W R GRACE & CO
Form 10-Q
August 08, 2018

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-Q

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

For the Quarterly Period Ended June 30, 2018
or

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

Commission File Number 1-13953
W. R. GRACE & CO.
(Exact name of registrant as specified in its charter)

Delaware	65-0773649
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

7500 Grace Drive, Columbia, Maryland 21044-4098
(Address of principal executive offices) (Zip code)
(410) 531-4000
(Registrant's telephone number, including area code)

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate website, 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 ý No o

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ý	Accelerated filer o
Non-accelerated filer o (Do not check if a smaller reporting company)	Smaller reporting company o
Emerging growth company o	

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. o

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

Indicate by check mark whether the registrant has filed all documents and reports required to be filed by Sections 12, 13 or 15(d) of the Securities Exchange Act of 1934 subsequent to the distribution of securities under a plan confirmed by a court. Yes ý No o

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date.

Class	Outstanding at July 31, 2018
Common Stock, $0.01 par value per share	67,238,067 shares

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GRACE®, the GRACE® logo and, except as otherwise indicated, the other trademarks, service marks or trade names used in the text of this Report are trademarks, service marks, or trade names of operating units of W. R. Grace & Co. or its subsidiaries and/or affiliates. Unless the context indicates otherwise, in this Report the terms "Grace," "we," "us," or "our" mean W. R. Grace & Co. and/or its consolidated subsidiaries and affiliates, and the term the "Company" means W. R. Grace & Co. Unless otherwise indicated, the contents of websites mentioned in this report are not incorporated by reference or otherwise made a part of this Report.

The Financial Accounting Standards Board® is referred to in this Report as the "FASB." The FASB issues, among other things, the FASB Accounting Standards Codification® ("ASC") and Accounting Standards Updates ("ASU"). The U.S. Internal Revenue Service is referred to in this Report as the "IRS."

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PART I. FINANCIAL INFORMATION

Item 1. Financial Statements

Review by Independent Registered Public Accounting Firm

With respect to the interim consolidated financial statements included in this Quarterly Report on Form 10-Q for the quarter ended June 30, 2018, PricewaterhouseCoopers LLP, the Company’s independent registered public accounting firm, has applied limited procedures in accordance with professional auditing standards for a review of such information. Their report on the interim consolidated financial statements, which follows, states that they did not audit and they do not express an opinion on the unaudited interim consolidated financial statements. Accordingly, the degree of reliance on their report on the unaudited interim consolidated financial statements should be restricted in light of the limited nature of the review procedures applied. This report is not considered a “report” within the meaning of Sections 7 and 11 of the Securities Act of 1933, and, therefore, the independent accountants’ liability under Section 11 does not extend to it.

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Report of Independent Registered Public Accounting Firm
To the Shareholders and Board of Directors of W. R. Grace & Co.:

Results of Review of Financial Statements

We have reviewed the accompanying consolidated balance sheet of W. R. Grace & Co. and its subsidiaries as of June 30, 2018, and the related consolidated statements of operations and comprehensive income (loss) for the three-month and six-month periods ended June 30, 2018 and 2017 and the consolidated statements of equity and of cash flows for the six-month periods ended June 30, 2018 and 2017, including the related notes (collectively referred to as the “interim financial statements”). Based on our reviews, we are not aware of any material modifications that should be made to the accompanying interim financial statements for them to be in conformity with accounting principles generally accepted in the United States of America.

We have previously audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheet of the Company as of December 31, 2017, and the related consolidated statements of operations, of comprehensive income, of equity, and of cash flows for the year then ended (not presented herein), and in our report dated February 22, 2018, we expressed an unqualified opinion on those consolidated financial statements. In our opinion, the information set forth in the accompanying consolidated balance sheet information as of December 31, 2017, is fairly stated, in all material respects, in relation to the consolidated balance sheet from which it has been derived.

Basis for Review Results

These interim financial statements are the responsibility of the Company’s management. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (“PCAOB”) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB. We conducted our review in accordance with the standards of the PCAOB. A review of interim financial information consists principally of applying analytical procedures and making inquiries of persons responsible for financial and accounting matters. It is substantially less in scope than an audit conducted in accordance with the standards of the PCAOB, the objective of which is the expression of an opinion regarding the financial statements taken as a whole. Accordingly, we do not express such an opinion.

/s/ PricewaterhouseCoopers LLP
Baltimore, Maryland
August 8, 2018

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W. R. Grace & Co. and Subsidiaries
Consolidated Statements of Operations (unaudited)

(In millions, except per share amounts)	Three Months Ended June 30, 2018	Three Months Ended June 30, 2017	Six Months Ended June 30, 2018	Six Months Ended June 30, 2017
Net sales	$485.7	$429.5	$917.2	$827.5
Cost of goods sold	287.0	262.3	549.0	507.1
Gross profit	198.7	167.2	368.2	320.4
Selling, general and administrative expenses	82.2	69.3	151.5	134.8
Research and development expenses	16.1	13.6	30.8	27.5
Provision for environmental remediation, net	0.5	13.2	0.6	13.2
Equity in earnings of unconsolidated affiliate	(8.2)	(6.1)	(13.6)	(13.1)
Restructuring and repositioning expenses	18.8	5.4	24.4	7.7
Interest expense and related financing costs	19.9	20.1	39.2	39.6
Other (income) expense, net	5.8	(11.4)	3.5	(13.3)
Total costs and expenses	135.1	104.1	236.4	196.4
Income (loss) before income taxes	63.6	63.1	131.8	124.0
(Provision for) benefit from income taxes	(25.0)	(19.6)	(49.8)	(37.6)
Net income (loss)	38.6	43.5	82.0	86.4
Less: Net (income) loss attributable to noncontrolling interests	0.2	0.4	0.4	0.4
Net income (loss) attributable to W. R. Grace & Co. shareholders	$38.8	$43.9	$82.4	$86.8
Earnings Per Share Attributable to W. R. Grace & Co. Shareholders				
Basic earnings per share:				
Net income (loss)	$0.58	$0.64	$1.22	$1.27
Weighted average number of basic shares	67.3	68.3	67.4	68.3
Diluted earnings per share:				
Net income (loss)	$0.58	$0.64	$1.22	$1.27
Weighted average number of diluted shares	67.4	68.4	67.5	68.5
Dividends per common share	$0.24	$0.21	$0.48	$0.42

The Notes to Consolidated Financial Statements are an integral part of these statements.

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W. R. Grace & Co. and Subsidiaries
Consolidated Statements of Comprehensive Income (Loss) (unaudited)

(In millions)	Three Months Ended June 30, 2018	Three Months Ended June 30, 2017	Six Months Ended June 30, 2018	Six Months Ended June 30, 2017
Net income (loss)	$38.6	$43.5	$82.0	$86.4
Other comprehensive income (loss), net of income taxes:				
Defined benefit pension and other postretirement plans	(0.2)	(0.4)	(0.4)	(0.7)
Currency translation adjustments	37.9	(8.3)	19.7	(9.7)
Gain (loss) from hedging activities	(5.2)	(0.2)	(3.4)	0.5
Total other comprehensive income (loss)	32.5	(8.9)	15.9	(9.9)
Comprehensive income (loss)	71.1	34.6	97.9	76.5
Less: comprehensive (income) loss attributable to noncontrolling interests	0.2	0.4	0.4	0.4
Comprehensive income (loss) attributable to W. R. Grace & Co. shareholders	$71.3	$35.0	$98.3	$76.9

The Notes to Consolidated Financial Statements are an integral part of these statements.

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W. R. Grace & Co. and Subsidiaries
Consolidated Statements of Cash Flows (unaudited)

(In millions)	Six Months Ended June 30, 2018	2017
OPERATING ACTIVITIES		
Net income (loss)	$82.0	$86.4
Reconciliation to net cash provided by (used for) operating activities:		
Depreciation and amortization	50.9	54.2
Equity in earnings of unconsolidated affiliate	(13.6)	(13.1)
Costs related to legacy product, environmental and other claims	4.3	17.0
Cash paid for legacy product, environmental and other claims	(12.6)	(44.2)
Provision for (benefit from) income taxes	49.8	37.6
Cash paid for income taxes	(16.7)	(31.3)
Income tax refunds received	0.1	29.7
Loss on early extinguishment of debt	4.8	—
Interest expense and related financing costs	39.2	39.6
Cash paid for interest	(39.6)	(34.3)
Defined benefit pension expense	7.8	8.2
Cash paid under defined benefit pension arrangements	(57.9)	(7.8)
Changes in assets and liabilities, excluding effect of currency translation and acquisitions:		
Trade accounts receivable	14.8	4.3
Inventories	(50.8)	(3.9)
Accounts payable	34.0	7.4
All other items, net	22.5	(9.3)
Net cash provided by (used for) operating activities	119.0	140.5
INVESTING ACTIVITIES		
Capital expenditures	(90.8)	(59.1)
Business acquired, net of cash acquired	(420.9)	—
Other investing activities	12.7	0.3
Net cash provided by (used for) investing activities	(499.0)	(58.8)
FINANCING ACTIVITIES		
Borrowings under credit arrangements	983.2	98.8
Repayments under credit arrangements	(541.8)	(61.5)
Cash paid for debt financing costs	(11.8)	(0.2)
Cash paid for repurchases of common stock	(49.8)	(30.0)
Proceeds from exercise of stock options	6.4	12.2
Dividends paid to shareholders	(32.4)	(28.7)
Other financing activities	(3.5)	(3.8)
Net cash provided by (used for) financing activities	350.3	(13.2)
Effect of currency exchange rate changes on cash, cash equivalents, and restricted cash	(1.0)	3.5
Net increase (decrease) in cash and cash equivalents	(30.7)	72.0
Cash, cash equivalents, and restricted cash, beginning of period	163.5	100.6
Cash, cash equivalents, and restricted cash, end of period	$132.8	$172.6
Supplemental disclosure of cash flow information		
Capital expenditures in accounts payable	$38.7	$17.8

The Notes to Consolidated Financial Statements are an integral part of these statements.

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W. R. Grace & Co. and Subsidiaries
Consolidated Balance Sheets (unaudited)

(In millions, except par value and shares)	June 30, 2018	December 31, 2017
ASSETS		
Current Assets		
Cash and cash equivalents	$131.5	$ 152.8
Restricted cash and cash equivalents	1.3	10.7
Trade accounts receivable, less allowance of $11.7 (2017—$11.7)	277.5	285.2
Inventories	307.4	230.9
Other current assets	70.7	49.0
Total Current Assets	788.4	728.6
Properties and equipment, net of accumulated depreciation and amortization of $1,482.4 (2017—$1,463.4)	955.9	799.1
Goodwill	541.2	402.4
Technology and other intangible assets, net	364.5	255.4
Deferred income taxes	535.4	556.5
Investment in unconsolidated affiliate	138.7	125.9
Other assets	78.1	39.1
Total Assets	$3,402.2	$ 2,907.0
LIABILITIES AND EQUITY		
Current Liabilities		
Debt payable within one year	$23.3	$ 20.1
Accounts payable	262.5	210.3
Other current liabilities	217.3	217.8
Total Current Liabilities	503.1	448.2
Debt payable after one year	1,963.3	1,523.8
Underfunded and unfunded defined benefit pension plans	452.2	502.4
Other liabilities	188.7	169.3
Total Liabilities	3,107.3	2,643.7
Commitments and Contingencies—Note 8		
Equity		
Common stock issued, par value $0.01; 300,000,000 shares authorized; outstanding: 67,235,786 (2017—67,780,410)	0.7	0.7
Paid-in capital	472.1	474.8
Retained earnings	625.5	573.1
Treasury stock, at cost: shares: 10,220,841 (2017—9,676,217)	(865.7)	(832.1)
Accumulated other comprehensive income (loss)	55.8	39.9
Total W. R. Grace & Co. Shareholders' Equity	288.4	256.4
Noncontrolling interests	6.5	6.9
Total Equity	294.9	263.3
Total Liabilities and Equity	$3,402.2	$ 2,907.0

The Notes to Consolidated Financial Statements are an integral part of these statements.

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W. R. Grace & Co. and Subsidiaries
Consolidated Statements of Equity (unaudited)

(In millions)	Common Stock and Paid-in Capital	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Income (Loss)	Noncontrolling Interests	Total Equity
Balance, December 31, 2016	$488.0	$619.3	$(804.9)	$ 66.4	$ 3.6	$372.4
Net income (loss)	—	86.8	—	—	(0.4)	86.4
Repurchase of common stock	—	—	(30.0)	—	—	(30.0)
Payments to taxing authorities in consideration of employee tax obligations related to stock-based compensation arrangements	(2.4)	—	—	—	—	(2.4)
Stock-based compensation	5.4	—	—	—	—	5.4
Exercise of stock options	(17.0)	—	28.8	—	—	11.8
Shares issued	0.7	—	—	—	—	0.7
Other comprehensive (loss) income	—	—	—	(9.9)	—	(9.9)
Dividends declared	—	(28.8)	—	—	—	(28.8)
Balance, June 30, 2017	$474.7	$677.3	$(806.1)	$ 56.5	$ 3.2	$405.6
Balance, December 31, 2017	$475.5	$573.1	$(832.1)	$ 39.9	$ 6.9	$263.3
Net income (loss)	—	82.4	—	—	(0.4)	82.0
Repurchase of common stock	—	—	(49.8)	—	—	(49.8)
Payments to taxing authorities in consideration of employee tax obligations related to stock-based compensation arrangements	(3.0)	—	—	—	—	(3.0)
Stock-based compensation	9.6	—	—	—	—	9.6
Exercise of stock options	(4.1)	—	10.2	—	—	6.1
Shares issued	(5.2)	—	6.0	—	—	0.8
Dividends declared	—	(32.5)	—	—	—	(32.5)
Other comprehensive (loss) income	—	—	—	15.9	—	15.9
Adjustment to retained earnings for adoption of ASC 606	—	2.5	—	—	—	2.5
Balance, June 30, 2018	$472.8	$625.5	$(865.7)	$ 55.8	$ 6.5	$294.9

The Notes to Consolidated Financial Statements are an integral part of these statements.

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Notes to Consolidated Financial Statements

1. Basis of Presentation and Summary of Significant Accounting and Financial Reporting Policies

W. R. Grace & Co., through its subsidiaries, is engaged in specialty chemicals and specialty materials businesses on a global basis through two reportable segments: Grace Catalysts Technologies, which includes catalysts and related products and technologies used in refining, petrochemical and other chemical manufacturing applications; and Grace Materials Technologies, which includes specialty materials, including silica-based and silica-alumina-based materials, used in coatings, consumer, industrial, and pharmaceutical applications.

W. R. Grace & Co. conducts all of its business through a single wholly owned subsidiary, W. R. Grace & Co.–Conn. ("Grace–Conn."). Grace–Conn. owns all of the assets, properties and rights of W. R. Grace & Co. on a consolidated basis, either directly or through subsidiaries.

As used in these notes, the term "Company" refers to W. R. Grace & Co. The term "Grace" refers to the Company and/or one or more of its subsidiaries and, in certain cases, their respective predecessors.

Basis of Presentation   The interim Consolidated Financial Statements presented herein are unaudited and should be read in conjunction with the Consolidated Financial Statements presented in the Company's 2017 Annual Report on Form 10-K. Such interim Consolidated Financial Statements reflect all adjustments that, in the opinion of management, are necessary for a fair statement of the results of the interim periods presented; all such adjustments are of a normal recurring nature except for the impacts of adopting new accounting standards as discussed below. All significant intercompany accounts and transactions have been eliminated.

The results of operations for the six-month interim period ended June 30, 2018, are not necessarily indicative of the results of operations to be attained for the year ending December 31, 2018.

Use of Estimates   The preparation of financial statements in conformity with U.S. generally accepted accounting principles ("U.S. GAAP") requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the Consolidated Financial Statements, and the reported amounts of revenues and expenses for the periods presented. Actual amounts could differ from those estimates, and the differences could be material. Changes in estimates are recorded in the period identified. Grace's accounting measurements that are most affected by management's estimates of future events are:

- Realization values of net deferred tax assets, which depend on projections of future taxable income;
- Pension and postretirement liabilities, which depend on assumptions regarding participant life spans, future inflation, discount rates and total returns on invested funds (see Note 6);
- Carrying values of goodwill and other intangible assets, which depend on assumptions of future earnings and cash flows; and
- Contingent liabilities, which depend on an assessment of the probability of loss and an estimate of ultimate obligation, such as litigation and environmental remediation (see Note 8).

Reclassifications   Certain amounts in prior years' Consolidated Financial Statements have been reclassified to conform to the current year presentation. Such reclassifications have not materially affected previously reported amounts in the Consolidated Financial Statements.

Long-Lived Assets   During the 2018 first quarter, Grace, with the assistance of an outside accounting firm, completed a study to evaluate the useful lives of its operating machinery and equipment, including a review of historical asset retirement data as well as review and analysis of relevant industry practices. As a result of this study, effective January 1, 2018, Grace revised the accounting useful lives of certain machinery and equipment, which was determined to be a change in accounting estimate and is being applied prospectively. As a result of this change in accounting estimate, Grace's depreciation expense with respect to such machinery and equipment was reduced by $6.2 million, resulting in an increase to net income of $4.8 million or $0.07 per diluted share, for the three months ended June 30, 2018. For the six months ended June 30, 2018, depreciation expense with respect to such machinery and equipment was reduced by $8.9 million, resulting in an increase to net income of $6.8 million or $0.10 per diluted share. Estimated useful lives for operating machinery and equipment, which previously ranged from 3 to 10 years, now range from 5 to 25 years.

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Notes to Consolidated Financial Statements (Continued)

1. Basis of Presentation and Summary of Significant Accounting and Financial Reporting Policies (Continued)

Recently Issued Accounting Standards   In February 2016, the FASB issued ASU 2016-02 “Leases (Topic 842).” This update is intended to increase transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. The core principle of Topic 842 is that a lessee should recognize the assets and liabilities that arise from leases. A lessee should recognize in the statement of financial position a liability to make lease payments (the lease liability) and a right-of-use asset representing its right to use the underlying asset for the lease term, including optional payments where they are reasonably certain to occur. Currently, as a lessee, Grace is a party to a number of leases which, under existing guidance, are classified as operating leases and not recorded on the balance sheet but expensed as incurred. Under the new standard, many of these leases will be recorded on the Consolidated Balance Sheets. Grace will adopt the standard in the 2019 first quarter. Grace has begun its implementation of the new standard and at this time cannot reasonably estimate the effect of adoption.

In January 2017, the FASB issued ASU 2017-04 “Intangibles—Goodwill and Other (Topic 350).” This update modifies the concept of impairment from the condition that exists when the carrying amount of goodwill exceeds its implied fair value to the condition that exists when the carrying amount of a reporting unit exceeds its fair value. An entity no longer will determine goodwill impairment by calculating the implied fair value of goodwill by assigning the fair value of a reporting unit to all of its assets and liabilities as if that reporting unit had been acquired in a business combination (“Step 2”). Because these amendments eliminate Step 2 from the goodwill impairment test, they should reduce the cost and complexity of evaluating goodwill for impairment. Grace is required to adopt the amendments in this update on January 1, 2020. Early adoption is permitted. Grace is currently evaluating the timing of adoption and does not expect the update to have a material effect on the Consolidated Financial Statements.

In January 2018, the FASB issued ASU 2018-01 “Leases (Topic 842): Land Easement Practical Expedient for Transition to Topic 842.” This update provides an optional transition practical expedient that allows an entity to elect not to evaluate under Topic 842 existing or expired land easements not previously accounted for as leases. All land easements entered into or modified after the adoption of Topic 842 must be evaluated under Topic 842. Grace, which typically does not account for easements under current lease accounting, will use the transition practical expedient when adopting Topic 842 in the 2019 first quarter and at this time cannot reasonably estimate the effect of adoption.

In February 2018, the FASB issued ASU 2018-02 “Income Statement—Reporting Comprehensive Income (Topic 220).” This update addresses the revaluation of deferred tax assets and liabilities due to the Tax Cuts and Jobs Act of 2017 impacting income from continuing operations, even if the initial income tax effects were recognized in other comprehensive income. The update allows entities to reclassify the tax effects that were originally in other comprehensive income from accumulated other comprehensive income to retained earnings. The update requires entities to disclose whether the election was made and a description of the income tax effects. The update can be: (a) applied to the period of adoption, or (b) applied retrospectively to each period in which the Tax Cuts and Jobs Act of 2017 is in effect. Grace is required to adopt the amendments in this update on January 1, 2019, with early adoption permitted. Grace is currently evaluating the timing and effect of adoption.

Recently Adopted Accounting Standards   In November 2016, the FASB issued ASU 2016-18 “Statement of Cash Flows (Topic 230): Restricted Cash,” which requires that a statement of cash flows explain the change during the period in the total of cash, cash equivalents, and amounts generally described as restricted cash or restricted cash equivalents. Therefore, amounts generally described as restricted cash and restricted cash equivalents should be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. Grace adopted the update in the 2018 first quarter. The table below presents the effect of the adoption of ASU 2016-18 on previously reported amounts.

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Notes to Consolidated Financial Statements (Continued)

1. Basis of Presentation and Summary of Significant Accounting and Financial Reporting Policies (Continued)

(In millions)	Six Months Ended June 30, 2017		
	Previously Reported	Revised	Effect of Change
Other investing activities	$(0.5)	$ 0.3	$ 0.8
Net cash provided by (used for) investing activities	(59.6)	(58.8)	0.8
Cash, cash equivalents, and restricted cash, beginning of period	90.6	100.6	10.0
Cash, cash equivalents, and restricted cash, end of period	161.8	172.6	10.8

In January 2017, the FASB issued ASU 2017-01 "Business Combinations (Topic 805)," which provides a screen to determine when an integrated set of assets and activities is not a business. The screen requires that when substantially all of the fair value of the gross assets acquired (or disposed of) is concentrated in a single identifiable asset or a group of similar identifiable assets, the set is not a business. This screen reduces the number of transactions that need to be further evaluated. If the screen is not met, the amendments in this update (1) require that to be considered a business, a set must include, at a minimum, an input and a substantive process that together significantly contribute to the ability to create output, and (2) remove the evaluation of whether a market participant could replace missing elements. The amendments in this update also narrow the definition of the term "output" so that the term is consistent with how outputs are described in ASC 606. Grace adopted the update in the 2018 first quarter and applied the new definition of a business to the acquisition completed during the 2018 second quarter.

In May 2017, the FASB issued ASU 2017-09 "Compensation—Stock Compensation (Topic 718)." This update clarifies the existing definition of the term "modification," which is currently defined as "a change in any of the terms or conditions of a share-based payment award." The update requires entities to account for modifications of share-based payment awards unless the (1) fair value, (2) vesting conditions, and (3) classification as an equity instrument or a liability instrument of the modified award are the same as the original award before modification. Grace adopted the update in the 2018 first quarter, and it did not have an effect on the Consolidated Financial Statements.

Revenue Recognition

In May 2014, the FASB issued ASU 2014-09 "Revenue from Contracts with Customers (Topic 606)" ("ASC 606"). This update was intended to remove inconsistencies and weaknesses in revenue requirements; provide a more robust framework for addressing revenue issues; improve comparability of revenue recognition practices across entities, industries, jurisdictions and capital markets; provide more useful information to users of financial statements through improved disclosure requirements; and simplify the preparation of financial statements by reducing the number of requirements to which an entity must refer. Grace adopted ASC 606 with a date of initial application of January 1, 2018. Grace applied the standard to all customer contracts. As a result, Grace has changed its accounting policy for revenue recognition as detailed below.

Grace applied ASC 606 using the modified retrospective method, that is, by recognizing the cumulative effect of initially applying ASC 606 as an adjustment to "retained earnings" at the date of initial application. Results for periods beginning after December 31, 2017, are presented under ASC 606, while the comparative information has not been adjusted and continues to be reported in accordance with Grace's historical accounting under ASC 605 "Revenue Recognition" ("ASC 605").

Grace generates revenues predominantly from sales of manufactured products to customers and in part from licensing of technology. Under ASC 606, revenue from customer arrangements is recognized when control is transferred to the customer.

Product Sales Revenue Recognition

In its implementation of ASC 606, Grace assessed its customer arrangements at the operating segment level, and based on the similarity of arrangements, Grace elected to use the portfolio method practical expedient.

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Notes to Consolidated Financial Statements (Continued)

1. Basis of Presentation and Summary of Significant Accounting and Financial Reporting Policies (Continued)

Based on the promises made to customers in product sales arrangements, Grace determined that it has a performance obligation to manufacture and deliver products to its customers. Grace makes certain other promises in its customer arrangements that are immaterial in the context of the contracts. Revenue is recognized at amounts based on agreed upon prices in sales contracts and/or purchase orders. Grace offers various incentives to its product sales customers that result in variable consideration, including but not limited to volume discounts, which reward bulk purchases by lowering the price for future purchases, and volume rebates, which encourage customers to purchase volume levels that would reduce their current prices. These incentives are immaterial in the context of the contracts.

For product sales, control is transferred at the point in time at which risk of loss and title have transferred to the customer, which is determined based on shipping terms. Terms of delivery and terms of payment are generally included in customer contracts of sale, order confirmation documents, and invoices. Payment is generally due within 30 to 60 days of invoicing. Grace defers revenue recognition until no other significant Grace obligations remain. Grace's customer arrangements do not contain significant acceptance provisions.

Taxes that Grace collects that are assessed by a governmental authority, and that are both imposed on and concurrent with any of its revenue-producing activities, are excluded from revenue. Grace considers shipping and handling activities that it performs as activities to fulfill the sales of its products. Amounts billed for shipping and handling are included in net sales, while costs incurred for shipping and handling are included in cost of sales, in accordance with the practical expedient provided by ASC 606.

Technology Licensing Revenue Recognition

For Grace's technology licensing business, Grace determined that the customer arrangements contain multiple deliverables to enable licensees to realize the full benefit of the technology. These deliverables include licensing the technology itself; developing engineering design packages; and providing training, consulting, and technical services. Under these arrangements, the license grant is not a distinct performance obligation, as the licensee only can benefit from the license in conjunction with other integral services such as development of the engineering design package, training, consulting, or technical services provided over the contract period. Therefore, Grace accounts for the license grant and integral services as a single performance obligation. Certain deliverables and services not included in the core bundled deliverables are accounted for as separate performance obligations.

The transaction price is specified in the technology licensing agreements and is substantially fixed. Some services are priced on a per-diem basis, but these are not material in the context of the contracts. Grace invoices its technology licensing customers as certain project milestones are achieved. Payment terms are similar to those of Grace's product sales.

Revenue for each performance obligation is recognized when control is transferred to the customer, which is generally over a period of time. As a result, Grace generally recognizes revenue for each performance obligation ratably over the period of the contract, which is up to seven years, depending on the scope of the licensee's project. Based on the timing of payments, Grace records deferred revenue related to these agreements. See Note 13.

Impact of Adoption

Except for the changes below, Grace has consistently applied its accounting policy for revenue recognition to all periods presented in the Consolidated Financial Statements.

Grace recorded a net increase to "retained earnings" of $2.5 million as of January 1, 2018, which represents the cumulative impact of adopting ASC 606, with a $3.2 million reduction to "other liabilities" and a $0.7 million reduction to "deferred income taxes." The cumulative adjustment results from a change in accounting for contingent revenue related to technology licensing arrangements. Under ASC 605, certain revenue was not realized until a contractual contingency was resolved. Upon adoption of ASC 606, Grace estimates all forms of

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Notes to Consolidated Financial Statements (Continued)

1. Basis of Presentation and Summary of Significant Accounting and Financial Reporting Policies (Continued)

variable consideration, including contingent amounts, at the inception of the arrangement and recognizes it over the period of performance.

The tables below present the effect of the adoption of ASC 606 on Grace's Consolidated Statements of Operations and Consolidated Balance Sheets.

Consolidated Statements of Operations

	Three months ended June 30, 2018		
(In millions)	Under ASC 605	As Reported (ASC 606)	Effect of Change
Net sales	$485.4	$ 485.7	$ 0.3
Gross profit	198.4	198.7	0.3
Income (loss) before income taxes	63.3	63.6	0.3
Provision for income taxes	(24.9)	(25.0)	(0.1)
Net income (loss)	38.4	38.6	0.2
Net income (loss) attributable to W. R. Grace & Co. Shareholders	38.6	38.8	0.2

	Six Months Ended June 30, 2018		
(In millions)	Under ASC 605	As Reported (ASC 606)	Effect of Change
Net sales	$916.8	$ 917.2	$ 0.4
Gross profit	367.8	368.2	0.4
Income (loss) before income taxes	131.4	131.8	0.4
Provision for income taxes	(49.7)	(49.8)	(0.1)
Net income (loss)	81.7	82.0	0.3
Net income (loss) attributable to W. R. Grace & Co. Shareholders	82.1	82.4	0.3

Consolidated Balance Sheets

	June 30, 2018		
(In millions)	Under ASC 605	As Reported (ASC 606)	Effect of Change
Deferred income taxes	$536.2	$ 535.4	$ (0.8)
Other liabilities	192.3	188.7	(3.6)
Retained earnings	622.7	625.5	2.8

ASU 2017-07 "Compensation—Retirement Benefits (Topic 715)"

In March 2017, the FASB issued ASU 2017-07 "Compensation—Retirement Benefits (Topic 715)." This update requires that the service cost component of net benefit cost be presented with other compensation costs arising from services rendered. The remaining net benefit cost is either presented as a line item in the statement of operations outside of a subtotal for income from operations, if presented, or disclosed separately. In addition, only the service cost component

of net benefit cost can be capitalized. Grace adopted the update in the 2018 first quarter.
The changes in classification of net benefit costs within the Consolidated Statements of Operations have been retrospectively applied to all periods presented. The change in costs capitalizable into inventory was applied

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Notes to Consolidated Financial Statements (Continued)

1. Basis of Presentation and Summary of Significant Accounting and Financial Reporting Policies (Continued)

prospectively in accordance with the update. The tables below present the effect of the adoption of ASU 2017-07 on previously reported amounts.

Consolidated Statements of Operations

	Three Months Ended June 30, 2017		
(In millions)	Previously Reported	Revised	Effect of Change
Cost of goods sold	$260.2	$262.3	$ 2.1
Gross profit	169.3	167.2	(2.1)
Selling, general and administrative expenses	70.3	70.8	0.5
Research and development expenses	12.9	13.6	0.7
Other (income) expense	(9.6)	(12.9)	(3.3)

	Six Months Ended June 30, 2017		
(In millions)	Previously Reported	Revised	Effect of Change
Cost of goods sold	$505.0	$507.1	$ 2.1
Gross profit	322.5	320.4	(2.1)
Selling, general and administrative expenses	136.8	137.8	1.0
Research and development expenses	26.1	27.5	1.4
Other (income) expense	(11.8)	(16.3)	(4.5)

2. Inventories

Inventories are stated at the lower of cost or net realizable value, and cost is determined using FIFO. Inventories consisted of the following at June 30, 2018, and December 31, 2017:

(In millions)	June 30, 2018	December 31, 2017
Raw materials	$ 60.3	$ 48.8
In process	56.8	33.0
Finished products	161.3	124.7
Other	29.0	24.4
Total inventory	$ 307.4	$ 230.9

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Notes to Consolidated Financial Statements (Continued)

3. Debt

Components of Debt

(In millions)	June 30, 2018	December 31, 2017
2018 U.S. dollar term loan, net of unamortized debt issuance costs of $9.7	$940.3	$ —
5.125% senior notes due 2021, net of unamortized debt issuance costs of $5.0 (2017—$5.8)	695.0	694.2
5.625% senior notes due 2024, net of unamortized debt issuance costs of $3.2 (2017—$3.5)	296.8	296.5
Debt payable to unconsolidated affiliate	46.3	42.4
2014 U.S. dollar term loan, net of unamortized debt issuance costs and discounts (2017—$4.3)	—	404.1
2014 Euro term loan, net of unamortized debt issuance costs and discounts (2017—$1.0)	—	94.0
Other borrowings(1)	8.2	12.7
Total debt	1,986.6	1,543.9
Less debt payable within one year	23.3	20.1
Debt payable after one year	$1,963.3	$ 1,523.8
Weighted average interest rates on total debt	3.8 %	4.7 %

(1) Represents borrowings under various lines of credit and other borrowings, primarily by non-U.S. subsidiaries.

On April 3, 2018, Grace entered into a Credit Agreement (the “Credit Agreement”), which provides for new senior secured credit facilities, consisting of:

(a) a $950 million term loan due in 2025, with interest at LIBOR +175 basis points, and

(b) a $400 million revolving credit facility due in 2023, with interest at LIBOR +175 basis points.

The term loan will amortize in equal quarterly installments in aggregate annual amounts equal to 1.00% of the original principal amount thereof, with the first payment due on December 31, 2018.

The Credit Agreement contains customary affirmative covenants, including, but not limited to: (i) maintenance of existence, and compliance with laws; (ii) delivery of consolidated financial statements and other information; (iii) payment of taxes; (iv) delivery of notices of defaults and certain other material events; and (v) maintenance of adequate insurance. The Credit Agreement also contains customary negative covenants, including but not limited to restrictions on: (i) dividends on, and redemptions of, equity interests and other restricted payments; (ii) liens; (iii) loans and investments; (iv) the sale, transfer or disposition of assets and businesses; (v) transactions with affiliates; and (vi) a maximum first lien leverage ratio.

Events of default under the Credit Agreement include, but are not limited to: (i) failure to pay principal, interest, fees or other amounts under the Credit Agreement when due, taking into account any applicable grace period; (ii) any representation or warranty proving to have been incorrect in any material respect when made; (iii) failure to perform or observe covenants or other terms of the Credit Agreement subject to certain grace periods; (iv) a cross-default and cross-acceleration with certain other material debt; (v) bankruptcy events; (vi) certain defaults under ERISA; and (vii) the invalidity or impairment of security interests.

To secure its obligations under the Credit Agreement, Grace and certain of its U.S. subsidiaries have granted security interests in substantially all equity and debt interests in Grace–Conn. or any other Grace subsidiary owned by them and in substantially all their non-real estate assets and property.

The foregoing is a summary of the Credit Agreement. Grace has filed the full text of the Credit Agreement with the Securities and Exchange Commission (the “SEC”), which is readily available on the internet at www.sec.gov.

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Notes to Consolidated Financial Statements (Continued)

3. Debt (Continued)

Grace used a portion of the proceeds to repay in full the borrowings outstanding under its 2014 credit agreement, which was terminated, as well as to make a voluntary $50.0 million accelerated contribution to its U.S. qualified pension plans. In connection with the repayment of debt, Grace recorded a $4.8 million loss on early extinguishment of debt. As of June 30, 2018, the available credit under the revolving credit facility was reduced to $364.3 million by outstanding letters of credit.

See Note 4 for a discussion of the fair value of Grace's debt.

The principal maturities of debt outstanding at June 30, 2018, were as follows:

	(In millions)
2018	$ 14.0
2019	19.1
2020	17.9
2021	711.4
2022	15.5
Thereafter	1,208.7
Total debt	$ 1,986.6

4. Fair Value Measurements and Risk

Certain of Grace's assets and liabilities are reported at fair value on a gross basis. ASC 820 "Fair Value Measurements and Disclosures" defines fair value as the value that would be received at the measurement date in the principal or "most advantageous" market. Grace uses principal market data, whenever available, to value assets and liabilities that are required to be reported at fair value.

Grace has identified the following financial assets and liabilities that are subject to the fair value analysis required by ASC 820:

Fair Value of Debt and Other Financial Instruments   Debt payable is recorded at carrying value. Fair value is determined based on Level 2 inputs, including expected future cash flows (discounted at market interest rates), estimated current market prices and quotes from financial institutions.

At June 30, 2018, the carrying amounts and fair values of Grace's debt were as follows:

	June 30, 2018		December 31, 2017	
(In millions)	Carrying Amount	Fair Value	Carrying Amount	Fair Value
2018 U.S. dollar term loan(1)	$940.3	$939.1	$—	$—
5.125% senior notes due 2021(2)	695.0	709.2	694.2	728.7
5.625% senior notes due 2024(2)	296.8	311.3	296.5	321.3
U.S. dollar term loan(3)	—	—	404.1	409.7
Euro term loan(3)	—	—	94.0	93.7
Other borrowings	54.5	54.5	55.1	55.1
Total debt	$1,986.6	$2,014.1	$1,543.9	$1,608.5

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(1) Carrying amounts are net of unamortized debt issuance costs and discounts of $9.7 million as of June 30, 2018.

(2) Carrying amounts are net of unamortized debt issuance costs of $5.0 million and $3.2 million as of June 30, 2018, and $5.8 million and $3.5 million as of December 31, 2017, related to the 5.125% senior notes due 2021 and 5.625% senior notes due 2024, respectively.

(3) Carrying amounts are net of unamortized debt issuance costs and discounts of $4.3 million and $1.0 million as of December 31, 2017, related to the U.S. dollar term loan and euro term loan, respectively.

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Notes to Consolidated Financial Statements (Continued)

4. Fair Value Measurements and Risk (Continued)

At June 30, 2018, the recorded values of other financial instruments such as cash equivalents and trade receivables and payables approximated their fair values, based on the short-term maturities and floating rate characteristics of these instruments.

Currency Derivatives Because Grace operates and/or sells to customers in over 60 countries and in over 30 currencies, its results are exposed to fluctuations in currency exchange rates. Grace seeks to minimize exposure to these fluctuations by matching sales in volatile currencies with expenditures in the same currencies, but it is not always possible to do so. From time to time, Grace uses financial instruments such as currency forward contracts, options, swaps, or combinations thereof to reduce the risk of certain specific transactions. However, Grace does not have a policy of hedging all exposures, because management does not believe that such a level of hedging would be cost-effective. Forward contracts with maturities of not more than 36 months are used and designated as cash flow hedges of forecasted repayments of intercompany loans. The effective portion of gains and losses on these currency hedges is recorded in “accumulated other comprehensive income (loss)” and reclassified into “other (income) expense, net” to offset the remeasurement of the underlying hedged loans. Excluded components (forward points) on these hedges are amortized to income on a systematic basis.

Grace also enters into foreign currency forward contracts to hedge a portion of its net outstanding monetary assets and liabilities. These forward contracts are not designated as hedging instruments under applicable accounting guidance, and therefore all changes in the fair value of the forward contracts are recorded in “other (income) expense, net,” in the Consolidated Statements of Operations. These forward contracts are intended to offset the foreign currency gains or losses associated with the underlying monetary assets and liabilities.

The valuation of Grace’s currency exchange rate forward contracts and swaps is determined using an income approach. Inputs used to value currency exchange rate forward contracts consist of: (1) spot rates, which are quoted by various financial institutions; (2) forward points, which are primarily affected by changes in interest rates; and (3) discount rates used to present value future cash flows, which are based on the London Interbank Offered Rate (LIBOR) curve or overnight indexed swap rates. Total notional amounts for forward contracts outstanding as of June 30, 2018, were $67.1 million.

Cross-Currency Swap Agreements Grace uses cross-currency swaps designated as cash flow hedges to manage fluctuations in currency exchange rates and interest rates on variable rate debt. The effective portion of gains and losses on these cash flow hedges is recorded in “accumulated other comprehensive income (loss)” and reclassified into “other (income) expense, net” and “interest expense and related financing costs” during the hedged interest period.

In April 2018, in connection with the Credit Agreement (see Note 3), Grace entered into new cross-currency swaps beginning on April 3, 2018, and maturing on March 31, 2023, to synthetically convert $600.0 million of U.S. dollar-denominated floating rate debt into €490.1 million of euro-denominated debt fixed at 2.0231%. The valuation of these cross-currency swaps is determined using an income approach, using LIBOR and EURIBOR swap curves, currency basis spreads, and euro/U.S. dollar exchange rates.

Debt and Interest Rate Swap Agreements Grace uses interest rate swaps designated as cash flow hedges to manage fluctuations in interest rates on variable rate debt. The effective portion of gains and losses on these interest rate cash flow hedges is recorded in “accumulated other comprehensive income (loss)” and reclassified into “interest expense and related financing costs” during the hedged interest period.

In connection with its emergence financing, Grace entered into interest rate swaps beginning on February 3, 2015, and maturing on February 3, 2020, fixing the LIBOR component of the interest on $250.0 million of Grace’s term debt at a rate of 2.393%. These interest rate swaps were de-designated and terminated in April 2018 in connection with Grace’s entry into a new credit agreement.

In connection with the Credit Agreement (see Note 3), Grace entered into new interest rate swaps beginning on April 3, 2018, and maturing on March 31, 2023, fixing $100.0 million of term debt at 2.775%. The valuation of these interest rate swaps is determined using an income approach, using prevailing market interest rates and discount rates to present value future cash flows based on the forward LIBOR yield curves. Credit risk is also incorporated into derivative valuations.

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Notes to Consolidated Financial Statements (Continued)

4. Fair Value Measurements and Risk (Continued)

The following tables present the fair value hierarchy for financial assets and liabilities measured at fair value on a recurring basis as of June 30, 2018, and December 31, 2017:

	Fair Value Measurements at June 30, 2018, Using			
(In millions)	Total	Quoted Prices in Active Markets for Identical Assets or Liabilities (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets				
Currency derivatives	$4.0	$ —	$ 4.0	$ —
Interest rate derivatives	0.5	—	0.5	—
Variable-to-fixed cross-currency derivatives	21.4	—	21.4	—
Total Assets	$25.9	$ —	$ 25.9	$ —
Liabilities				
Interest rate derivatives	$0.2	$ —	$ 0.2	$ —
Currency derivatives	20.9	—	20.9	—
Total Liabilities	$21.1	$ —	$ 21.1	$ —

	Fair Value Measurements at December 31, 2017, Using			
(In millions)	Total	Quoted Prices in Active Markets for Identical Assets or Liabilities (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets				
Currency derivatives	$3.1	$ —	$ 3.1	$ —
Total Assets	$3.1	$ —	$ 3.1	$ —
Liabilities				
Interest rate derivatives	$1.8	$ —	$ 1.8	$ —
Currency derivatives	23.8	—	23.8	—
Total Liabilities	$25.6	$ —	$ 25.6	$ —

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Notes to Consolidated Financial Statements (Continued)

4. Fair Value Measurements and Risk (Continued)

The following tables present the location and fair values of derivative instruments included in the Consolidated Balance Sheets as of June 30, 2018, and December 31, 2017:

June 30, 2018 (In millions)	Asset Derivatives Balance Sheet Location	Fair Value	Liability Derivatives Balance Sheet Location	Fair Value
Derivatives designated as hedging instruments under ASC 815:				
Currency contracts	Other current assets	$ 3.3	Other current liabilities	$ —
Interest rate contracts	Other current assets	—	Other current liabilities	0.2
Variable-to-fixed cross-currency swaps	Other current assets	12.5	Other current liabilities	—
Currency contracts	Other assets	0.1	Other liabilities	19.1
Interest rate contracts	Other assets	0.5	Other liabilities	—
Variable-to-fixed cross-currency swaps	Other assets	8.9	Other liabilities	—
Derivatives not designated as hedging instruments under ASC 815:				
Currency contracts	Other current assets	0.6	Other current liabilities	1.8
Total derivatives		$ 25.9		$ 21.1

December 31, 2017 (In millions)	Asset Derivatives Balance Sheet Location	Fair Value	Liability Derivatives Balance Sheet Location	Fair Value
Derivatives designated as hedging instruments under ASC 815:				
Currency contracts	Other current assets	$ 2.7	Other current liabilities	$ 1.4
Interest rate contracts	Other current assets	—	Other current liabilities	1.3
Currency contracts	Other assets	—	Other liabilities	22.2
Interest rate contracts	Other assets	—	Other liabilities	0.5
Derivatives not designated as hedging instruments under ASC 815:				
Currency contracts	Other current assets	0.4	Other current liabilities	0.2
Total derivatives		$ 3.1		$ 25.6

The following tables present the location and amount of gains and losses on derivative instruments included in the Consolidated Statements of Operations or, when applicable, gains and losses initially recognized in other comprehensive income (loss) ("OCI") for the three and six months ended June 30, 2018 and 2017:

Three Months Ended June 30, 2018 (In millions)	Amount of Gain (Loss)	Location of Gain (Loss) Reclassified from Accumulated OCI into Income	Amount of Gain (Loss) Reclassified

	Recognized in OCI on Derivatives		from OCI into Income
Derivatives in ASC 815 cash flow hedging relationships:			
Interest rate contracts	$ 0.3	Interest expense	$ 0.1
Currency contracts(1)	10.4	Other expense	10.2
Variable-to-fixed cross-currency swaps	3.1	Interest expense	3.1
Variable-to-fixed cross-currency swaps	18.3	Other expense	29.3
Total derivatives	$ 32.1		$ 42.7

(1) Amount of gain (loss) recognized in OCI includes $0.4 million excluded from the assessment of effectiveness for which the difference between changes in fair value and periodic amortization is recorded in OCI.

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Notes to Consolidated Financial Statements (Continued)

4. Fair Value Measurements and Risk (Continued)

Six Months Ended June 30, 2018 (In millions)	Amount of Gain (Loss) Recognized in OCI on Derivatives	Location of Gain (Loss) Reclassified from Accumulated OCI into Income	Amount of Gain (Loss) Reclassified from OCI into Income
Derivatives in ASC 815 cash flow hedging relationships:			
Interest rate contracts	$ 1.8	Interest expense	$ (0.1)
Currency contracts(1)	3.8	Other expense	4.1
Variable-to-fixed cross-currency swaps	3.1	Interest expense	3.1
Variable-to-fixed cross-currency swaps	18.3	Other expense	29.3
Total derivatives	$ 27.0		$ 36.4

(1) Amount of gain (loss) recognized in OCI includes $(0.4) million excluded from the assessment of effectiveness for which the difference between changes in fair value and periodic amortization is recorded in OCI.

Three Months Ended June 30, 2017 (In millions)	Amount of Gain (Loss) Recognized in OCI on Derivatives	Location of Gain (Loss) Reclassified from Accumulated OCI into Income	Amount of Gain (Loss) Reclassified from OCI into Income
Derivatives in ASC 815 cash flow hedging relationships:			
Interest rate contracts	$ (1.1)	Interest expense	$ (0.8)
Currency contracts	—	Other expense	(0.1)
Total derivatives	$ (1.1)		$ (0.9)

Six Months Ended June 30, 2017 (In millions)	Amount of Gain (Loss) Recognized in OCI on Derivatives	Location of Gain (Loss) Reclassified from Accumulated OCI into Income	Amount of Gain (Loss) Reclassified from OCI into Income
Derivatives in ASC 815 cash flow hedging relationships:			
Interest rate contracts	$ (1.0)	Interest expense	$ (1.7)
Currency contracts	(0.1)	Other expense	(0.1)
Total derivatives	$ (1.1)		$ (1.8)

The following tables present the total amounts of income and expense line items presented in the Consolidated Statements of Operations in which the effects of cash flow hedges are reported.

Three Months Ended June 30,

(In millions)	2018 Interest expense	2018 Other income (expense)	2017 Interest expense	2017 Other income (expense)
Total amounts of income and expense line items in the Consolidated Statements of Operations in which the effects of cash flow hedges are recorded	$(19.9)	$ (5.8)	$(20.1)	$ 11.4
Gain (loss) on cash flow hedging relationships in ASC 815				
Interest rate contracts				
Amount of gain (loss) reclassified from accumulated OCI into income	$0.1	$ —	$(0.8)	$ —
Variable-to-fixed cross-currency swaps				
Amount of gain (loss) reclassified from accumulated OCI into income	3.1	29.3	—	—
Currency contracts				
Amount of gain (loss) reclassified from accumulated OCI into income	—	10.2	—	(0.1)
Amount excluded from effectiveness testing recognized in earnings based on amortization approach (included in above)	—	0.3	—	—

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Notes to Consolidated Financial Statements (Continued)

4. Fair Value Measurements and Risk (Continued)

(In millions)	Six Months Ended June 30, 2018 Interest expense	Other income (expense)	2017 Interest expense	Other income (expense)
Total amounts of income and expense line items in the Consolidated Statements of Operations in which the effects of cash flow hedges are recorded	$(39.2)	$ (3.5)	$(39.6)	$ 13.3
Gain (loss) on cash flow hedging relationships in ASC 815				
Interest rate contracts				
Amount of gain (loss) reclassified from accumulated OCI into income	$(0.1)	$ —	$(1.7)	$ —
Variable-to-fixed cross-currency swaps				
Amount of gain (loss) reclassified from accumulated OCI into income	3.1	29.3	—	—
Currency contracts				
Amount of gain (loss) reclassified from accumulated OCI into income	—	4.1	—	(0.1)
Amount excluded from effectiveness testing recognized in earnings based on amortization approach (included in above)	—	1.1	—	—

Net Investment Hedges Grace uses cross-currency swaps as derivative hedging instruments in certain net investment hedges of its non-U.S. subsidiaries. The effective portion of gains and losses attributable to these net investment hedges is recorded net of tax to “currency translation adjustments” within “accumulated other comprehensive income (loss)” to offset the change in the carrying value of the net investment being hedged. Recognition in earnings of amounts previously recorded to “currency translation adjustments” is limited to circumstances such as complete or substantially complete liquidation of the net investment in the hedged foreign operation. At June 30, 2018, the notional amount of €170.0 million of Grace’s cross-currency swaps was designated as a hedging instrument of its net investment in its European subsidiaries.

Grace also uses foreign currency-denominated debt and deferred intercompany royalties as non-derivative hedging instruments in certain net investment hedges. At June 30, 2018, €22.5 million of Grace’s deferred intercompany royalties was designated as a hedging instrument of its net investment in its European subsidiaries. In April 2018, in connection with the Credit Agreement, Grace de-designated and repaid its euro-denominated term loan principal that had been designated as a hedge of its net investment in its European subsidiaries.

The following table presents the amount of gains and losses on derivative and non-derivative instruments designated as net investment hedges, recorded to “currency translation adjustments” within “accumulated other comprehensive income (loss)” for the three and six months ended June 30, 2018 and 2017. There were no reclassifications of the effective portion of net investment hedges out of OCI and into earnings for the periods presented in the tables below.

(In millions)	Three Months Ended June 30, 2018	2017	Six Months Ended June 30, 2018	2017
Derivatives in ASC 815 net investment hedging relationships:				
Cross-currency swap	$13.3	$(6.1)	$2.0	$(8.6)
Non-derivatives in ASC 815 net investment hedging relationships:				
Foreign currency denominated debt	$—	$(4.9)	$(4.4)	$(7.2)
Foreign currency denominated deferred intercompany royalties	1.9	(2.9)	0.2	(4.4)

$1.9	$(7.8)	$(4.2)	$(11.6)

Credit Risk Grace is exposed to credit risk in its trade accounts receivable. Customers in the petroleum refining industry represent the greatest exposure. Grace's credit evaluation policies mitigate credit risk exposures, and it has a history of minimal credit losses. Grace does not generally require collateral for its trade accounts

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Notes to Consolidated Financial Statements (Continued)

4. Fair Value Measurements and Risk (Continued)

receivable but may require a bank letter of credit in certain instances, particularly when selling to customers in cash-restricted countries.

Grace may also be exposed to credit risk in its derivatives contracts. Grace monitors counterparty credit risk and currently does not anticipate nonperformance by counterparties to its derivatives. Grace's derivative contracts are with internationally recognized commercial financial institutions.

5. Income Taxes

The provision for income taxes for the six months ended June 30, 2018 and 2017, was $49.8 million and $37.6 million, respectively. The $12.2 million increase is primarily due to the Tax Cuts and Jobs Act of 2017 (the "Act") Global Intangible Low Taxed Income ("GILTI") 2018 tax charge of $12.0 million, partially offset by a $6.3 million benefit from the change in the federal tax rate under the Act. The 2017 first quarter also included $3.1 million in share-based compensation deductions that did not repeat in 2018.

The provision for income taxes for the three months ended June 30, 2018 and 2017, was $25.0 million and $19.6 million, respectively. The $5.4 million increase was primarily due to the $6.1 million GILTI tax charge and a $1.9 million net increase in discrete charges primarily related to stock compensation. These charges were partially offset by a $4.4 million benefit from the change in the federal tax rate.

On December 22, 2017, the Act was signed into law, making significant changes to the Internal Revenue Code. Changes include a federal corporate tax rate decrease from 35% to 21% for tax years beginning after December 31, 2017, the transition of U.S. international taxation from a worldwide tax system to a territorial system, and a one-time transition tax on the mandatory deemed repatriation of foreign earnings.

On December 22, 2017, the SEC issued Staff Accounting Bulletin No. 118 ("SAB 118") to address the application of U.S. GAAP in situations when 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 accordance with SAB 118, Grace recorded the provisional income tax effects of the Act. Additional detailed analyses are needed in order to complete the accounting for certain income tax aspects of the Act. Any subsequent adjustment to these amounts will be recorded to current tax expense in the quarter during which the analysis is completed, which is expected to be during the second half of 2018. In January 2018, the FASB released guidance on the accounting for tax on the GILTI provisions of the Act. Grace has not completed its analysis in order to make a policy decision on accounting for GILTI.

No material adjustments have been recorded to Grace's provisional SAB 118 tax expense as of June 30, 2018. Further detailed analyses are needed in order to complete the accounting for certain income tax aspects of the Act. Any subsequent adjustment to these amounts will be recorded to current tax expense in the quarter during which the analysis is completed, which is expected to be during the second half of 2018.

6. Pension Plans and Other Postretirement Benefit Plans

Pension Plans The following table presents the funded status of Grace's pension plans:

(In millions)	June 30, 2018	December 31, 2017
Overfunded defined benefit pension plans	$4.2	$ —
Underfunded defined benefit pension plans	(63.4)	(110.5)
Unfunded defined benefit pension plans	(388.8)	(391.9)
Total underfunded and unfunded defined benefit pension plans	(452.2)	(502.4)
Pension liabilities included in other current liabilities	(14.8)	(15.0)
Net funded status	$(462.8)	$ (517.4)

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Notes to Consolidated Financial Statements (Continued)

6. Pension Plans and Other Postretirement Benefit Plans (Continued)

Underfunded plans include a group of advance-funded plans that are underfunded on a projected benefit obligation ("PBO") basis. Unfunded plans include several plans that are funded on a pay-as-you-go basis, and therefore, the entire PBO is unfunded.

The following tables present the components of net periodic benefit cost (income).

	Three Months Ended June 30,			
	2018		2017	
(In millions)	U.S.	Non-U.S.	U.S.	Non-U.S.
Service cost	$4.9	$ 2.5	$4.3	$ 2.0
Interest cost	10.3	1.2	10.5	1.1
Expected return on plan assets	(14.6)	(0.2)	(14.4)	(0.2)
Amortization of prior service credit	(0.1)	—	(0.1)	—
Net periodic benefit cost (income)	$0.5	$ 3.5	$0.3	$ 2.9

	Six Months Ended June 30,			
	2018		2017	
(In millions)	U.S.	Non-U.S.	U.S.	Non-U.S.
Service cost	$9.7	$ 4.9	$8.6	$ 4.0
Interest cost	20.6	2.5	21.0	2.1
Expected return on plan assets	(29.1)	(0.5)	(28.8)	(0.4)
Amortization of prior service credit	(0.3)	—	(0.2)	—
Net periodic benefit cost (income)	$0.9	$ 6.9	$0.6	$ 5.7

Plan Contributions and Funding   Grace intends to satisfy its funding obligations under the U.S. qualified pension plans and to comply with all of the requirements of the Employee Retirement Income Security Act of 1974 ("ERISA"). For ERISA purposes, funded status is calculated on a different basis than under U.S. GAAP. On April 6, 2018, Grace contributed $50.0 million to its U.S. qualified pension plans.

Grace intends to fund non-U.S. pension plans based on applicable legal requirements and actuarial recommendations.

Defined Contribution Retirement Plan   Grace sponsors a defined contribution retirement plan for its employees in the United States. This plan is qualified under section 401(k) of the U.S. tax code. Currently, Grace contributes an amount equal to 100% of employee contributions, up to 6% of an individual employee's salary or wages. Grace's cost related to this benefit plan for the three and six months ended June 30, 2018, was $3.3 million and $6.1 million compared with $3.0 million and $5.7 million for the corresponding prior-year periods.

The U.S. salaried pension plan is closed to new entrants after January 1, 2017. U.S. salaried employees and certain U.S. hourly employees hired on or after January 1, 2017, and employees in Germany hired on or after January 1, 2016, will participate in enhanced defined contribution plans instead of defined benefit pension plans.

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Notes to Consolidated Financial Statements (Continued)

7. Other Balance Sheet Accounts

(In millions)	June 30, 2018	December 31, 2017
Other Current Liabilities		
Accrued compensation	$ 45.2	$ 60.7
Deferred revenue	26.0	19.5
Environmental contingencies	22.7	23.5
Income taxes payable	20.3	12.2
Pension liabilities	14.8	15.0
Accrued interest	13.3	16.5
Other accrued liabilities	75.0	70.4
	$ 217.3	$ 217.8

Accrued compensation includes salaries and wages as well as estimated current amounts due under the annual and long-term incentive programs.

(In millions)	June 30, 2018	December 31, 2017
Other Liabilities		
Liability to unconsolidated affiliate	$ 56.0	$ 32.7
Environmental contingencies	38.5	46.8
Deferred revenue	22.3	14.9
Fair value of currency and interest rate contracts	19.1	22.7
Asset retirement obligation	9.1	10.4
Deferred income taxes	8.0	8.2
Postemployment liability	4.9	5.2
Other noncurrent liabilities	30.8	28.4
	$ 188.7	$ 169.3

8. Commitments and Contingent Liabilities

Over the years, Grace operated numerous types of businesses that are no longer part of its business portfolio. As Grace divested or otherwise ceased operating these businesses, it retained certain liabilities and obligations, which Grace refers to as legacy liabilities. The principal legacy liabilities are product and environmental liabilities. Although the outcome of each of the matters discussed below cannot be predicted with certainty, Grace has assessed its risk and has made accounting estimates as required under U.S. GAAP.

Legacy Product and Environmental Liabilities

Legacy Product Liabilities   Grace emerged from an asbestos-related Chapter 11 bankruptcy on February 3, 2014 (the "Effective Date"). Under its plan of reorganization, all pending and future asbestos-related claims are channeled for resolution to either a personal injury trust (the "PI Trust") or a property damage trust (the "PD Trust"). The trusts are the sole recourse for holders of asbestos-related claims. The channeling injunctions issued by the bankruptcy court prohibit holders of asbestos-related claims from asserting such claims directly against Grace.

Grace has satisfied all of its financial obligations to the PI Trust. Grace has contingent financial obligations remaining to the PD Trust. With respect to property damage claims related to Grace's former Zonolite attic insulation product installed in the U.S. ("ZAI PD Claims"), the PD Trust was funded with $34.4 million on the Effective Date and $30.0 million on February 3, 2017. Grace is also obligated to make up to 10 contingent deferred payments of $8 million per year to the PD Trust in respect of ZAI PD Claims during the 20-year period beginning on the fifth anniversary of the Effective Date, with each such payment due only if the assets of the PD

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Notes to Consolidated Financial Statements (Continued)

8. Commitments and Contingent Liabilities (Continued)

Trust in respect of ZAI PD Claims fall below $10 million during the preceding year. Grace has not accrued for the 10 additional payments as Grace does not have sufficient information to conclude that they are probable. Grace is not obligated to make additional payments to the PD Trust in respect of ZAI PD Claims beyond the payments described above. Grace has satisfied all of its financial obligations with respect to Canadian ZAI PD Claims.

With respect to other asbestos property damage claims (“Other PD Claims”), claims unresolved as of the Effective Date are to be litigated in the bankruptcy court and any future claims are to be litigated in a federal district court, in each case pursuant to procedures approved by the bankruptcy court. To the extent any such Other PD Claims are determined to be allowed claims, they are to be paid in cash by the PD Trust. Grace is obligated to make a payment to the PD Trust every six months in the amount of any Other PD Claims allowed during the preceding six months plus interest (if applicable) and the amount of PD Trust expenses for the preceding six months (the “PD Obligation”). Grace has not paid any Other PD Claims since emergence. Annual expenses have been approximately $0.2 million per year. The aggregate amount to be paid under the PD Obligation is not capped and Grace may be obligated to make additional payments to the PD Trust in respect of the PD Obligation. Grace has accrued for those unresolved Other PD Claims that it believes are probable and estimable. Grace has not accrued for other unresolved or unasserted Other PD Claims as it does not believe that payment is probable.

All payments to the PD Trust required after the Effective Date are secured by the Company’s obligation to issue 77,372,257 shares of Company common stock to the PD Trust in the event of default, subject to customary anti-dilution provisions.

This summary of the commitments and contingencies related to the Chapter 11 proceeding does not purport to be complete and is qualified in its entirety by reference to the plan of reorganization and the exhibits and documents related thereto, which have been filed with the SEC and are readily available on the internet at www.sec.gov.

Legacy Environmental Liabilities   Grace is subject to loss contingencies resulting from extensive and evolving federal, state, local and foreign environmental laws and regulations relating to its manufacturing operations. Grace has procedures in place to minimize such contingencies; nevertheless, it has liabilities associated with past operations and additional claims may arise in the future. To address its legacy liabilities, Grace accrues for anticipated costs of response efforts where an assessment has indicated that a probable liability has been incurred and the cost can be reasonably estimated. These accruals do not take into account any discounting for the time value of money.

Grace’s environmental liabilities are reassessed regularly and adjusted when circumstances become better defined or response efforts and their costs can be better estimated, typically as a matter moves through the life-cycle of environmental investigation and remediation. These liabilities are evaluated based on currently available information, relating to the nature and extent of contamination, risk assessments, feasibility of response actions, and apportionment amongst other potentially responsible parties, all evaluated in light of prior experience.

At June 30, 2018, Grace’s estimated liability for legacy environmental response costs totaled $61.2 million, compared with $70.3 million at December 31, 2017, and was included in “other current liabilities” and “other liabilities” in the Consolidated Balance Sheets. These amounts are based on agreements in place or on Grace’s estimate of costs where no formal remediation plan exists, yet there is sufficient information to estimate response costs.

Vermiculite-Related Matters

Grace purchased a vermiculite mine in Libby, Montana, in 1963 and operated it until 1990. Vermiculite concentrate from the Libby mine was used in the manufacture of attic insulation and other products. Some of the vermiculite ore contained naturally occurring asbestos.

Grace is engaged with the U.S. Environmental Protection Agency (the “EPA”) and other federal, state and local governmental agencies in a remedial investigation and feasibility study (“RI/FS”) of the Libby mine and the surrounding area, known as Operable Unit 3 (“OU3”). The RI/FS will determine the specific areas within OU3

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Notes to Consolidated Financial Statements (Continued)

8. Commitments and Contingent Liabilities (Continued)

requiring remediation and will identify possible remedial action alternatives. Possible remedial actions within OU3 are wide-ranging, from institutional controls such as land use restrictions, to more active measures involving soil removal, containment projects, or other protective measures. When meaningful new information becomes available, Grace will reevaluate the estimated liability for the costs for remediation of the mine and surrounding area and adjust its reserves accordingly. Grace expects certain cost information based on the ongoing feasibility study to become available later in 2018 and, based on communications with regulatory agencies, anticipates that the EPA will issue the record of decision in or after 2020.

The EPA is also investigating or remediating formerly owned or operated sites that processed Libby vermiculite into finished products. Grace is cooperating with the EPA on these investigation and remediation activities, and has recorded a liability to the extent that its review has indicated that a probable liability has been incurred and the cost is estimable. These liabilities cover the estimated cost of investigations and, to the extent an assessment has indicated that remediation is necessary, the estimated cost of response actions. Response actions typically involve soil excavation and removal, and replacement with clean fill. The EPA may commence additional investigations in the future at other sites that processed Libby vermiculite, but Grace does not believe, based on its knowledge of prior and current operations and site conditions, that liability for remediation at such other sites is probable.

Grace’s total estimated liability for response costs that are currently estimable for the Libby mine and surrounding area, and at vermiculite processing sites outside of Libby, at June 30, 2018, and December 31, 2017, was $18.1 million and $25.8 million, respectively. It is probable that Grace’s ultimate liability for these vermiculite-related matters will exceed current estimates by material amounts.

Non-Vermiculite-Related Matters

At June 30, 2018, and December 31, 2017, Grace’s estimated legacy environmental liability for response costs at sites not related to its former vermiculite mining and processing activities was $43.1 million and $44.5 million, respectively. This liability relates to Grace’s former businesses or operations, including its share of liability at off-site disposal facilities. Grace’s estimated liability is based upon regulatory requirements and environmental conditions at each site. As Grace receives new information, its estimated liability may change materially.

Commercial and Financial Commitments and Contingencies

Purchase Commitments   Grace uses purchase commitments to ensure supply and to minimize the volatility of major components of direct manufacturing costs including natural gas, certain metals, rare earths, and other materials. Such commitments are for quantities that Grace fully expects to use in its normal operations.

Guarantees and Indemnification Obligations   Grace is a party to many contracts containing guarantees and indemnification obligations. These contracts primarily consist of:

- Product warranties with respect to certain products sold to customers in the ordinary course of business. These warranties typically provide that products will conform to specifications. Grace accrues a warranty liability on a transaction-specific basis depending on the individual facts and circumstances related to each sale.
- Performance guarantees offered to customers under certain licensing arrangements. Grace has not established a liability for these arrangements based on past performance.
- Licenses of intellectual property by Grace to third parties in which Grace has agreed to indemnify the licensee against third party infringement claims.
- Contracts providing for the sale or spin-off of a former business unit or product line in which Grace has agreed to indemnify the buyer or resulting entity against certain liabilities related to activities prior to the closing of the transaction, including environmental, tax, and employee liabilities.

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Notes to Consolidated Financial Statements (Continued)

8. Commitments and Contingent Liabilities (Continued)

- Guarantees of real property lease obligations of third parties, typically arising out of (a) leases entered into by former subsidiaries of Grace, or (b) the assignment or sublease of a lease by Grace to a third party.

Financial Assurances   Financial assurances have been established for a variety of purposes, including insurance and environmental matters, trade-related commitments and other matters. As of June 30, 2018, Grace had gross financial assurances issued and outstanding of $141.3 million, composed of $67.8 million of surety bonds issued by various insurance companies and $73.5 million of standby letters of credit and other financial assurances issued by various banks.

9. Restructuring Expenses and Repositioning Expenses

Restructuring Expenses   Grace incurred costs from restructuring actions, primarily related to workforce reductions as a result of changes in the business environment and its business structure, which are included in “restructuring and repositioning expenses” in the Consolidated Statements of Operations. Restructuring costs in 2018 primarily related to plant exit costs and sales force reorganization. Restructuring costs in 2017 primarily related to workforce reduction programs in manufacturing, supply chain, finance and IT.

The following table presents restructuring expenses by reportable segment for the three and six months ended June 30, 2018.

	Three Months Ended June 30,		Six Months Ended June 30,	
(In millions)	2018	2017	2018	2017
Catalysts Technologies	$1.0	$—	$1.5	$0.4
Materials Technologies	—	0.1	0.4	0.3
Corporate	—	1.9	0.1	4.1
Total restructuring expenses	$1.0	$2.0	$2.0	$4.8

These costs are not included in segment operating income. Substantially all costs related to the restructuring programs are expected to be paid by September 30, 2018.

The following table presents components of the change in the restructuring liability from December 31, 2017, to June 30, 2018.

	(In millions)
Balance, December 31, 2017	$ 6.7
Accruals for severance and other costs	2.0
Payments	(5.1)
Currency translation adjustments and other	0.1
Balance, June 30, 2018	$ 3.7

Repositioning Expenses   Repositioning expenses primarily include third-party costs related to transformative productivity programs. Pretax repositioning expenses for the three and six months ended June 30, 2018, were $17.8

million and $22.4 million, respectively, compared with $3.3 million and $2.8 million, respectively, for the corresponding prior-year periods.

Expenses incurred in 2018 primarily related to the 2018 second quarter write-off of $8.5 million of prior plant engineering costs as a result of terminating an expansion project no longer necessary due to the polyolefin catalysts acquisition (see Note 16), and $8.1 million for a multi-year program to transform manufacturing and business processes to extend Grace’s competitive advantages and improve its cost position, of which $4.9 million

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Notes to Consolidated Financial Statements (Continued)

9. Restructuring Expenses and Repositioning Expenses (Continued)

was recorded in the 2018 second quarter. Excluding asset write-offs, substantially all of these expenses have been or are expected to be settled in cash.

10. Other (Income) Expense, net

Components of other (income) expense, net are as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
(In millions)	2018	2017	2018	2017
Defined benefit pension (income) expense other than service cost	$(3.4)	$(3.2)	(6.8)	(4.4)
Third-party acquisition-related costs	5.8	—	6.7	—
Loss on early extinguishment of debt	4.8	—	4.8	—
Currency transaction effects	(2.7)	1.5	(3.1)	2.0
Net (gain) loss on sales of investments and disposals of assets	0.9	0.4	1.3	0.8
Chapter 11 expenses, net	0.5	0.6	1.0	1.5
Business interruption insurance recovery	—	(10.6)	—	(13.1)
Other miscellaneous (income) expense	(0.1)	(0.1)	(0.4)	(0.1)
Total other (income) expense, net	$5.8	$(11.4)	$3.5	$(13.3)

In January 2017, a Catalysts Technologies customer experienced an explosion and fire resulting in an extended outage. Grace received $25.0 million in payments from its third-party insurer in 2017, including $10.4 million through June 30, 2017, under its business interruption insurance policy for lost profits as a result of the outage. The policy has a $25 million limit per event.

11. Other Comprehensive Income (Loss)

The following tables present the pre-tax, tax, and after-tax components of Grace's other comprehensive income (loss) for the three and six months ended June 30, 2018 and 2017:

Three Months Ended June 30, 2018 (In millions)	Pre-Tax Amount	Tax Benefit/ (Expense)	After-Tax Amount
Defined benefit pension and other postretirement plans:			
Amortization of net prior service credit included in net periodic benefit cost	$ (0.4)	$ 0.1	$ (0.3)
Amortization of net deferred actuarial loss included in net periodic benefit cost	0.1	—	0.1
Benefit plans, net	(0.3)	0.1	(0.2)
Currency translation adjustments	40.6	(2.7)	37.9
Gain (loss) from hedging activities	(8.2)	3.0	(5.2)
Other comprehensive income (loss) attributable to W. R. Grace & Co. shareholders	$ 32.1	$ 0.4	$ 32.5

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Notes to Consolidated Financial Statements (Continued)

11. Other Comprehensive Income (Loss) (Continued)

Six Months Ended June 30, 2018 (In millions)	Pre-Tax Amount	Tax Benefit/ (Expense)	After-Tax Amount
Defined benefit pension and other postretirement plans:			
Amortization of net prior service credit included in net periodic benefit cost	$ (0.8)	$ 0.2	$ (0.6)
Amortization of net deferred actuarial loss included in net periodic benefit cost	0.2	—	0.2
Benefit plans, net	(0.6)	0.2	(0.4)
Currency translation adjustments	19.8	(0.1)	19.7
Gain (loss) from hedging activities	(5.6)	2.2	(3.4)
Other comprehensive income (loss) attributable to W. R. Grace & Co. shareholders	$ 13.6	$ 2.3	$ 15.9

Three Months Ended June 30, 2017 (In millions)	Pre-Tax Amount	Tax Benefit/ (Expense)	After-Tax Amount
Defined benefit pension and other postretirement plans:			
Amortization of net prior service credit included in net periodic benefit cost	$ (0.6)	$ 0.2	$ (0.4)
Amortization of net deferred actuarial loss included in net periodic benefit cost	0.1	(0.1)	—
Benefit plans, net	(0.5)	0.1	(0.4)
Currency translation adjustments	(8.3)	—	(8.3)
Gain (loss) from hedging activities	(0.2)	—	(0.2)
Other comprehensive income (loss) attributable to W. R. Grace & Co. shareholders	$ (9.0)	$ 0.1	$ (8.9)

Six Months Ended June 30, 2017 (In millions)	Pre-Tax Amount	Tax Benefit/ (Expense)	After-Tax Amount
Defined benefit pension and other postretirement plans:			
Amortization of net prior service credit included in net periodic benefit cost	$ (1.2)	$ 0.4	$ (0.8)
Amortization of net deferred actuarial loss included in net periodic benefit cost	0.2	(0.1)	0.1
Benefit plans, net	(1.0)	0.3	(0.7)
Currency translation adjustments	(9.7)	—	(9.7)
Gain (loss) from hedging activities	0.7	(0.2)	0.5
Other comprehensive income (loss) attributable to W. R. Grace & Co. shareholders	$ (10.0)	$ 0.1	$ (9.9)

The following tables present the changes in accumulated other comprehensive income (loss), net of tax, for the six months ended June 30, 2018 and 2017:

Six Months Ended June 30, 2018 (In millions)	Defined Benefit Pension and Other Postretirement Plans	Currency Translation Adjustments	Gain (Loss) from Hedging Activities	Total
Beginning balance	$ 0.9	$ 41.6	$ (2.6)	$ 39.9
Other comprehensive income (loss) before reclassifications	—	19.7	20.0	39.7
Amounts reclassified from accumulated other comprehensive income (loss)	(0.4)	—	(23.4)	(23.8)
Net current-period other comprehensive income (loss)	(0.4)	19.7	(3.4)	15.9

Ending balance	$ 0.5	$ 61.3	$ (6.0)	$55.8

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Notes to Consolidated Financial Statements (Continued)

11. Other Comprehensive Income (Loss) (Continued)

Six Months Ended June 30, 2017 (In millions)	Defined Benefit Pension and Other Postretirement Plans	Currency Translation Adjustments	Gain (Loss) from Hedging Activities	Total
Beginning balance	$ 2.2	$ 67.6	$ (3.4)	$66.4
Other comprehensive income (loss) before reclassifications	—	(9.7)	(0.7)	(10.4)
Amounts reclassified from accumulated other comprehensive income (loss)	(0.7)	—	1.2	0.5
Net current-period other comprehensive income (loss)	(0.7)	(9.7)	0.5	(9.9)
Ending balance	$ 1.5	$ 57.9	$ (2.9)	$56.5

Grace is a global enterprise operating in many countries with local currency generally deemed to be the functional currency for accounting purposes. The currency translation amount represents the adjustments necessary to translate the balance sheets valued in local currencies to the U.S. dollar as of the end of each period presented, and to translate revenues and expenses at average exchange rates for each period presented.

See Note 4 for a discussion of hedging activities. See Note 6 for a discussion of pension plans and other postretirement benefit plans.

12. Earnings Per Share

The following table shows a reconciliation of the numerators and denominators used in calculating basic and diluted earnings per share.

	Three Months Ended June 30,		Six Months Ended June 30,	
(In millions, except per share amounts)	2018	2017	2018	2017
Numerators				
Net income (loss) attributable to W. R. Grace & Co. shareholders	$38.8	$43.9	$82.4	$86.8
Denominators				
Weighted average common shares—basic calculation	67.3	68.3	67.4	68.3
Dilutive effect of employee stock options	0.1	0.1	0.1	0.2
Weighted average common shares—diluted calculation	67.4	68.4	67.5	68.5
Basic earnings per share	$0.58	$0.64	$1.22	$1.27
Diluted earnings per share	$0.58	$0.64	1.22	1.27

There were 1.4 million and 1.7 million anti-dilutive options outstanding for the three and six months ended June 30, 2018, compared with 1.6 million and 1.5 million for the corresponding prior-year periods.

On February 5, 2015, the Company announced that its Board of Directors had authorized a share repurchase program of up to $500 million, which it completed on July 10, 2017. On February 8, 2017, the Company announced that its Board of Directors authorized an additional share repurchase program of up to $250 million, expected to be completed over the next 24 to 36 months at the discretion of management. The timing of the repurchases and the actual amount repurchased will depend on a variety of factors, including the market price of the Company's shares, the strategic deployment of capital, and general market and economic conditions. During the six months ended June 30, 2018 and 2017, the Company repurchased 723,441 shares and 425,673 shares of Company common stock for $49.8 million and

$30.0 million, respectively, pursuant to the terms of the share repurchase programs. As of June 30, 2018, $169.1 million remained under the current authorization.

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Notes to Consolidated Financial Statements (Continued)

13. Revenues

Grace generates revenues from customer arrangements primarily by manufacturing and delivering specialty chemicals and specialty materials through its two reportable segments. See Note 14 for additional information about Grace's reportable segments.

Disaggregation of Revenue   The following tables present Grace's revenues by geography and product group, within its respective reportable segments, for the three and six months ended June 30, 2018 and 2017.

Three Months Ended June 30, 2018 (In millions)	North America	Europe Middle East Africa (EMEA)	Asia Pacific	Latin America	Total
Catalysts Technologies:					
Refining Catalysts	$ 67.2	$ 61.0	$ 53.4	$ 14.5	$196.1
Polyolefin and Chemical Catalysts	51.6	66.6	45.2	4.9	168.3
Total	$ 118.8	$ 127.6	$ 98.6	$ 19.4	$364.4
Materials Technologies:					
Coatings	$ 7.7	$ 19.7	$ 11.4	$ 2.4	$41.2
Consumer/Pharma	8.9	13.5	5.9	4.7	33.0
Chemical process	10.1	20.9	8.0	2.3	41.3
Other	1.9	3.7	0.2	—	5.8
Total	$ 28.6	$ 57.8	$ 25.5	$ 9.4	$121.3

Six Months Ended June 30, 2018 (In millions)	North America	EMEA	Asia Pacific	Latin America	Total
Catalysts Technologies:					
Refining Catalysts	$ 137.1	$122.3	$92.2	$ 27.9	$379.5
Polyolefin and Chemical Catalysts	83.8	125.0	83.2	8.7	300.7
Total	$ 220.9	$247.3	$175.4	$ 36.6	$680.2
Materials Technologies:					
Coatings	$ 14.8	$40.2	$23.2	$ 4.7	$82.9
Consumer/Pharma	16.6	26.7	10.2	9.4	62.9
Chemical process	17.5	41.7	15.2	4.6	79.0
Other	3.6	8.2	0.3	0.1	12.2
Total	$ 52.5	$116.8	$48.9	$ 18.8	$237.0

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Notes to Consolidated Financial Statements (Continued)

13. Revenues (Continued)

Three Months Ended June 30, 2017 (In millions)	North America	EMEA	Asia Pacific	Latin America	Total
Catalysts Technologies:					
Refining Catalysts	$ 64.8	$53.9	$ 50.2	$ 17.8	$186.7
Polyolefin and Chemical Catalysts	30.4	55.3	44.6	3.5	133.8
Total	$ 95.2	$109.2	$ 94.8	$ 21.3	$320.5
Materials Technologies:					
Coatings	$ 6.1	$17.9	$ 9.1	$ 2.0	$35.1
Consumer/Pharma	11.1	10.4	4.2	4.4	30.1
Chemical process	7.0	23.1	7.4	1.5	39.0
Other	1.4	3.3	—	0.1	4.8
Total(1)	$ 25.6	$54.7	$ 20.7	$ 8.0	$109.0

(1) Under the modified retrospective method, prior-period information has not been adjusted and continues to be reported in accordance with Grace's historical accounting under ASC 605.

Six Months Ended June 30, 2017 (In millions)	North America	EMEA	Asia Pacific	Latin America	Total
Catalysts Technologies:					
Refining Catalysts	$ 126.6	$108.0	$91.9	$ 38.6	$365.1
Polyolefin and Chemical Catalysts	58.0	99.5	83.2	8.5	249.2
Total	$ 184.6	$207.5	$175.1	$ 47.1	$614.3
Materials Technologies:					
Coatings	$ 13.1	$34.5	$18.6	$ 4.0	$70.2
Consumer/Pharma	21.4	22.6	7.4	9.2	60.6
Chemical process	14.4	41.7	14.2	2.6	72.9
Other	3.0	6.3	0.1	0.1	9.5
Total(1)	$ 51.9	$105.1	$40.3	$ 15.9	$213.2

(1) Under the modified retrospective method, prior-period information has not been adjusted and continues to be reported in accordance with Grace's historical accounting under ASC 605.

Contract Balances   Grace invoices customers for product sales once performance obligations have been satisfied, generally at the point of delivery, at which point payment becomes unconditional. Accordingly, Grace's product sales contracts generally do not give rise to material contract assets or liabilities under ASC 606; however, from time to time certain customers may pay in advance. In the technology licensing business, Grace invoices licensees based on milestones achieved but has obligations to provide services in future periods, which results in contract liabilities.

The following table presents Grace's deferred revenue balances as of June 30, 2018, and December 31, 2017:

(In millions)	June 30, 2018	December 31, 2017
Current	$ 26.0	$ 19.5
Noncurrent	22.3	14.9
Total	$ 48.3	$ 34.4

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Notes to Consolidated Financial Statements (Continued)

13. Revenues (Continued)

These amounts are included as deferred revenue in “other current liabilities” and “other liabilities” in Grace's Consolidated Balance Sheets. Grace records deferred revenues when cash payments are received or due in advance of performance. The increase in deferred revenue reflects cash payments from customers received or due in advance of satisfying performance obligations, offset by $10.3 million of revenue recognized that was included in the deferred revenue balance as of December 31, 2017, and the $3.2 million cumulative adjustment recorded to “retained earnings” as part of the adoption of ASC 606.

The noncurrent portion of the technology licensing revenue will be recognized as performance obligations under the technology licensing agreements are satisfied; the noncurrent balance is expected to be recognized over the next four years.

Remaining performance obligations represent the estimated revenue expected to be recognized in the future related to performance obligations that are unsatisfied (or partially unsatisfied). The aggregate amount of the transaction price allocated to remaining performance obligations for such contracts with a duration of more than one year was approximately $92 million as of June 30, 2018, and includes certain amounts reported as deferred revenue above. In accordance with the practical expedient in ASC 606-10-50-14, Grace does not disclose information about remaining performance obligations that have original expected durations of one year or less. Grace expects to recognize revenue related to remaining performance obligations over several years, as follows:

Year	Approximate percentage of revenue related to remaining performance obligations recognized	
2018	12	%
2019	29	%
2020	23	%
Thereafter through 2024	36	%
	100	%

For the three and six months ended June 30, 2018, revenue recognized from performance obligations related to prior periods was not material. Grace has not capitalized any costs to obtain or fulfill contracts with customers under ASC 606. No material impairment losses have been recognized on any receivables or contract assets arising from contracts with customers.

14. Segment Information

Grace is a global producer of specialty chemicals and specialty materials. Grace’s two reportable business segments are Grace Catalysts Technologies and Grace Materials Technologies. Grace Catalysts Technologies includes catalysts and related products and technologies used in refining, petrochemical and other chemical manufacturing applications. Advanced Refining Technologies (“ART”), Grace’s joint venture with Chevron Products Company, a division of Chevron U.S.A. Inc. (“Chevron”), is managed in this segment. (See Note 15.) Grace Catalysts Technologies comprises two operating segments, Grace Refining Technologies and Grace Specialty Catalysts, which are aggregated into one reportable segment based upon similar economic characteristics, the nature of the products and production processes, type and class of customer, and channels of distribution. Grace Materials Technologies includes specialty materials, including silica-based and silica-alumina-based materials, used in coatings, consumer, industrial, and pharmaceutical

applications. The table below presents information related to Grace's reportable segments. Only those corporate expenses directly related to the reportable segments are allocated for reporting purposes. All remaining corporate items are reported separately and labeled as such.

Grace excludes defined benefit pension expense from the calculation of segment operating income. Grace believes that the exclusion of defined benefit pension expense provides a better indicator of its reportable segment performance as defined benefit pension expense is not managed at a reportable segment level.

Grace defines Adjusted EBIT to be net income attributable to W. R. Grace & Co. shareholders adjusted for interest income and expense; income taxes; costs related to legacy product, environmental and other claims;

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Notes to Consolidated Financial Statements (Continued)

14. Segment Information (Continued)

restructuring and repositioning expenses and asset impairments; pension costs other than service and interest costs, expected returns on plan assets, and amortization of prior service costs/credits; income and expense items related to divested businesses, product lines, and certain other investments; gains and losses on sales of businesses, product lines, and certain other investments; third-party acquisition-related costs and the amortization of acquired inventory fair value adjustment; and certain other items that are not representative of underlying trends.

Reportable Segment Data

(In millions)	Three Months Ended June 30, 2018	Three Months Ended June 30, 2017	Six Months Ended June 30, 2018	Six Months Ended June 30, 2017
Net Sales				
Catalysts Technologies	$364.4	$320.5	$680.2	$614.3
Materials Technologies	121.3	109.0	237.0	213.2
Total	$485.7	$429.5	$917.2	$827.5
Adjusted EBIT				
Catalysts Technologies segment operating income	$113.7	$101.3	$205.8	$182.5
Materials Technologies segment operating income	29.6	24.2	53.7	49.0
Corporate costs	(19.8)	(18.3)	(36.4)	(34.4)
Certain pension costs	(4.0)	(3.2)	(7.8)	(6.3)
Total	$119.5	$104.0	$215.3	$190.8

Corporate costs include corporate support function costs and other corporate costs such as professional fees and insurance premiums. Certain pension costs include only ongoing costs recognized quarterly, which include service and interest costs, expected returns on plan assets, and amortization of prior service costs/credits.

Reconciliation of Reportable Segment Data to Financial Statements Grace Adjusted EBIT for the three and six months ended June 30, 2018 and 2017, is reconciled below to “income (loss) before income taxes” presented in the accompanying Consolidated Statements of Operations.

(In millions)	Three Months Ended June 30, 2018	Three Months Ended June 30, 2017	Six Months Ended June 30, 2018	Six Months Ended June 30, 2017
Grace Adjusted EBIT	$119.5	$104.0	$215.3	$190.8
Restructuring and repositioning expenses	(18.8)	(5.4)	(24.4)	(7.7)
Third-party acquisition-related costs	(5.8)	—	(6.7)	—
Loss on early extinguishment of debt	(4.8)	—	(4.8)	—
Amortization of acquired inventory fair value adjustment	(4.6)	—	(4.6)	—
Costs related to legacy product, environmental and other claims	(2.8)	(14.9)	(4.3)	(17.0)
Income and expense items related to divested businesses	0.6	(0.7)	0.1	(1.0)
Pension MTM adjustment and other related costs, net	—	—	—	(1.9)
Interest expense, net	(19.5)	(19.5)	(38.4)	(38.8)
Net income (loss) attributable to noncontrolling interests	(0.2)	(0.4)	(0.4)	(0.4)
Income (loss) before income taxes	$63.6	$63.1	$131.8	$124.0

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Notes to Consolidated Financial Statements (Continued)

14. Segment Information (Continued)

Geographic Area Data The table below presents information related to the geographic areas in which Grace operates. Sales are attributed to geographic areas based on customer location.

	Three Months Ended June 30,		Six Months Ended June 30,	
(In millions)	2018	2017	2018	2017
Net Sales				
United States	$ 138.1			