benefits of: (i) AO's insurance coverage for the period prior to the 1990 acquisition and (ii) a former owner's indemnity of AO holding it harmless from any liability allocable to AO respiratory products used prior to May 1982. As more fully described in the 2017 10-K, the respirator liabilities generally involve claims for personal injury, including asbestosis, silicosis and coal worker's pneumoconiosis, allegedly resulting from the use of respirators that are alleged to have been negligently designed and/or labeled. Neither Cabot, nor its past or present subsidiaries, at any time manufactured asbestos or asbestos-containing products. At no time did this respiratory product line represent a significant portion of the respirator market.

As of March 31, 2018 and September 30, 2017, there were approximately 36,000 and 37,000 claimants, respectively, in pending cases asserting claims against AO in connection with respiratory products. Cabot has a reserve to cover its expected share of liability for existing and future respirator liability claims. At March 31, 2018 and September 30, 2017, the reserve was \$17 million and \$18 million, respectively. The Company made payments related to its respirator liability of \$1 million and \$2 million in the first six months of fiscal 2018 and fiscal 2017, respectively.

The Company's current estimate of the cost of its share of existing and future respirator liability claims is based on facts and circumstances existing at this time. Developments that could affect the Company's estimate include, but are not limited to, (i) significant changes in the number of future claims, (ii) changes in the rate of dismissals without payment of pending claims, (iii) significant changes in the average cost of resolving claims, (iv) significant changes in the legal costs of defending these claims, (v) changes in the nature of claims received, (vi) changes in the law and procedure applicable to these claims, (vii) the financial viability of other parties that contribute to the settlement of respirator claims, (viii) a change in the availability of insurance coverage maintained by certain of the other parties that contribute to the settlement of respirator claims, or the indemnity provided by a former owner of the business, (ix) changes in the allocation of costs among the various parties paying legal and settlement costs, and (x) a determination that the assumptions that were used to estimate Cabot's share of liability are no longer reasonable. The Company cannot determine the impact of these potential developments on its current estimate of its share of liability for existing and future claims. Accordingly, the actual amount of these liabilities for existing and future claims could be different than the reserved amount.

Other Matters

The Company has various other lawsuits, claims and contingent liabilities arising in the ordinary course of its business and with respect to its divested businesses. The Company does not believe that any of these matters will have a material adverse effect on its financial position; however, litigation is inherently unpredictable. Cabot could incur judgments, enter into settlements or revise its expectations regarding the outcome of certain matters, and such developments could have a material impact on its results of operations in the period in which the amounts are accrued or its cash flows in the period in which the amounts are paid.

J. Income Tax

Effective Tax Rate

	Three Months Ended March 31		Six Months Ended March 31	
	2018	2017	2018	2017
	(Dollars in millions)			
(Provision) benefit for income taxes	\$ 7	\$ 1	\$ (198)	\$ (17)
Effective tax rate	4%	(1)%	(248)%	11%

For the three and six months ended March 31, 2018, the tax (provision) benefit included a net discrete tax benefit of \$26 million and a net discrete tax expense of \$162 million, respectively, of which net tax expenses of \$4 million and \$189 million, respectively, comprised the impact of the Act. The amounts for the three and six month periods also included a net tax benefit of \$30 million associated with the Purification Solutions goodwill and long-lived assets impairment charges. For both the three and six months ended March 31, 2017, the tax provision included a net discrete tax benefit of \$20 million, primarily associated with the generation of excess foreign tax credits upon repatriation of previously taxed foreign earnings.

Tax Reform

On December 22, 2017, the U.S. enacted significant changes to federal income tax law affecting the Company, including a permanent reduction of the U.S. corporate income tax rate from 35% to 21%, effective January 1, 2018. Cabot expects that these changes will positively impact the Company's future after-tax earnings in the U.S., primarily due to the lower federal statutory tax rate and the establishment of a full participation exemption regime for foreign earnings. In transitioning to this new full participation exemption regime for foreign earnings, Cabot is subject to a one-time tax for the deemed repatriation of certain foreign earnings. A discussion of certain provisions of the Act and the Company's preliminary assessment of the impact of such provisions on its consolidated financial statements is set forth below.

Uncertain Impacts of the Act

The accounting standard for income taxes ("ASC 740") required the Company to recognize the effect of the tax law changes under the Act in the first quarter of fiscal 2018. However, due to the potential uncertainty or diversity of views in accounting for the impact of the Act, the Securities and Exchange Commission staff issued Staff Accounting Bulletin 118 ("SAB 118") to address the application of U.S. GAAP in situations where a registrant does not have the necessary information available, prepared, or analyzed (including computations) in reasonable detail to complete the accounting for certain income tax effects of the Act.

In particular, SAB 118 clarified that the impact of the Act must be accounted for and reported in one of three ways: (1) by reflecting the tax effects of the Act for which the accounting is complete; (2) by reporting provisional amounts for those specific income tax effects of the Act for which the accounting is incomplete but a reasonable estimate can be determined, with such provisional amounts (or adjustments to provisional amounts) identified in the measurement period, as defined therein, being included as an adjustment to tax expense or benefit from continuing operations in the period the amounts are determined; or (3) where the income tax effects cannot be reasonably estimated, no provisional amounts should be reported and the registrant should continue to apply ASC 740 based on the provisions of the tax laws that were in effect immediately prior to the enactment of the Act. The measurement period begins in the reporting period that includes the Act's enactment date and ends when the accounting has been completed, but not beyond one year from the enactment date.

Due to various uncertainties as described below, the Company has not completed its accounting for certain tax impacts of the Act. However, as provided in SAB 118, reasonable estimates, including any adjustments to the estimates made during the first quarter of fiscal 2018, have been made and recorded as provisional amounts in its financial results for the second quarter of fiscal 2018. A discussion of the material impacts of tax law changes under the Act for which the accounting is incomplete follows:

- **Revaluation of Deferred Tax Assets:** Due to the Company's September 30 fiscal year-end, the reduction in the corporate tax rate to 21% effective January 1, 2018 will apply on a pro-rata basis for fiscal 2018, resulting in a U.S. federal statutory tax rate of 24.53% for the fiscal year. The reduction requires the Company to revalue its deferred tax assets and liabilities to account for the future financial impact of these amounts.

As of March 31, 2018, the accounting for this item was incomplete. Additional information is necessary in order to complete the accounting for this item, including: (1) further analysis regarding the impact of the reduced rate on the reversal of deferred tax assets and liabilities for the full fiscal 2018 at the pro-rata rate, and (2) the true-up of deferred tax assets and liabilities upon the filing of the U.S. income tax return for fiscal 2017. However, the Company has recorded a total provisional tax expense of \$17 million related to the impact of the rate change on deferred tax balances, of which \$13 million was recorded in the first quarter of fiscal 2018 and \$4 million was recorded in the second quarter of fiscal 2018. The additional provisional adjustment recorded in the second quarter was primarily associated with the Purification Solutions goodwill and long-lived assets impairment charges.

- **Deemed Repatriation:** In general, the Act provides that U.S. shareholders of a “specified foreign corporation”, as defined in the Act, must include in U.S. taxable income its pro-rata share of certain undistributed and previously untaxed post-1986 foreign earnings and profits (“E&P”). The amount of E&P taken into account is the amount determined either as of November 2, 2017 or December 31, 2017, whichever is greater. This inclusion is offset by a deduction that results in an effective U.S. federal income tax rate of either 15.5% or 8%. The 15.5% rate applies to the “aggregate cash position”, as defined in the Act, of the specified foreign corporations and the 8% rate applies to the extent that the income inclusion exceeds the aggregate cash position. The aggregate cash position is determined as the cash position either as of September 30, 2018, or the average of September 30, 2016 and September 30, 2017, whichever is greater. Finally, the U.S. cash tax impact of the deemed repatriation inclusion may be offset by the utilization of foreign tax credits, which are pro-rated to reflect the deduction described above.

As of March 31, 2018, the accounting for this item is incomplete. Significant additional information will need to be obtained and analyzed in order to complete the accounting for this item. This includes: (1) the determination of the full fiscal 2018 E&P and foreign tax credits of the specified foreign corporations; (2) the true-up of the pre-fiscal 2018 E&P and foreign tax credits of the specified foreign corporations upon the filing of the U.S. income tax return for fiscal 2017 (tax year 2016); (3) establishing the appropriate foreign exchange rate for the full fiscal year 2018 used to translate foreign taxes; (4) clarification of the state income tax impact of the repatriation, including guidance from states in which Cabot has a taxable presence on the extent to which the state will conform with the provisions of the Act, as well as determination of the apportionment of the Company’s income for the full fiscal year 2018; (5) uncertainty as to which of the alternative aggregate cash position measurement dates will apply to the Company; and (6) further guidance from the U.S. Treasury Department on the interpretation and application of the rules.

In the absence of such additional information, Cabot has made a reasonable estimate of the financial impact of this item. The Company recorded a provisional charge of \$149 million during the first quarter of fiscal 2018 to the (Provision) benefit for income taxes for deemed repatriation. No adjustment has been made to this provisional amount for the second quarter of fiscal 2018. This amount is expected to be a fully non-cash charge due to the Company’s existing tax attributes.

- **Deferred Tax Liability on Unremitted Earnings:** In addition to the deemed repatriation of foreign earnings, going forward, the Act effectively establishes a participation exemption system of taxation that, in general, provides a 100% deduction for dividends from specified foreign corporations. However, the Company is still required to provide non-U.S. withholding taxes, as well as other potential tax impacts, on undistributed earnings of non-U.S. subsidiaries that it does not consider to be indefinitely reinvested.

As of March 31, 2018, the accounting for this item is incomplete. Additional information necessary to complete the accounting includes: (1) finalization of U.S. previously taxed income resulting from the deemed repatriation of foreign earnings; (2) further analysis of the amount of distributable reserves, including treatment thereof under local law, available in various non-U.S. subsidiaries; (3) clarification of the state income tax impact of unremitted earnings that are not indefinitely reinvested; and (4) evolving interpretations of the U.S. GAAP rules applicable to the Act. As a result of the Act, the Company has made certain changes to its indefinite reinvestment assertion and has made a reasonable estimate of the financial impact of this item. The Company recorded a provisional amount of \$23 million during the first quarter of fiscal 2018 to its tax expense for this item. No adjustment has been made to this provisional amount for the second quarter of fiscal 2018.

The Company will continue to evaluate the impact of the Act on its business and consolidated financial statements and will make any further adjustments to its provisional amounts in subsequent reporting periods upon obtaining, preparing or analyzing additional information affecting the income tax effects initially reported as a provisional amount.

Accounting for the Global Intangible Low-Taxed Income Tax

Under the Act, Cabot may be subject to a tax on global intangible low-taxed income (“GILTI”) in future years. In general, GILTI is a 10.5% tax on foreign income in excess of a deemed return on tangible assets of foreign corporations. This tax is effective for taxable years beginning after December 31, 2017. The Company has not yet adopted an accounting policy with respect to whether (i) to recognize deferred taxes for temporary differences (including outside basis differences) expected to reverse as GILTI or (ii) to recognize these temporary differences as period costs if and when incurred.

Other Material Provisions of the Act Effective in Future Periods

The Act also contains a number of other provisions that may have a material financial impact on the Company in the future. These include base erosion anti-abuse tax, foreign derived intangible income and the interest expense limitation under Internal Revenue Code section 163(j). These tax law changes apply only to tax years beginning after December 31, 2017. Therefore, the Company has not and will not record any amounts related to these items in its fiscal 2018 financial results.

Uncertainties

Cabot and certain subsidiaries are under audit in a number of jurisdictions. In addition, certain statutes of limitations are scheduled to expire in the near future. It is reasonably possible that a further change in the unrecognized tax benefits may also occur within the next twelve months related to the settlement of one or more of these audits or the lapse of applicable statutes of limitations. However, an estimated range of the impact on the unrecognized tax benefits cannot be quantified at this time.

Cabot files U.S. federal and state and non-U.S. income tax returns in jurisdictions with varying statutes of limitations. The 2014 through 2015 tax years generally remain subject to examination by the United States Internal Revenue Service and various tax years from 2005 through 2015 remain subject to examination by the respective state tax authorities. In significant non-U.S. jurisdictions, various tax years from 2002 through 2016 remain subject to examination by their respective tax authorities. As of December 31, 2017, Cabot’s significant non-U.S. jurisdictions include Canada, China, France, Germany, Italy, Japan, and the Netherlands.

During the three and six months ended March 31, 2018, Cabot released uncertain tax positions of less than \$1 million and \$2 million, respectively, due to the expirations of statutes of limitations in various jurisdictions. During the three and six months ended March 31, 2017, Cabot released uncertain tax positions of \$1 million and \$3 million, respectively, due to the expirations of statutes of limitations in various jurisdictions.

K. Earnings Per Share

The following tables summarize the components of the basic and diluted earnings (loss) per common share ("EPS") computations:

	Three Months Ended March 31		Six Months Ended March 31	
	2018	2017	2018	2017
(In millions, except per share amounts)				
Basic EPS:				
Net income (loss) attributable to Cabot Corporation	\$ (173)	\$ 74	\$ (295)	\$ 129
Less: Undistributed earnings allocated to participating securities ⁽¹⁾	—	1	—	1
Earnings (loss) allocated to common shareholders (numerator)	<u>\$ (173)</u>	<u>\$ 73</u>	<u>\$ (295)</u>	<u>\$ 128</u>
Weighted average common shares and participating securities outstanding	62.6	62.9	62.5	62.8
Less: Participating securities ⁽¹⁾	<u>0.8</u>	<u>0.5</u>	<u>0.7</u>	<u>0.5</u>
Adjusted weighted average common shares (denominator)	<u>61.8</u>	<u>62.4</u>	<u>61.8</u>	<u>62.3</u>
Earnings (loss) per common share - basic:	\$ (2.80)	\$ 1.19	\$ (4.78)	\$ 2.06
Diluted EPS:				
Earnings (loss) allocated to common shareholders	\$ (173)	\$ 73	\$ (295)	\$ 128
Plus: Earnings (loss) allocated to participating securities	—	1	—	1
Less: Adjusted earnings allocated to participating securities ⁽²⁾	—	1	—	1
Earnings (loss) allocated to common shareholders (numerator)	<u>\$ (173)</u>	<u>\$ 73</u>	<u>\$ (295)</u>	<u>\$ 128</u>
Adjusted weighted average common shares outstanding	61.8	62.4	61.8	62.3
Effect of dilutive securities:				
Common shares issuable ⁽³⁾	<u>—</u>	<u>0.4</u>	<u>—</u>	<u>0.5</u>
Adjusted weighted average common shares (denominator)	<u>61.8</u>	<u>62.8</u>	<u>61.8</u>	<u>62.8</u>
Earnings (loss) per common share - diluted:	\$ (2.80)	\$ 1.19	\$ (4.78)	\$ 2.05

(1) Participating securities consist of shares underlying outstanding and achieved performance-based restricted stock units issued during and after fiscal 2017 and all unvested time-based restricted stock units.

Undistributed earnings are the earnings which remain after dividends declared during the period are assumed to be distributed to the common and participating shareholders. Undistributed earnings are allocated to common and participating shareholders on the same basis as dividend distributions. The calculation of undistributed earnings is as follows:

	Three Months Ended March 31		Six Months Ended March 31	
	2018	2017	2018	2017
(In millions)				
Calculation of undistributed earnings (loss):				
Net income (loss) attributable to Cabot Corporation	\$ (173)	\$ 74	\$ (295)	\$ 129
Less: Dividends declared on common stock	19	19	39	38
Undistributed earnings (loss)	<u>\$ (192)</u>	<u>\$ 55</u>	<u>\$ (334)</u>	<u>\$ 91</u>
Allocation of undistributed earnings (loss):				
Undistributed earnings (loss) allocated to common shareholders	\$ (192)	\$ 54	\$ (334)	\$ 90
Undistributed earnings (loss) allocated to participating shareholders	—	1	—	1
Undistributed earnings (loss)	<u>\$ (192)</u>	<u>\$ 55</u>	<u>\$ (334)</u>	<u>\$ 91</u>

- (2) Undistributed earnings are adjusted for the assumed distribution of dividends to the dilutive securities, which are described in (3) below, and then reallocated to participating securities.
- (3) Represents incremental shares of common stock from the (i) assumed exercise of stock options issued under Cabot's equity incentive plans; (ii) assumed issuance of shares to employees pursuant to the Company's Deferred Compensation and Supplemental Retirement Plan; and (iii) assumed issuance of shares for outstanding and achieved performance-based restricted stock unit awards issued before fiscal 2017 under Cabot's equity incentive plans using the treasury stock method. For the three and six months ended March 31, 2018, 827,223 and 773,357 incremental shares of common stock, respectively, were excluded from the calculation of diluted earnings per share because the inclusion of these shares would have been antidilutive. For the three and six months ended March 31, 2017, 272,588 and 224,266 incremental shares of common stock, respectively, were excluded from the calculation of diluted earnings per share because the inclusion of these shares would have been antidilutive.

L. Restructuring

Cabot's restructuring activities were recorded in the Consolidated Statements of Operations in the three and six months ended March 31, 2018 and 2017 as follows:

	Three Months Ended March 31		Six Months Ended March 31	
	2018	2017	2018	2017
(In millions)				
Cost of sales	\$ (10)	\$ 2	\$ (9)	\$ 2
Selling and administrative expenses	1	—	1	—
Total	<u>\$ (9)</u>	<u>\$ 2</u>	<u>\$ (8)</u>	<u>\$ 2</u>

Details of all restructuring activities and the related reserves during the three and six months ended March 31, 2018 were as follows:

	Severance and Employee Benefits	Environmental Remediation	Asset Sales	Asset Impairment and Accelerated Depreciation	Other	Total
	(In millions)					
Reserve at September 30, 2017	\$ 1	\$ 2	\$ —	\$ —	\$ —	\$ 3
Charges	—	—	—	—	1	1
Accrual for refundable land deposit	—	—	(4)	—	—	(4)
Cash received (paid)	—	—	4	—	(1)	3
Reserve at December 31, 2017	\$ 1	\$ 2	\$ —	\$ —	\$ —	\$ 3
Charges (gain)	1	—	(11)	1	—	(9)
Costs charged against assets / (liabilities)	—	—	2	(1)	—	1
Cash received	(1)	—	9	—	—	8
Reserve at March 31, 2018	\$ 1	\$ 2	\$ —	\$ —	\$ —	\$ 3

Cabot's severance and employee benefit reserves and other closure related reserves are reflected in Accounts payable and accrued liabilities on the Company's Consolidated Balance Sheets. Cabot's environmental remediation reserves related to restructuring activities are reflected in Other liabilities on the Company's Consolidated Balance Sheets.

Marshall, Texas Plan

In October 2017, Cabot indefinitely idled three of the seven production units at its activated carbon manufacturing facility in Marshall, Texas. The decision, affecting approximately 40 local employees, was driven by the need to better match the business' production capacity and cost structure with the current demand for powdered activated carbon in North America. Total costs related to this plan are expected to be approximately \$8 million, comprised of approximately \$8 million of non-cash accelerated depreciation costs and less than \$1 million of severance costs. The Company recorded charges of approximately \$1 million in the six months ended March 31, 2018, comprised mainly of accelerated depreciation charges. The Company anticipates charges related to these actions of approximately \$1 million in the remainder of fiscal 2018 and approximately \$7 million thereafter.

2016 Plan

In October 2015, in response to challenging macroeconomic conditions, the Company announced its intention to restructure its operations subject to local consultation requirements and processes in certain locations. Cabot's plan resulted in the termination of employment for approximately 300 employees across the Company's global locations.

Most of the charges and cash outlays related to this plan were recorded in fiscal 2016. The Company recorded pre-tax cash charges related to plan of approximately \$1 million in the first six months of both fiscal 2018 and 2017, and expects to record approximately \$1 million of cash charges in the remainder of fiscal 2018. The charges recorded and anticipated are comprised of severance, employee benefits and other transition costs. As of March 31, 2018, Cabot has less than \$1 million of accrued severance charges in the Consolidated Balance Sheets related to these actions.

Additionally, in fiscal 2016 Cabot closed its carbon black manufacturing facility in Merak, Indonesia to consolidate production in Asia using the Company's Cilegon, Indonesia and other Asian and global carbon black production sites to meet regional demand. The decision was driven by the financial performance at the Merak facility in the years preceding the closure. Manufacturing operations ceased at the end of January 2016.

The Company completed the sale of the land in Merak on which the facility was located in the second quarter of fiscal 2018. The Company received a refundable deposit of \$4 million of cash in the first quarter of fiscal 2018, which was recorded in Accounts payable and accrued liabilities on the Consolidated Balance Sheets as of December 31, 2017. An additional payment of approximately \$9 million was received in the second quarter of fiscal 2018, resulting in a net gain of approximately \$11 million. The Company recorded net charges of less than \$1 million in the six months ended March 31, 2017 primarily for site clearing and demolition costs related to the Merak closure.

As of March 31, 2018, Cabot has less than \$1 million of accrued severance costs in the Consolidated Balance Sheets related to the Merak facility closure.

Other Actions

Cabot has recorded approximately \$1 million of severance charges in the six months ended March 31, 2018, nearly all of which has been paid in the second quarter of fiscal 2018.

Additionally, in previous years, the Company entered into other various restructuring actions that have been substantially completed, other than the sale of land rights in Thane, India and environmental remediation activities in Berre, France that remain to be completed.

Cabot expects to pay approximately \$2 million related to these remediation activities in the remainder of fiscal 2018 and thereafter, mainly for accrued environmental and other closure related costs. As of March 31, 2018, Cabot has approximately \$2 million of accrued environmental costs and less than \$1 million of accrued severance costs in the Consolidated Balance Sheets related to these actions.

M. Financial Instruments and Fair Value Measurements

The FASB authoritative guidance on fair value measurements defines fair value, provides a framework for measuring fair value, and requires certain disclosures about fair value measurements. The required disclosures focus on the inputs used to measure fair value. The guidance establishes the following hierarchy for categorizing these inputs:

- Level 1 — Quoted market prices in active markets for identical assets or liabilities
- Level 2 — Significant other observable inputs (e.g., quoted prices for similar items in active markets, quoted prices for identical or similar items in markets that are not active, inputs other than quoted prices that are observable such as interest rate and yield curves, and market-corroborated inputs)
- Level 3 — Significant unobservable inputs

There were no transfers of financial assets or liabilities measured at fair value between Level 1 and Level 2 and there were no Level 3 investments during the first six months of either fiscal 2018 or 2017.

At March 31, 2018 and September 30, 2017, Cabot had derivatives relating to foreign currency risks carried at fair value. At March 31, 2018 and September 30, 2017, the fair value of these derivatives was a net liability of \$28 million and \$13 million, respectively, and was included in Prepaid expenses and other current assets and Other liabilities on the Consolidated Balance Sheets. These derivatives are classified as Level 2 instruments within the fair value hierarchy as the fair value determination was based on observable inputs.

At both March 31, 2018 and September 30, 2017, the fair value of guaranteed investment contracts, included in Other assets on the Consolidated Balance Sheets, was \$12 million. Guaranteed investment contracts were classified as Level 2 instruments within the fair value hierarchy as the fair value determination was based on other observable inputs.

At March 31, 2018 and September 30, 2017, the fair values of cash and cash equivalents, accounts and notes receivable, accounts payable and accrued liabilities, and notes payable and variable rate debt approximated their carrying values due to the short-term nature of these instruments. Both the carrying value and fair value of the long-term fixed rate debt were \$0.66 billion as of March 31, 2018. The carrying value and fair value of the long-term fixed rate debt were \$0.91 billion and \$0.94 billion, respectively, as of September 30, 2017. The fair values of Cabot's fixed rate long-term debt are estimated based on comparable quoted market prices at the respective period ends. The carrying amounts of Cabot's floating rate long-term debt and capital lease obligations approximate their fair values. All such measurements are based on observable inputs and are classified as Level 2 within the fair value hierarchy. The valuation technique used is the discounted cash flow model.

N. Derivatives

Foreign Currency Risk Management

Cabot's international operations are subject to certain risks, including currency exchange rate fluctuations and government actions. Cabot endeavors to match the currency in which debt is issued to the currency of the Company's major, stable cash receipts. In some situations, Cabot has issued debt denominated in U.S. dollars and then entered into cross-currency swaps that exchange the dollar principal and interest payments into Euro denominated principal and interest payments.

Additionally, the Company has foreign currency exposure arising from its net investments in foreign operations. Cabot may enter into cross-currency swaps to mitigate the impact of currency rate changes on the Company's net investments.

The Company also has foreign currency exposure arising from the denomination of monetary assets and liabilities in foreign currencies other than the functional currency of a given subsidiary as well as the risk that currency fluctuations could affect the dollar value of future cash flows generated in foreign currencies. Accordingly, Cabot uses short-term forward contracts to minimize the exposure to foreign currency risk. In certain situations where the Company has forecasted purchases under a long-term commitment or forecasted sales denominated in a foreign currency, Cabot may enter into appropriate financial instruments in accordance with the Company's risk management policy to hedge future cash flow exposures.

The following table provides details of the derivatives held as of March 31, 2018 and September 30, 2017 to manage foreign currency risk.

Description	Borrowing	Notional Amount		Hedge Designation
		March 31, 2018	September 30, 2017	
Cross-Currency Swaps	3.4% Notes	USD 250 million swapped to EUR 223 million	USD 250 million swapped to EUR 223 million	Net investment
Forward Foreign Currency Contracts ⁽¹⁾	N/A	USD 2 million	USD 5 million	No designation

(1) Cabot's forward foreign exchange contracts are denominated in the Indonesian rupiah and Czech koruna.

Accounting for Derivative Instruments and Hedging Activities

The Company determines the fair value of financial instruments using quoted market prices whenever available. When quoted market prices are not available for various types of financial instruments (such as forwards, options and swaps), the Company uses standard models with market-based inputs, which take into account the present value of estimated future cash flows and the ability of Cabot or the financial counterparty to perform. For interest rate and cross-currency swaps, the significant inputs to these models are interest rate curves for discounting future cash flows and are adjusted for credit risk. For forward foreign currency contracts, the significant inputs are interest rate curves for discounting future cash flows, and exchange rate curves of the foreign currency for translating future cash flows.

Fair Value Hedge

For derivative instruments that are designated and qualify as fair value hedges, the gain or loss on the derivative as well as the offsetting gain or loss on the hedged item attributable to the hedged risk are recognized in current period earnings.

Cash Flow Hedge

For derivative instruments that are designated and qualify as cash flow hedges, the effective portion of the gain or loss on the derivative is recorded in AOCI and reclassified to earnings in the same period or periods during which the hedged transaction affects earnings. Gains and losses on the derivative representing either hedge ineffectiveness or hedge components excluded from the assessment of effectiveness are recognized in current period earnings.

Net Investment Hedge

For net investment hedges, changes in the fair value of the effective portion of the derivatives' gains or losses are reported as foreign currency translation gains or losses in AOCI while changes in the ineffective portion are reported in earnings. Effectiveness is assessed based on the hypothetical derivative method. The gains or losses on derivative instruments reported in AOCI are reclassified to earnings in the period in which earnings are affected by the underlying item, such as a disposal or substantial liquidations of the entities being hedged. Effective October 1, 2017, the Company elected to de-designate its existing net investment hedge instruments in which hedge effectiveness was assessed using the method based on changes in forward exchange rates and re-designate the net investment hedges in which hedge effectiveness will be assessed using the method based on changes in spot exchange rates.

The Company has cross-currency swaps with a notional amount of \$250 million, which are designated as hedges of its net investments in certain Euro denominated subsidiaries. Cash settlements occur semi-annually on March 15th and September 15th for fixed rate interest payments and a cash exchange of the notional currency amount will occur at the end of the term in 2026. During the second quarter of both fiscal 2018 and 2017, the Company received net cash interest of \$2 million. As of March 31, 2018, the fair value of these swaps was a net liability of \$28 million and was included in Prepaid expenses and other current assets and Other liabilities and the cumulative loss of \$24 million was included in AOCI on the Consolidated Balance Sheets. As of September 30, 2017, the fair value of these swaps was a net liability of \$13 million and was included in Prepaid expenses and other current assets and Other Liabilities and the cumulative loss of \$9 million was included in AOCI on the Consolidated Balance Sheets.

The following tables summarize the impact of the cross-currency swaps to AOCI and the Consolidated Statements of Operations:

Description	Three Months Ended March 31							
	2018		2017		2018		2017	
	Gain/(Loss) Recognized in AOCI		(Gain)/Loss Reclassified from AOCI into Interest Expense in the Consolidated Statements of Operations		(Gain)/Loss Recognized in Interest Expense in the Consolidated Statements of Operations (Amount Excluded from Effectiveness Testing)			
	(In millions)							
Cross-currency swaps (1)	\$	(8)	\$	(1)	\$	(1)	\$	—

Description	Six Months Ended March 31							
	2018		2017		2018		2017	
	Gain/(Loss) Recognized in AOCI		(Gain)/Loss Reclassified from AOCI into Interest Expense in the Consolidated Statements of Operations		(Gain)/Loss Recognized in Interest Expense in the Consolidated Statements of Operations (Amount Excluded from Effectiveness Testing)			
	(In millions)							
Cross-currency swaps (1)	\$	(13)	\$	(8)	\$	(2)	\$	—

(1) As noted above, effective October 1, 2017, the Company changed the method it uses to assess effectiveness from the method based on changes in forward exchange rates, in which all gains/losses were recognized in AOCI, to the method based on changes in spot exchange rates.

Other Derivative Instruments

From time to time, the Company may enter into certain derivative instruments that may not be designated as hedges for accounting purposes, which may include cross-currency swaps, foreign currency forward contracts and commodity derivatives. For cross-currency swaps and foreign currency forward contracts not designated as hedges, the Company uses standard models with market-based inputs. The significant inputs to these models are interest rate curves for discounting future cash flows, and exchange rate curves of the foreign currency for translating future cash flows. In determining the fair value of the commodity derivatives, the significant inputs to valuation models are quoted market prices of similar instruments in active markets. Although these derivatives do not qualify for hedge accounting, Cabot believes that such instruments are closely correlated with the underlying exposure, thus managing the associated risk. The gains or losses from changes in the fair value of derivative instruments that are not accounted for as hedges are recognized in current period earnings.

At March 31, 2018 and September 30, 2017, the fair value of derivative instruments not designated as hedges were immaterial, and were presented in Accounts payable and accrued liabilities, and Prepaid expenses and other current assets, respectively, on the Consolidated Balance Sheets.

O. Venezuela

Cabot owns 49% of a carbon black operating affiliate in Venezuela, which is accounted for as an equity affiliate, through wholly-owned subsidiaries that carry the investment and receive its dividends. As of March 31, 2018, these subsidiaries carried the operating affiliate investment of \$13 million.

During the six months ended March 31, 2018 and 2017, the Company received dividends in the amounts of \$3 million and \$2 million, respectively, which were paid in U.S. dollars.

A significant portion of the Company's operating affiliate's sales are exports denominated in U.S. dollars. The Venezuelan government mandates that a certain percentage of the dollars collected from these sales be converted into bolivars. The exchange rates made available to the Company as of March 31, 2018 and September 30, 2017 were 49,478 bolivars and 3,345 bolivars to the U.S. dollar, respectively. This exchange rate devaluation had an immaterial impact on the Company's results.

The operating entity has generally been profitable. The Company continues to closely monitor developments in Venezuela and their potential impact on the recoverability of its equity affiliate investment. Any future change in the exchange rate made available to the Company could cause the Company to change the exchange rate it uses and result in gains or losses on the bolivar denominated assets held by its operating affiliate and wholly-owned subsidiaries.

P. Financial Information by Segment

The Company identifies a business as an operating segment if: (i) it engages in business activities from which it may earn revenues and incur expenses; (ii) its operating results are regularly reviewed by the Chief Operating Decision Maker (“CODM”), who is Cabot’s President and Chief Executive Officer, to make decisions about resources to be allocated to the segment and assess its performance; and (iii) it has available discrete financial information. The Company has determined that all of its businesses are operating segments. The CODM reviews financial information at the operating segment level to allocate resources and to assess the operating results and financial performance for each operating segment. Operating segments are aggregated into a reportable segment if the operating segments are determined to have similar economic characteristics and if the operating segments are similar in the following areas: (i) nature of products and services; (ii) nature of production processes; (iii) type or class of customer for their products and services; (iv) methods used to distribute the products or provide services; and (v) if applicable, the nature of the regulatory environment.

The Company has four reportable segments: Reinforcement Materials, Performance Chemicals, Purification Solutions and Specialty Fluids.

The Reinforcement Materials segment represents the rubber blacks and elastomer composites product lines.

The Performance Chemicals segment combines the specialty carbons and compounds and inkjet colorants product lines into the Specialty Carbons and Formulations business, and combines the fumed metal oxides and aerogel product lines into the Metal Oxides business. These businesses are similar in terms of economic characteristics, nature of products, processes, customer class and product distribution methods, and, therefore, have been aggregated into one reportable segment. The net sales from each of these businesses for the three and six months ended March 31, 2018 and 2017 were as follows:

	Three Months Ended March 31		Six Months Ended March 31	
	2018	2017	2018	2017
	(In millions)			
Specialty Carbons and Formulations	\$ 193	\$ 162	\$ 353	\$ 300
Metal Oxides	75	66	144	133
Total Performance Chemicals	<u>\$ 268</u>	<u>\$ 228</u>	<u>\$ 497</u>	<u>\$ 433</u>

The Purification Solutions segment represents the Company’s activated carbon business and the Specialty Fluids segment includes cesium formate oil and gas drilling fluids and high-purity fine cesium chemicals product lines.

Income (loss) from continuing operations before income taxes (“Segment EBIT”) is presented for each reportable segment in the table below. Segment EBIT excludes certain items, meaning items management does not consider representative of on-going operating segment results. In addition, Segment EBIT includes Equity in earnings of affiliated companies, net of tax, the full operating results of a contractual joint venture in Purification Solutions, royalties, Net income attributable to noncontrolling interests, net of tax, and discounting charges for certain Notes receivable, but excludes Interest expense, foreign currency transaction gains and losses, interest income, dividend income, unearned revenue, general unallocated expense and unallocated corporate costs.

Financial information by reportable segment is as follows:

	Reinforcement Materials	Performance Chemicals	Purification Solutions	Specialty Fluids	Segment Total	Unallocated and Other ⁽¹⁾	Consolidated Total
(In millions)							
Three Months Ended March 31, 2018							
Revenues from external customers ⁽²⁾	\$ 454	\$ 268	\$ 66	\$ 6	\$ 794	\$ 24	\$ 818
Income (loss) from continuing operations before income taxes ⁽³⁾	\$ 79	\$ 57	\$ (6)	\$ (3)	\$ 127	\$ (298)	\$ (171)
Three Months Ended March 31, 2017							
Revenues from external customers ⁽²⁾	\$ 352	\$ 228	\$ 67	\$ 7	\$ 654	\$ 24	\$ 678
Income (loss) from continuing operations before income taxes ⁽³⁾	\$ 54	\$ 51	\$ 2	\$ —	\$ 107	\$ (29)	\$ 78
Six Months Ended March 31, 2018							
Revenues from external customers ⁽²⁾	\$ 841	\$ 497	\$ 136	\$ 12	\$ 1,486	\$ 52	\$ 1,538
Income (loss) from continuing operations before income taxes ⁽³⁾	\$ 141	\$ 104	\$ —	\$ (5)	\$ 240	\$ (319)	\$ (79)
Six Months Ended March 31, 2017							
Revenues from external customers ⁽²⁾	\$ 647	\$ 433	\$ 136	\$ 18	\$ 1,234	\$ 55	\$ 1,289
Income (loss) from continuing operations before income taxes ⁽³⁾	\$ 94	\$ 100	\$ 6	\$ 2	\$ 202	\$ (49)	\$ 153

(1) Unallocated and Other includes certain items and eliminations necessary to reflect management's reporting of operating segment results. These items are reflective of the segment reporting presented to the CODM.

(2) Consolidated Total Revenues from external customers reconciles to Net sales and other operating revenues on the Consolidated Statement of Operations. Revenues from external customers that are categorized as Unallocated and Other reflects royalties, external shipping and handling fees, the impact of unearned revenue, the removal of 100% of the sales of an equity method affiliate and discounting charges for certain Notes receivable. Details are provided in the table below:

	Three Months Ended March 31		Six Months Ended March 31	
	2018	2017	2018	2017
(In millions)				
Royalties, the impact of unearned revenue, the removal of 100% of the sales of an equity method affiliate and discounting charges for certain notes receivable	\$ (9)	\$ (6)	\$ (8)	\$ (2)
Shipping and handling fees	33	30	60	57
Total	\$ 24	\$ 24	\$ 52	\$ 55

- (3) Consolidated Total Income (loss) from continuing operations before income taxes reconciles to Income (loss) from continuing operations before income taxes and equity in earnings of affiliated companies on the Consolidated Statement of Operations. Income (loss) from continuing operations before income taxes that are categorized as Unallocated and Other includes:

	Three Months Ended March 31		Six Months Ended March 31	
	2018	2017	2018	2017
	(In millions)			
Interest expense	\$ (14)	\$ (13)	\$ (27)	\$ (26)
Certain items (a)				
Purification Solutions goodwill and long-lived assets impairment charge	(254)	—	(254)	—
Inventory reserve adjustment	(13)	—	(13)	—
Global restructuring activities	9	(2)	8	(2)
Legal and environmental matters and reserves	(5)	2	(6)	2
Acquisition and integration-related charges	(1)	—	(1)	—
Gains (losses) on sale of investments	—	—	10	—
Other	—	—	(1)	—
Total certain items, pre-tax	(264)	—	(257)	—
Unallocated corporate costs(b)	(16)	(14)	(30)	(26)
General unallocated income (expense)(c)	(3)	(1)	(3)	6
Less: Equity in earnings of affiliated companies, net of tax(d)	1	1	2	3
Total	\$ (298)	\$ (29)	\$ (319)	\$ (49)

- (a) Certain items are items of expense and income that management does not consider representative of the Company's fundamental on-going segment results and they are, therefore, excluded from Segment EBIT.
- (b) Unallocated corporate costs are costs that are not controlled by the segments and primarily benefit corporate interests.
- (c) General unallocated income (expense) consists of gains (losses) arising from foreign currency transactions, net of other foreign currency risk management activities, the profit or loss related to the corporate adjustment for unearned revenue, and the impact of including the full operating results of a contractual joint venture in Purification Solutions Segment EBIT. Fiscal 2017 amounts have been recast to reflect the retrospective application of the Company's election to change its inventory valuation method of accounting for its U.S. carbon black inventories from the LIFO method to the FIFO method, which resulted in a decrease in General unallocated income (expense) of \$2 million for the six months ended March 31, 2017.
- (d) Equity in earnings of affiliated companies, net of tax, is included in Segment EBIT and is removed in Unallocated and other to reconcile to Income (loss) from operations before income taxes and equity in earnings from affiliated companies.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

Critical Accounting Policies

Our consolidated financial statements have been prepared in conformity with accounting policies generally accepted in the United States ("GAAP"). The preparation of our financial statements requires management to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues, and expenses and related disclosure of contingent assets and liabilities. We consider an accounting estimate to be critical to the financial statements if (i) the estimate is complex in nature or requires a high degree of judgment and (ii) different estimates and assumptions were used, the results could have a material impact on the consolidated financial statements. On an ongoing basis, we evaluate our estimates and the application of our policies. We base our estimates on historical experience, current conditions and on various other assumptions that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates. Our critical accounting policies have not substantially changed from those described in the 2017 Form 10-K, other than our method for accounting for U.S. carbon black inventories which we changed effective October 1, 2017, as described below. We have updated the discussion of the Inventory Valuation, Intangible Asset and Goodwill Impairment, and Long-lived Assets Impairment policies included below to reflect recent events.

Inventory Valuation

Effective October 1, 2017, we changed our method of accounting for U.S. carbon black inventories from the LIFO method to the FIFO method. Total U.S. inventories accounted for utilizing the LIFO cost flow assumption represented 7% of total worldwide inventories as of September 30, 2017 prior to this change in method. We believe the FIFO method is preferable because it: (i) conforms the accounting for U.S. carbon black inventories to the inventory valuation methodology for the majority of our other inventories; (ii) better represents how management assesses and reports on the performance of the Reinforcement Materials and Performance Chemicals operating segments that carry U.S. carbon black inventories, as the impact of accounting for this inventory on a LIFO basis has historically been excluded from segment results; (iii) better aligns the accounting for U.S. carbon black inventories with the physical flow of that inventory; and (iv) improves comparability with many of our peers. We applied this change retrospectively to all prior periods presented for which details are presented in Note B of our Notes to the Consolidated Financial Statements ("Note B").

The cost of Specialty Fluids inventories that are classified as assets held for rent is determined using the average cost method. The cost of all other inventories is determined using the FIFO method.

We periodically review inventory for both potential obsolescence and potential declines in anticipated selling prices. In this review, we make assumptions about the future demand for and market value of the inventory, and based on these assumptions estimate the amount of any obsolete, unmarketable, slow moving or overvalued inventory. We write down the value of our inventories by an amount equal to the difference between the cost of the inventory and its estimated net realizable value. Historically, such write-downs have not been material. If actual market conditions are less favorable than those projected by management at the time of the assessment, however, additional inventory write-downs may be required, which could reduce our gross profit and our earnings.

Intangible Assets and Goodwill Impairment

We record tangible and intangible assets acquired and liabilities assumed in business combinations under the acquisition method of accounting. Amounts paid for an acquisition are allocated to the assets acquired and liabilities assumed based on their fair values at the date of acquisition. We use assumptions and estimates in determining the fair value of assets acquired and liabilities assumed in a business combination. The determination of the fair value of intangible assets requires the use of significant judgment with regard to assumptions used in the valuation model. We estimate the fair value of identifiable acquisition-related intangible assets principally based on projections of cash flows that will arise from these assets. The projected cash flows are discounted to determine the fair value of the assets at the dates of acquisition.

Definite-lived intangible assets, which are comprised of trademarks, customer relationships and developed technologies, are amortized over their estimated useful lives and are reviewed for impairment when indication of potential impairment exists, such as a significant reduction in cash flows associated with the assets. As discussed in Note C of our Notes to the Consolidated Financial Statements, we acquired Tech Blend in November 2017, and the preliminary purchase price allocation included separately identifiable intangible assets of \$29 million.

Goodwill is comprised of the purchase price of business acquisitions in excess of the fair value assigned to the net tangible and identifiable intangible assets acquired. Goodwill is not amortized, but is reviewed for impairment annually as of May 31, or when events or changes in the business environment indicate that the carrying value of the reporting unit may exceed its fair value. A reporting unit, for the purpose of the impairment test, is at or below the operating segment level, and constitutes a business for which discrete financial information is available and regularly reviewed by segment management. As part of the Tech Blend acquisition, goodwill of \$33 million was generated and is reflected in the Specialty Compounds reporting unit. The other reporting units with goodwill balances are Reinforcement Materials and Fumed Metal Oxides. The separate businesses included within Performance Chemicals are considered separate reporting units. As such, the goodwill balance relative to Performance Chemicals is recorded in the Fumed Metal Oxides and Specialty Compounds reporting units.

Based on our most recent annual goodwill impairment test performed as of May 31, 2017, the fair values of the Reinforcement Materials and Fumed Metal Oxides reporting units were substantially in excess of their carrying values. The fair value of the Purification Solutions reporting unit exceeded its carrying amount by 13%. In the second quarter of fiscal 2018, we determined that it was more likely than not that the carrying value of the Purification Solutions reporting unit exceeded its fair value. Accordingly, we performed the quantitative goodwill impairment test. Refer to Note E of our Notes to the Consolidated Financial Statements ("Note E") for details on the Purification Solutions goodwill impairment test and the resulting impairment charge recorded.

For the purpose of the goodwill impairment test, we first assess qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If an initial qualitative assessment identifies that it is more likely than not that the carrying value of a reporting unit exceeds its estimated fair value, an additional quantitative evaluation is performed. Alternatively, we may elect to proceed directly to the quantitative goodwill impairment test. If based on the quantitative evaluation the fair value of the reporting unit is less than its carrying amount, a goodwill impairment loss would result. The goodwill impairment loss would be the amount by which the carrying value of the reporting unit, including goodwill, exceeds its fair value, limited to the total amount of goodwill allocated to that reporting unit. The fair value of a reporting unit is based on discounted estimated future cash flows. The fair value is also benchmarked against a market approach using the guideline public companies method. The assumptions used to estimate fair value include management's best estimates of future growth rates, operating cash flows, capital expenditures and discount rates over an estimate of the remaining operating period at the reporting unit level.

Long-lived Assets Impairment

Our long-lived assets primarily include property, plant and equipment, intangible assets, long-term investments and assets held for rent. The carrying values of long-lived assets are reviewed for impairment whenever events or changes in business circumstances indicate that the carrying amount of an asset may not be recoverable.

To test for impairment of assets, we generally use a probability-weighted estimate of the future undiscounted net cash flows of the assets over their remaining lives to determine if the value of the asset is recoverable. Long-lived assets are grouped with other assets and liabilities at the lowest level for which independent identifiable cash flows are determinable.

An asset impairment is recognized when the carrying value of the asset is not recoverable based on the analysis described above, in which case the asset is written down to its fair value. If the asset does not have a readily determinable market value, a discounted cash flow model may be used to determine the fair value of the asset. In circumstances when an asset does not have separately identifiable cash flows, an impairment charge is recorded when we no longer intend to use the asset. In the second quarter of fiscal 2018, we determined that the long-lived asset group of Purification Solutions was not recoverable. Accordingly, we recorded an impairment charge for the carrying value in excess of the fair value of the asset group. Refer to Note E regarding the results of the recoverability test performed on the long-lived assets of the Purification Solutions segment and the resulting impairment charge recorded.

Results of Operations

Cabot is organized into four reportable business segments: Reinforcement Materials, Performance Chemicals, Purification Solutions and Specialty Fluids. Cabot is also organized for operational purposes into three geographic regions: the Americas; Europe, Middle East and Africa; and Asia Pacific. The discussions of our results of operations for the periods presented reflect these structures.

Our analysis of our financial condition and operating results should be read with our consolidated financial statements and accompanying notes.

Definition of Terms and Non-GAAP Financial Measures

When discussing our results of operations, we use several terms as described below.

The term “product mix” refers to the mix of types and grades of products sold or the mix of geographic regions where products are sold, and the positive or negative impact this has on the revenue or profitability of the business and/or segment.

Our discussion under the heading “(Provision) Benefit for Income Taxes and Reconciliation of Effective Tax Rate to Operating Tax Rate” includes a discussion of our “effective tax rate” and our “operating tax rate” and includes a reconciliation of the two rates. Our operating tax rate is a non-GAAP financial measure and should not be considered as an alternative to our effective tax rate, the most comparable GAAP financial measure. In calculating our operating tax rate, we exclude discrete tax items, which include: (i) unusual or infrequent items, such as a significant release or establishment of a valuation allowance, (ii) items related to uncertain tax positions, such as the tax impact of audit settlements, interest on tax reserves, and the release of tax reserves from the expiration of statutes of limitations, and (iii) other discrete tax items, such as the tax impact of legislative changes and, on a quarterly basis, the timing of losses in certain jurisdictions and the cumulative rate adjustment, if applicable. We also exclude the tax impact of certain items, as defined below in the discussion of Total segment EBIT, on both operating income and the tax provision. Our definition of the operating tax rate may not be comparable to the definition used by other companies. Management believes that this non-GAAP financial measure is useful supplemental information because it helps our investors compare our tax rate year to year on a consistent basis and to understand what our tax rate on current operations would be without the impact of these items.

Our discussion under the heading “Second Quarter and First Six Months of Fiscal 2018 versus Second Quarter and First Six Months of Fiscal 2017—By Business Segment” includes a discussion of Total segment EBIT, which is a non-GAAP financial measure defined as Income (loss) from continuing operations before income taxes and equity in earnings from affiliated companies less certain items and other unallocated items. Our Chief Operating Decision Maker, who is our President and Chief Executive Officer, uses segment EBIT to evaluate the operating results of each segment and to allocate resources to the segments. We believe Total segment EBIT, which reflects the sum of EBIT from our four reportable segments, provides useful supplemental information for our investors as it is an important indicator of our operational strength and performance, allows investors to see our results through the eyes of management, and provides context for our discussion of individual business segment performance. Total segment EBIT should not be considered an alternative for Income (loss) from continuing operations before income taxes and equity in earnings of affiliated companies, which is the most directly comparable GAAP financial measure. A reconciliation of Total segment EBIT to Income (loss) from continuing operations before income taxes and equity in earnings of affiliated companies is provided under the heading “Second Quarter of Fiscal 2018 versus Second Quarter of Fiscal 2017—By Business Segment”. Investors should consider the limitations associated with this non-GAAP measure, including the potential lack of comparability of this measure from one company to another.

In calculating Total segment EBIT, we exclude from our Income (loss) from continuing operations before income taxes and equity in earnings of affiliated companies (i) items of expense and income that management does not consider representative of our fundamental on-going segment results, which we refer to as “certain items”, and (ii) items that, because they are not controlled by the business segments and primarily benefit corporate objectives, are not allocated to our business segments, such as interest expense and other corporate costs, which include unallocated corporate overhead expenses such as certain corporate salaries and headquarter expenses, plus costs related to special projects and initiatives, which we refer to as “other unallocated items”. Management believes excluding the items identified as certain items facilitates operating performance comparisons from period to period by eliminating differences caused by the existence and timing of certain expense and income items that would not otherwise be apparent on a GAAP basis and also facilitates an evaluation of our operating performance without the impact of these costs or benefits. The items of income and expense that we have excluded from Total segment EBIT, as applicable, but that are included in our GAAP Income (loss) from continuing operations before income taxes and equity in earnings of affiliated companies, as applicable, are described below.

- Asset impairment charges, which primarily include charges associated with an impairment of goodwill or other long-lived assets.
- Inventory reserve adjustment, which resulted from an evaluation performed as part of an impairment analysis.
- Global restructuring activities, which include costs or benefits associated with cost reduction initiatives or plant closures and are primarily related to (i) employee termination costs, (ii) asset impairment charges associated with restructuring actions, (iii) costs to close facilities, including environmental costs and contract termination penalties and (iv) gains realized on the sale of land or equipment associated with restructured plants or locations.
- Acquisition and integration-related charges, which include transaction costs, redundant costs incurred during the period of integration, and costs associated with transitioning certain management and business processes to our processes.

- Legal and environmental reserves and matters, which consist of costs or benefits for matters typically related to former businesses or that are otherwise incurred outside of the ordinary course of business.
- Gains (losses) on sale of investments, which primarily relate to the sale of investments accounted for using the cost method.
- Non-recurring gains (losses) on foreign exchange, which primarily relate to the impact of controlled currency devaluations on our net monetary assets denominated in that currency.
- Executive transition costs, which include incremental charges, including stock compensation charges, associated with the retirement or termination of employment of senior executives of the Company.

Overview

During the second quarter of fiscal 2018, Income (loss) from continuing operations before income taxes and equity in earnings of affiliated companies decreased compared to the second quarter of fiscal 2017 due to after-tax impairment charges of \$224 million related to the assets of our Purification Solutions segment, partially offset by higher unit margins in the Reinforcement Materials segment from favorable spot pricing in Asia and the impact from calendar year 2018 tire customer agreements.

Second Quarter of Fiscal 2018 versus Second Quarter of Fiscal 2017—Consolidated

Net Sales and Other Operating Revenues and Gross Profit

	Three Months Ended March 31		Six Months Ended March 31	
	2018	2017	2018	2017
	(In millions)			
Net sales and other operating revenues	\$ 818	\$ 678	\$ 1,538	\$ 1,289
Gross profit	\$ 190	\$ 169	\$ 368	\$ 328

The \$140 million increase in net sales in the second quarter of fiscal 2018 compared to the second quarter of fiscal 2017 was driven by a more favorable price and product mix (combined \$93 million) predominantly in Reinforcement Materials and the favorable impact from foreign currency translation (\$42 million). For the first six months of fiscal 2018, net sales increased \$249 million compared to the first six months of fiscal 2017 primarily due to a more favorable price and product mix (\$173 million) predominantly in Reinforcement Materials, the favorable impact from foreign currency translation (\$55 million) and higher volumes (\$24 million). The higher volumes were driven by the Reinforcement Materials and Performance Chemicals segments (combined \$37 million) and were partially offset by Purification Solutions and Specialty Fluids (combined \$13 million).

Gross profit increased by \$21 million in the second quarter of fiscal 2018 compared to the second quarter of fiscal 2017, primarily due to higher unit margins in Reinforcement Materials, the favorable impact from foreign currency translation and the favorable impact from changing inventory levels, partially offset by higher fixed costs. For the first six months of fiscal 2017, gross profit increased by \$40 million primarily due to higher unit margins in Reinforcement Materials and the favorable impact from foreign currency translation, partially offset by higher fixed costs.

Selling and Administrative Expenses

	Three Months Ended March 31		Six Months Ended March 31	
	2018	2017	2018	2017
	(In millions)			
Selling and administrative expenses	\$ 78	\$ 65	\$ 147	\$ 128

Selling and administrative expenses increased by \$13 million and \$19 million in the second quarter and first six months of fiscal 2018 compared to the same periods of fiscal 2017, primarily due to ongoing Corporate projects and higher incentive compensation accruals.

Research and Technical Expenses

	Three Months Ended March 31		Six Months Ended March 31	
	2018	2017	2018	2017
	(In millions)			
Research and technical expenses	\$ 16	\$ 14	\$ 31	\$ 26

Research and technical expenses increased by \$2 million in the second quarter of fiscal 2018 and \$5 million in the first six months of fiscal 2018 compared to the same periods of fiscal 2017, primarily due to higher spending on growth projects across the Company.

Interest and Dividend Income, Interest Expense and Other Income (Expense)

	Three Months Ended March 31		Six Months Ended March 31	
	2018	2017	2018	2017
	(In millions)			
Interest and dividend income	\$ 3	\$ 2	\$ 6	\$ 4
Interest expense	\$ (14)	\$ (13)	\$ (27)	\$ (26)
Other income (expense)	\$ (2)	\$ (1)	\$ 6	\$ 1

Interest and dividend income increased by \$1 million in the second quarter of fiscal 2018 and \$2 million for the first six months of fiscal 2018 compared to the same periods of fiscal 2017 due to interest earned on higher cash balances.

Interest expense increased by \$1 million in the second quarter of fiscal 2018 and the first six months of fiscal 2018 compared to the same periods in fiscal 2017 primarily due to higher commercial paper debt balances and higher interest rates.

Other income (expense) changed by \$1 million in the second quarter of fiscal 2018 compared to the second quarter of fiscal 2017, primarily due to the unfavorable comparison of foreign currency movements. Other income (expense) changed by \$5 million in the first six months of fiscal 2018 compared to the same period of fiscal 2017 primarily due to the realized gain on the sale of cost-method investments.

(Provision) Benefit for Income Taxes and Reconciliation of Effective Tax Rate to Operating Tax Rate

	Three Months Ended March 31		Six Months Ended March 31	
	2018	2017	2018	2017
	(Dollars in millions)			
(Provision) benefit for income taxes	\$ 7	\$ 1	\$ (198)	\$ (17)
Effective tax rate	4%	(1)%	(248)%	11%
Impact of discrete tax items ⁽¹⁾ :				
Unusual or infrequent items	(15)%	25%	238%	12%
Items related to uncertain tax positions	—%	(1)%	2%	1%
Other discrete tax items	—%	1%	—%	—%
Impact of certain items	32%	—%	29%	—%
Operating tax rate	21%	24%	21%	24%

(1) For the three and six months ended March 31, 2018, Impact of discrete tax items included a net discrete tax expense of \$5 million and \$190 million, respectively. For both the three and six months ended March 31, 2017, Impact of discrete tax items included a net discrete tax benefit of \$20 million. The nature of the discrete tax items for the periods ended March 31, 2018 and 2017 were as follows:

- (a) Unusual or infrequent items during the three and six months ended March 31, 2018 consisted of the net tax impacts resulting from the enactment of H.R. 1 (the "Act") as discussed further below and in the discussion under the heading "Tax Reform" in Note J of our Notes to the Consolidated Financial Statements ("Note J") (net tax expenses of \$4 million and \$189 million, respectively), foreign exchange (gain)/loss on the re-measurement of a deferred tax liability, as well as impacts related to stock compensation deductions. Additionally, unusual or infrequent items during the three and six months ended March 31, 2018 and 2017 included the tax impact of excludible foreign exchange gains and losses in certain jurisdictions. Unusual or infrequent items during the three and six months ended March 31, 2017 included a tax benefit associated with the generation of excess foreign tax credits upon repatriation of previously taxed foreign earnings, partially offset by charges for the accrual of U.S. tax on certain foreign earnings of prior years;
- (b) Items related to uncertain tax positions during the three and six months ended March 31, 2018 and 2017 included net tax benefits from the reversal of accruals for uncertain tax positions due to the expiration of statutes of limitations and the settlement of tax audits, the accrual of interest on uncertain tax positions, and, for fiscal 2018 only, the refinement of the accrual for existing uncertain tax positions;
- (c) Other discrete tax items during the three and six months ended March 31, 2018 and 2017 included net tax impacts from various return to provision adjustments related to tax return filings and, for fiscal 2018 only, changes in non-U.S. tax laws and audit settlements.

For fiscal 2018, our expected operating tax rate is reconciled to our expected effective tax rate in the table below.

	Forecast for the Year Ended September 30, 2018
Effective tax rate	224%
Impact of discrete tax items:	
Unusual or infrequent items	(180)%
Items related to uncertain tax positions	(1)%
Other discrete tax items	—%
Impact of certain items	(22)%
Operating tax rate	21%

We file U.S. federal and state and non-U.S. income tax returns in jurisdictions with varying statutes of limitations. We are under audit in a number of jurisdictions. It is possible that some of these audits will be resolved in fiscal 2018 and could impact our anticipated effective tax rate. We have filed our tax returns in accordance with the tax laws, in all material respects, in each jurisdiction and maintain tax reserves for uncertain tax positions.

Tax Reform

On December 22, 2017, the U.S. enacted significant changes to federal income tax law affecting us, including a permanent reduction of the U.S. corporate income tax rate from 35% to 21%, effective January 1, 2018. We expect that these changes will positively impact our future after-tax earnings in the U.S., primarily due to the lower federal statutory tax rate and the establishment of a full participation exemption regime for foreign earnings. In transitioning to this new full participation exemption regime for foreign earnings, we are subject to a one-time tax for the deemed repatriation of certain foreign earnings. Refer to the discussion under the heading "Tax Reform" in Note J.

Equity in Earnings of Affiliated Companies and Net Income (Loss) Attributable to Noncontrolling Interests

	Three Months Ended March 31		Six Months Ended March 31	
	2018	2017	2018	2017
	(In millions)			
Equity in earnings of affiliated companies, net of tax	\$ 1	\$ 1	\$ 2	\$ 3
Net income (loss) attributable to noncontrolling interests, net of tax	\$ 10	\$ 6	\$ 20	\$ 10

Equity in earnings of affiliated companies, net of tax remained consistent in the second quarter of fiscal 2018 compared to the same period of fiscal 2017. For the six months ended fiscal 2018, Equity in earnings of affiliated companies, net of tax decreased \$1 million compared to the same period of fiscal 2017, primarily due to lower earnings from our Venezuelan equity affiliate.

Net income (loss) attributable to noncontrolling interests, net of tax, increased \$4 million in the second quarter of fiscal 2018 and \$10 million for the first six months of fiscal 2018 as compared to the same periods of fiscal 2017, primarily due to the higher profitability of our joint ventures in China and the Czech Republic.

Net Income Attributable to Cabot Corporation

In the second quarter and first six months of fiscal 2018, we reported net income (loss) attributable to Cabot Corporation of (\$173) million and (\$295) million, respectively, or (\$2.80) and (\$4.78) per diluted common share, respectively. This compares to net income (loss) attributable to Cabot Corporation of \$74 million and \$129 million, respectively, or \$1.19 and \$2.05 per diluted common share, respectively, in the second quarter and first six months of fiscal 2017. The net loss for the fiscal 2018 year to date is due to a tax charge recorded of \$189 million in connection with the enactment of the Act, and the Purification Solutions asset impairment charge of \$224 million after-tax.

Second Quarter and First Six Months of Fiscal 2018 versus Second Quarter and First Six Months of Fiscal 2017—By Business Segment

Income (loss) from continuing operations before income taxes and equity in earnings of affiliated companies, certain items, other unallocated items, and Total segment EBIT for the three and six months ended March 31, 2018 and 2017 are set forth in the table below. The details of certain items and other unallocated items are shown below and in Note P of our Notes to the Consolidated Financial Statements.

	Three Months Ended March 31		Six Months Ended March 31	
	2018	2017	2018	2017
	(In millions)			
Income (loss) from continuing operations before income taxes and equity in earnings of affiliated companies	\$ (171)	\$ 78	\$ (79)	\$ 153
Less: Certain items	(264)	—	(257)	—
Less: Other unallocated items	(34)	(29)	(62)	(49)
Total segment EBIT	<u>\$ 127</u>	<u>\$ 107</u>	<u>\$ 240</u>	<u>\$ 202</u>

In the second quarter of fiscal 2018, Income (loss) from continuing operations before income taxes and equity in earnings of affiliated companies decreased by \$249 million due to the Purification Solutions asset impairment charge of \$254 million, as compared with the second quarter of fiscal 2017. Total segment EBIT increased by \$20 million when compared to the second quarter of fiscal 2017 primarily due to higher unit margins (\$32 million), a favorable impact from foreign currency translation (\$7 million) and the favorable impact from changing inventory levels (\$5 million), partially offset by higher fixed costs (\$21 million). Higher unit margins were primarily driven by calendar year 2018 customer agreement pricing and a strong spot pricing environment in Asia in Reinforcement Materials. The higher fixed costs were associated with our investments in growth initiatives and higher personnel costs.

In the first six months of fiscal 2018, Income (loss) from continuing operations before income taxes and equity in earnings of affiliated companies decreased by \$232 million due to Purification Solutions asset impairment charges totaling \$254 million, as compared with the first six months of 2017. Total segment EBIT increased by \$38 million when compared to the same period of fiscal 2017 primarily due to higher volumes (\$5 million) in Reinforcement Materials and Performance Chemicals, higher unit margins (\$50 million) and the favorable impact from foreign currency translation (\$9 million), partially offset by higher fixed costs (\$24 million). Higher unit margins were primarily driven by calendar year 2018 contract pricing and a strong spot pricing environment in Asia in Reinforcement Materials. The higher fixed costs were associated with our investments in growth initiatives and higher personnel costs.

Certain Items

Details of the certain items for the second quarter and first six months of fiscal 2018 are as follows:

	Three Months Ended March 31		Six Months Ended March 31	
	2018	2017	2018	2017
	(In millions)			
Purification Solutions goodwill and long-lived asset impairment charge (Note E)	\$ (254)	—	\$ (254)	—
Inventory reserve adjustment (Note E)	(13)	—	(13)	—
Global restructuring activities (Note L)	9	(2)	8	(2)
Legal and environmental matters and reserves (Note I)	(5)	2	(6)	2
Acquisition and integration-related charges (Note C)	(1)	—	(1)	—
Gains (losses) on sale of investments	—	—	10	—
Other	—	—	(1)	—
Total certain items, pre-tax	<u>(264)</u>	<u>—</u>	<u>(257)</u>	<u>—</u>
Tax-related certain items:				
Tax impact of certain items	32	—	30	—
Discrete tax items (Note J)	(5)	20	(190)	20
Total tax-related certain items	<u>27</u>	<u>20</u>	<u>(160)</u>	<u>20</u>
Total certain items, after tax	<u>\$ (237)</u>	<u>\$ 20</u>	<u>\$ (417)</u>	<u>\$ 20</u>

The tax impact of certain items is determined by (1) starting with the current and deferred income tax expense or benefit included in Net income (loss) attributable to Cabot Corporation, and (2) subtracting the tax expense or benefit on “adjusted earnings”. Adjusted earnings is defined as the pre-tax income attributable to Cabot Corporation excluding certain items. The tax expense or benefit on adjusted earnings is calculated by applying the operating tax rate, as defined under the heading “Definition of Terms and Non-GAAP Financial Measures”, to adjusted earnings.

Other Unallocated Items

	Three Months Ended March 31		Six Months Ended March 31	
	2018	2017	2018	2017
	(In millions)			
Interest expense	\$ (14)	\$ (13)	\$ (27)	\$ (26)
Unallocated corporate costs	(16)	(14)	(30)	(26)
General unallocated income (expense)	(3)	(1)	(3)	6
Less: Equity in earnings of affiliated companies, net of tax	1	1	2	3
Total other unallocated items	\$ (34)	\$ (29)	\$ (62)	\$ (49)

A discussion of items that we refer to as “other unallocated items” can be found under the heading “Definition of Terms and Non-GAAP Financial Measures”. The balances of unallocated corporate costs are primarily comprised of expenditures related to managing a public company that are not allocated to the segments and corporate business development costs related to ongoing corporate projects. The balances of General unallocated income (expense) consist of gains (losses) arising from foreign currency transactions, net of other foreign currency risk management activities, the profit or loss related to the corporate adjustment for unearned revenue, and the impact of including the full operating results of a contractual joint venture in Purification Solutions segment EBIT.

Total other unallocated items changed by \$5 million in the second quarter of fiscal 2018 as compared to the same period in fiscal 2017, primarily due to the unfavorable impact of foreign currency translation which is included in General unallocated income (expense) and an increase in Unallocated corporate costs for corporate projects.

Total other unallocated items changed by \$13 million in the first six months of fiscal 2018 as compared to the same period in fiscal 2017 primarily due to the unfavorable impact from the change in the deferred margin and the unfavorable impact of foreign currency translation, both of which are included in General unallocated income (expense) and an increase in Unallocated corporate costs for corporate projects.

Reinforcement Materials

Sales and EBIT for Reinforcement Materials for the second quarter and first six months of fiscal 2018 and fiscal 2017 were as follows:

	Three Months Ended March 31		Six Months Ended March 31	
	2018	2017	2018	2017
	(In millions)			
Reinforcement Materials Sales	\$ 454	\$ 352	\$ 841	\$ 647
Reinforcement Materials EBIT	\$ 79	\$ 54	\$ 141	\$ 94

Sales in Reinforcement Materials increased by \$102 million in the second quarter of fiscal 2018 compared to the same period of fiscal 2017, primarily due to a more favorable price and product mix (combined \$80 million) and a favorable impact from foreign currency translation (\$22 million). The favorable price and product mix impact was primarily due to price improvements in calendar year 2018 customer agreements and higher spot prices in Asia.

In the first six months of fiscal 2018, sales in Reinforcement Materials increased by \$194 million when compared to the first six months of fiscal 2017. The increase was principally driven by a more favorable price and product mix (combined \$158 million), the favorable impact from foreign currency translation (\$28 million) and higher volumes (\$9 million). The more favorable price and product mix impact was primarily due to higher spot pricing in Asia and favorable pricing related to calendar year 2018 customer agreements.

EBIT in Reinforcement Materials increased by \$25 million in the second quarter of fiscal 2018 compared to the same period of fiscal 2017, primarily due to higher unit margins (\$28 million), and the favorable impact from foreign currency translation (\$4 million), partially offset by higher fixed costs (\$10 million). Higher unit margins were driven by price improvements in calendar year 2018 customer agreements, a more favorable product mix, and spot pricing in Asia. The higher fixed costs were primarily due to higher utilities and personnel costs.

EBIT in Reinforcement Materials increased by \$47 million in the first six months of fiscal 2018 compared to the same period of fiscal 2017. The increase was principally driven by higher unit margins (\$49 million), higher volumes (\$4 million) and the favorable impact of foreign currency translation (\$5 million), partially offset by higher fixed costs (\$11 million). Higher unit margins were driven by price improvements in customer agreements and spot pricing in Asia. The higher fixed costs were primarily due to higher utilities and personnel costs.

Performance Chemicals

Sales and EBIT for Performance Chemicals for the second quarter and first six months of fiscal 2018 and fiscal 2017 were as follows:

	Three Months Ended March 31		Six Months Ended March 31	
	2018	2017	2018	2017
	(In millions)			
Specialty Carbons and Formulations Sales	\$ 193	\$ 162	\$ 353	\$ 300
Metal Oxides Sales	75	66	144	133
Performance Chemicals Sales	\$ 268	\$ 228	\$ 497	\$ 433
Performance Chemicals EBIT	\$ 57	\$ 51	\$ 104	\$ 100

Sales in Performance Chemicals increased by \$40 million in the second quarter of fiscal 2018 compared to the same period of fiscal 2017, primarily due to higher volumes (\$12 million), a favorable impact from foreign currency translation (\$16 million) and a more favorable price and product mix (combined \$12 million). The favorable price and product mix was primarily due to increased pricing achieved for both Specialty Carbons and Formulations and Metal Oxides sales.

In the first six months of fiscal 2018, sales in Performance Chemicals increased by \$64 million when compared to the same period of fiscal 2017. The increase was primarily due to higher volumes (\$28 million), a favorable price and product mix (combined \$15 million) and the favorable impact of foreign currency translation (\$21 million). Higher volumes were primarily related to the Specialty Carbons and Formulations business in Europe, China and North America.

EBIT in Performance Chemicals increased by \$6 million in the second quarter of fiscal 2018 compared to the same period of fiscal 2017, primarily due to higher volumes (\$3 million), higher unit margins (\$7 million), a favorable impact from changing inventory levels (\$4 million) and a favorable impact from foreign currency translation (\$4 million), partially offset by higher fixed costs (\$12 million). Higher unit margins were driven by price increases and a more favorable product mix while higher fixed costs were primarily driven by increased spending on maintenance and selling and administrative costs related to growth initiatives.

EBIT in Performance Chemicals increased by \$4 million in the first six months of fiscal 2018 when compared to the same period of fiscal 2017 principally due to higher unit margins (\$6 million), higher volumes (\$10 million) and the favorable impact of foreign currency translation (\$5 million), partially offset by higher fixed costs (\$17 million). Higher volumes were primarily related to the Specialty Carbons and Formulations business in Europe, China and North America. Higher fixed costs were primarily due to increased maintenance costs and selling and administrative costs related to growth initiatives.

Purification Solutions

Sales and EBIT for Purification Solutions for the second quarter and first six months of fiscal 2018 and fiscal 2017 were as follows:

	Three Months Ended March 31		Six Months Ended March 31	
	2018	2017	2018	2017
	(In millions)			
Purification Solutions Sales	\$ 66	\$ 67	\$ 136	\$ 136
Purification Solutions EBIT	\$ (6)	\$ 2	\$ —	\$ 6

Sales in Purification Solutions decreased by \$1 million in the second quarter of fiscal 2018 compared to the same period of fiscal 2017 due to lower volumes (\$6 million), partially offset by a favorable impact from foreign currency translation (\$4 million). Sales in Purification Solutions remained consistent in the first six months of fiscal 2018 when compared to the same period of fiscal 2017. Volume decreases (\$5 million) during the first six months of fiscal 2018 were offset by the favorable impact from foreign currency translation (\$6 million).

EBIT in Purification Solutions decreased by \$8 million in the second quarter of fiscal 2018 compared to the same period of fiscal 2017, primarily due to lower volumes (\$3 million), lower unit margins (\$4 million) and the unfavorable impact from foreign currency translation (\$1 million). EBIT in Purification Solutions decreased by \$6 million in the first six months of fiscal 2018 when compared to the same period of fiscal 2017 due to lower volumes (\$2 million), lower unit margins (\$5 million), the unfavorable impact of inventory comparisons (\$2 million) and the unfavorable impact of foreign currency translation (\$1 million), partially offset by lower fixed costs (\$5 million). The lower volumes and lower unit margins for both the second quarter and first six months of fiscal 2018 were primarily due to ongoing competitive pressures within the mercury removal application.

Specialty Fluids

Sales and EBIT for Specialty Fluids for the second quarter and first six months of fiscal 2018 and 2017 were as follows:

	Three Months Ended March 31		Six Months Ended March 31	
	2018	2017	2018	2017
	(In millions)			
Specialty Fluids Sales	\$ 6	\$ 7	\$ 12	\$ 18
Specialty Fluid EBIT	\$ (3)	\$ —	\$ (5)	\$ 2

Sales in Specialty Fluids decreased by \$1 million in the second quarter of fiscal 2018 and \$6 million in the first six months of fiscal 2018 compared to the same periods of fiscal 2017 primarily due to lower volumes from reduced project activity.

EBIT in Specialty Fluids decreased by \$3 million in the second quarter of fiscal 2018 and \$7 million in the first six months of fiscal 2018 compared to the same periods of fiscal 2017 primarily due to lower volumes from reduced project activity.

Outlook

Looking ahead, we anticipate that Reinforcement Materials will continue to benefit from strong execution in a favorable market environment. In Performance Chemicals, we expect to maintain our margins while we drive volume growth through the second half of the year. Although the ongoing competitive pressures will continue to impact results in the Purification Solutions segment, we expect higher seasonal volumes and lower variable costs in the second half of the year. Longer term, we will continue to explore strategic alternatives for our Purification Solutions business to maximize value for our shareholders. In the meantime, we will remain focused on regaining volumes in the mercury removal application, growing volumes in our specialty applications, and looking for opportunities to reduce costs and tightly manage capital for this business. In the Specialty Fluids segment, we are expecting the startup of drilling activity on previously awarded projects to drive improved results in the remainder of the year.

Cash Flows and Liquidity

Overview

Our liquidity position, as measured by cash and cash equivalents plus borrowing availability, decreased by \$359 million during the first six months of fiscal 2018, which was attributable to a lower cash balance and lower borrowing availability under our revolving line of credit. As of March 31, 2018, we had cash and cash equivalents of \$179 million and borrowing availability under our revolving credit agreement of \$742 million. Our revolving credit agreement supports our commercial paper program and may be used for working capital, letters of credit and other general corporate purposes. During the second quarter of fiscal 2018, we repaid \$250 million of 2.55% fixed rate debt that matured on January 15, 2018 using a combination of foreign cash and commercial paper borrowings.

At March 31, 2018, we were in compliance with all covenants under our revolving credit facility, including the total consolidated debt to consolidated EBITDA (earnings before interest, taxes, depreciation and amortization) covenant.

A significant portion of our business occurs outside the U.S. and our cash generation does not always align geographically with our cash needs. The vast majority of our cash and cash equivalent holdings tend to be held outside the U.S. Cash held by foreign subsidiaries is generally used to finance the subsidiaries' operational activities and future investments. We use commercial paper throughout the year to manage short-term U.S. cash needs. The commercial paper balance is generally paid down at quarter-end using cash derived from customer collections, settlement of intercompany balances and short-term intercompany loans. The balance of commercial paper outstanding as of March 31, 2018 was \$258 million. In the unusual event that additional funds are needed in the U.S., we have the ability to repatriate additional funds.

We do not expect Tax Reform, discussed in more detail in Note J, to have a material impact on our liquidity position due to our existing tax attributes. We are evaluating the impact of tax reform on our opportunities to repatriate some portion of our foreign cash balances to the U.S.

We generally manage our cash and debt on a global basis to provide for working capital requirements as needed by region or site. Cash and debt are generally denominated in the local currency of the subsidiary holding the assets or liabilities, except where there are operational cash flow reasons to hold non-functional currency or debt.

We anticipate sufficient liquidity from (i) cash on hand; (ii) cash flows from operating activities; and (iii) cash available from our revolving credit agreement and our commercial paper program to meet our operational and capital investment needs and financial obligations for the foreseeable future. The liquidity we derive from cash flows from operations is, to a large degree, predicated on our ability to collect our receivables in a timely manner, the cost of our raw materials, and our ability to manage inventory levels.

We issued \$30 million of 7.42% medium term notes in fiscal 1999 that mature on December 11, 2018 and are included in Current portion of long-term debt on the Consolidated Balance Sheets as of March 31, 2018. We intend to pay off these notes at maturity with cash on hand and/or commercial paper borrowings.

The following discussion of the changes in our cash balance refers to the various sections of our Consolidated Statements of Cash Flows.

Cash Flows from Operating Activities

Cash provided by operating activities, which consists of net income adjusted for the various non-cash items included in income, changes in working capital and changes in certain other balance sheet accounts, totaled \$81 million in the first six months of fiscal 2018 compared to \$58 million during the same period of fiscal 2017.

Cash provided by operating activities in the first six months of fiscal 2018 was driven primarily by the non-cash impacts of the impairment of the assets and goodwill of the Purification Solutions business of \$162 million and \$92 million, respectively, depreciation and amortization of \$79 million and an increase in our deferred tax provision of \$157 million, which more than offset our net loss. In addition, there was an increase in Accounts payable and accrued liabilities. Partially offsetting these cash inflows was an increase in Accounts and notes receivable and Inventories.

Cash provided by operating activities in the first six months of fiscal 2017 was driven primarily by net income excluding the non-cash impact of depreciation and amortization of \$76 million. In addition, there was an increase in accounts payable and accrued liabilities. Partially offsetting these cash inflows was an increase in accounts and notes receivable, inventories, and deferred tax benefits.

Cash Flows from Investing Activities

In the six months ended March 31, 2018, investing activities consumed \$157 million of cash, which was primarily driven by \$64 million of cash paid for our acquisition of Tech Blend, net of cash acquired of \$1 million, and capital expenditures of \$109 million. These capital expenditures were for sustaining and compliance capital projects at our operating facilities as well as expansion capital expenditures. In the six months ended March 31, 2017, investing activities consumed \$47 million of cash which was primarily driven by capital expenditures of \$45 million. These capital expenditures were primarily for sustaining and compliance capital projects at our operating facilities.

Capital expenditures for fiscal 2018 are expected to be approximately \$250 million. Our planned capital spending program for fiscal 2018 is primarily for sustaining, compliance and improvement capital projects at our operating facilities as well as expansion capital expenditures, primarily for the construction of our fumed silica manufacturing plants in Carrollton, Kentucky and Wuhai, China.

Cash Flows from Financing Activities

Financing activities consumed \$51 million of cash in the first six months of fiscal 2018 compared to \$42 million of cash consumed in the first six months of fiscal 2017. In the first six months of fiscal 2018, financing activities consisted of share repurchases and dividend payments to stockholders as well as the repayment of our \$250 million of 2.55% fixed rate debt, which was offset by proceeds from the issuance of commercial paper. In the first six months of fiscal 2017, financing activities consisted of share repurchases and dividend payments to stockholders.

Purchase Commitments

We have entered into long-term purchase agreements primarily for the purchase of raw materials. Under certain of these agreements the quantity of material being purchased is fixed, but the price paid changes as market prices change. For those commitments, the amounts included in the table below are based on market prices at March 31, 2018, which may differ from actual market prices at the time of purchase.

	Payments Due by Fiscal Year						Total
	Remainder of Fiscal 2018	2019	2020	2021	2022	Thereafter	
				(In millions)			
Reinforcement Materials	\$ 159	\$ 289	\$ 173	\$ 136	\$ 136	\$ 1,947	\$ 2,840
Performance Chemicals	34	63	58	57	57	482	751
Purification Solutions	4	7	7	1	—	—	19
Total	<u>\$ 197</u>	<u>\$ 359</u>	<u>\$ 238</u>	<u>\$ 194</u>	<u>\$ 193</u>	<u>\$ 2,429</u>	<u>\$ 3,610</u>

Off-Balance Sheet Arrangements

As of March 31, 2018, we had no material transactions that meet the definition of an off-balance sheet arrangement.

Forward-Looking Information

This report on Form 10-Q contains “forward-looking statements” under the Federal securities laws. These forward-looking statements address expectations or projections about the future, including our expectations for future financial performance; demand for our products; the amount and timing of the charge to earnings we will record and the cash outlays we will make in connection with the closing of certain manufacturing facilities and restructuring initiatives; our estimated future amortization expenses for our intangible assets; the sufficiency of our cash on hand, cash provided from operations and cash available under our credit facilities to fund our cash requirements, including for the repayment of the current portion of our long-term debt; uses of available cash including anticipated capital spending and future cash outlays associated with long-term contractual obligations; the impact we expect tax reform legislation in the U.S. to have on our future after-tax earnings and liquidity position, and our expected tax rate for fiscal 2018; and the possible outcome of legal and environmental proceedings. From time to time, we also provide forward-looking statements in other materials we release to the public and in oral statements made by authorized officers.

Forward-looking statements are not guarantees of future performance and are subject to risks, uncertainties, potentially inaccurate assumptions, and other factors, some of which are beyond our control or difficult to predict. If known or unknown risks materialize, our actual results could differ materially from those expressed in the forward-looking statements.

In addition to factors described elsewhere in this report, the following are some of the factors that could cause our actual results to differ materially from those expressed in the forward-looking statements: changes in raw material costs; lower than expected demand for our products; changes in environmental requirements in the U.S.; the loss of one or more of our important customers; our inability to complete capacity expansions or other development projects; the availability of raw materials; our failure to develop new products or to keep pace with technological developments; fluctuations in currency exchange rates; patent rights of others; stock and credit market conditions; the timely commercialization of products under development (which may be disrupted or delayed by technical difficulties, market acceptance, competitors’ new products, as well as difficulties in moving from the experimental stage to the production stage); demand for our customers’ products; competitors’ reactions to market conditions; unanticipated disruptions or delays in plant operations or development projects; delays in the successful integration of structural changes, including acquisitions or joint ventures; severe weather events that cause business interruptions, including plant and power outages or disruptions in supplier or customer operations; the accuracy of the assumptions we used in establishing reserves for environmental matters and for our share of liability for respirator claims; and the outcome of pending litigation. Other factors and risks are discussed in our 2017 10-K.

Recently Issued Accounting Pronouncements

Refer to the discussion under the headings “Recently Adopted Accounting Standards” and “Recent Accounting Pronouncements” in Note B.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

Information about market risks for the period ended March 31, 2018 does not differ materially from that discussed under Item 7A of our 2017 10-K.

Item 4. Controls and Procedures

As of March 31, 2018, we carried out an evaluation, under the supervision and with the participation of our management, including our Principal Executive Officer and our Executive Vice President and Chief Financial Officer, of the effectiveness of our disclosure controls and procedures pursuant to Rule 13a-15 under the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Based upon that evaluation, our Principal Executive Officer and our Executive Vice President and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of that date.

There were no changes in our internal control over financial reporting that occurred during our fiscal quarter ended March 31, 2018 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Part II. Other Information

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

Issuer Purchases of Equity Securities

The table below sets forth information regarding Cabot's purchases of its equity securities during the quarter ended March 31, 2018:

<u>Period</u>	<u>Total Number of Shares Purchased⁽¹⁾⁽²⁾</u>	<u>Average Price Paid per Share</u>	<u>Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs⁽¹⁾</u>	<u>Maximum Number (or Approximate Dollar Value) of Shares that May Yet Be Purchased Under the Plans or Programs⁽¹⁾</u>
January 1, 2018 - January 31, 2018	—	\$ —	—	1,508,098
February 1, 2018 - February 28, 2018	—	\$ —	—	1,508,098
March 1, 2018 - March 31, 2018	—	\$ —	—	1,508,098
Total	—	—	—	—

(1) On January 13, 2015, the Company announced that the Board of Directors authorized us to repurchase up to five million shares of our common stock on the open market or in privately negotiated transactions. This authorization does not have a set expiration date.

(2) Total number of shares purchased does not include 8,308 shares withheld to pay taxes on the vesting of equity awards made under the company's equity incentive plans or to pay the exercise price of options exercised during the period.

Item 6. Exhibits

<u>Exhibit No.</u>	<u>Description</u>
Exhibit 3.1	Restated Certificate of Incorporation of Cabot Corporation effective January 9, 2009 (incorporated herein by reference to Exhibit 3.1 of Cabot's Quarterly Report on Form 10-Q for the quarterly period ended December 31, 2008, file reference 1-5667, filed with the SEC on February 9, 2009).
Exhibit 3.2	The By-laws of Cabot Corporation as amended January 8, 2016 (incorporated herein by reference to Exhibit 3.1 of Cabot Corporation's Quarterly Report on Form 10-Q for the quarterly period ended December 31, 2015, file reference 1-5667, filed with the SEC on February 5, 2016).
Exhibit 31.1*	Certification of Principal Executive Officer required by Rule 13a-14(a) or Rule 15d-14(a) of the Exchange Act.
Exhibit 31.2*	Certification of Principal Financial Officer required by Rule 13a-14(a) or Rule 15d-14(a) of the Exchange Act.
Exhibit 32**	Certifications of the Principal Executive Officer and the Principal Financial Officer pursuant to 18 U.S.C. Section 1350.
Exhibit 101.INS*	XBRL Instance Document.
Exhibit 101.SCH*	XBRL Taxonomy Extension Schema Document.
Exhibit 101.CAL*	XBRL Taxonomy Extension Calculation Linkbase Document.
Exhibit 101.DEF*	XBRL Taxonomy Extension Definition Linkbase Document.
Exhibit 101.LAB*	XBRL Taxonomy Extension Label Linkbase Document.
Exhibit 101.PRE*	XBRL Taxonomy Extension Presentation Linkbase Document.

* Filed herewith.

** Furnished herewith.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

CABOT CORPORATION

Date: May 9, 2018

By: _____
/s/ Eduardo E. Cordeiro
Eduardo E. Cordeiro
Executive Vice President and Chief Financial Officer
(Duly Authorized Officer)

Date: May 9, 2018

By: _____
/s/ James P. Kelly
James P. Kelly
Vice President and Controller
(Chief Accounting Officer)

Principal Executive Officer Certification

I, Sean D. Keohane, certify that:

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

Date: May 9, 2018

/s/ Sean D. Keohane

Sean D. Keohane
President and
Chief Executive Officer

Principal Financial Officer Certification

I, Eduardo E. Cordeiro, certify that:

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

Date: May 9, 2018

/s/ Eduardo E. Cordeiro

Eduardo E. Cordeiro
Executive Vice President and
Chief Financial Officer

**Certifications Pursuant to 18 U.S.C. Section 1350,
as Adopted Pursuant to Section 906 of the
Sarbanes-Oxley Act of 2002**

In connection with the filing of the Quarterly Report on Form 10-Q for the quarter ended March 31, 2018 (the "Report") by Cabot Corporation (the "Company"), each of the undersigned hereby certifies pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to his knowledge:

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

Date: May 9, 2018

/s/ Sean D. Keohane

Sean D. Keohane
President and Chief Executive Officer

Date: May 9, 2018

/s/ Eduardo E. Cordeiro

Eduardo E. Cordeiro
Executive Vice President and
Chief Financial Officer

