CRANE CO /DE/
Form 10-Q
May 01, 2019

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-Q
Mark One:
x QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the Quarterly Period Ended March 31, 2019
OR
o TRANSITION REPORT PURSUANT TO SECTION 13 or 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the Transition Period from to
Commission File Number: 1-1657
CRANE CO.
(Exact name of registrant as specified in its charter)

Delaware	13-1952290
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

100 First Stamford Place, Stamford, CT	06902
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: 203-363-7300
(Not Applicable)
(Former name, former address and former fiscal year, if changed since last report)
Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes x No o
Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes x No o
Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non–accelerated filer, or 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. (check one):

Large accelerated filer	x	Accelerated filer	o
Non-accelerated filer	o	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 x

The number of shares outstanding of the issuer's classes of common stock, as of March 29, 2019
Common stock, $1.00 Par Value – 59,888,100 shares

Crane Co.
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PART I: FINANCIAL INFORMATION

ITEM 1: FINANCIAL STATEMENTS
CRANE CO. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(IN MILLIONS, EXCEPT PER SHARE DATA)
(UNAUDITED)

	Three Months Ended March 31,	
	2019	2018
Net sales	$831.7	$799.1
Operating costs and expenses:		
Cost of sales	526.6	521.2
Selling, general and administrative	187.4	177.6
Acquisition-related and integration charges	1.1	5.2
Restructuring charges	2.9	0.8
Operating profit	113.7	94.3
Other income (expense):		
Interest income	0.6	0.8
Interest expense	(11.9)	(14.6)
Miscellaneous income, net	2.0	3.9
	(9.3)	(9.9)
Income before income taxes	104.4	84.4
Provision for income taxes	21.9	15.7
Net income before allocation to noncontrolling interests	82.5	68.7
Less: Noncontrolling interest in subsidiaries’ earnings	0.1	—
Net income attributable to common shareholders	$82.4	$68.7
Earnings per share:		
Basic	$1.38	$1.15
Diluted	$1.36	$1.13
Average shares outstanding:		
Basic	59.8	59.7
Diluted	60.7	61.0
Dividends per share	$0.39	$0.35

See Notes to Condensed Consolidated Financial Statements.

CRANE CO. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(IN MILLIONS)
(UNAUDITED)

	Three Months Ended March 31,	
	2019	2018
Net income before allocation to noncontrolling interests	$82.5	$68.7
Components of other comprehensive income (loss), net of tax		
Currency translation adjustment	(0.8)	25.4
Changes in pension and postretirement plan assets and benefit obligation, net of tax	2.9	9.6
Other comprehensive income, net of tax	2.1	35.0
Comprehensive income before allocation to noncontrolling interests	84.6	103.7
Less: Noncontrolling interests in comprehensive income	(0.6)	—
Comprehensive income attributable to common shareholders	$85.2	$103.7

See Notes to Condensed Consolidated Financial Statements.

CRANE CO. AND SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS
(IN MILLIONS)
(UNAUDITED)

	March 31, 2019	December 31, 2018
Assets		
Current assets:		
Cash and cash equivalents	$ 256.8	$ 343.4
Accounts receivable, net	573.8	515.8
Current insurance receivable - asbestos	16.0	16.0
Inventories, net:		
Finished goods	140.6	116.2
Finished parts and subassemblies	43.0	45.9
Work in process	60.8	55.4
Raw materials	196.2	194.0
Inventories, net	440.6	411.5
Other current assets	84.1	76.2
Total current assets	1,371.3	1,362.9
Property, plant and equipment:		
Cost	1,194.3	1,185.6
Less: accumulated depreciation	598.5	586.5
Property, plant and equipment, net	595.8	599.1
Long-term insurance receivable - asbestos	71.9	75.0
Long-term deferred tax assets	1.4	18.8
Other assets	219.3	101.4
Intangible assets, net	471.0	481.8
Goodwill	1,411.6	1,403.7
Total assets	$ 4,142.3	$ 4,042.7

See Notes to Condensed Consolidated Financial Statements.

CRANE CO. AND SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS
(IN MILLIONS, EXCEPT SHARE AND PER SHARE DATA)
(UNAUDITED)

	March 31, 2019	December 31, 2018
Liabilities and equity		
Current liabilities:		
Short-term borrowings and current maturities of long-term debt	$ 63.1	$ 6.9
Accounts payable	263.2	329.2
Current asbestos liability	66.0	66.0
Accrued liabilities	310.3	337.1
U.S. and foreign taxes on income	1.1	1.0
Total current liabilities	703.7	740.2
Long-term debt	940.2	942.3
Accrued pension and postretirement benefits	234.4	244.0
Long-term deferred tax liability	53.7	53.2
Long-term asbestos liability	438.5	451.3
Other liabilities	178.8	84.6
Total liabilities	2,549.3	2,515.6
Commitments and contingencies (Note 12)		
Equity:		
Preferred shares, par value $0.01; 5,000,000 shares authorized	—	—
Common shares, par value $1.00; 200,000,000 shares authorized, 72,426,139 shares issued	72.4	72.4
Capital surplus	299.2	303.5
Retained earnings	2,131.1	2,072.1
Accumulated other comprehensive loss	(445.5)	(447.6)
Treasury stock	(466.6)	(476.2)
Total shareholders’ equity	1,590.6	1,524.2
Noncontrolling interests	2.4	2.9
Total equity	1,593.0	1,527.1
Total liabilities and equity	$ 4,142.3	$ 4,042.7
Share data:		
Common shares issued	72,426,139	72,426,139
Less: Common shares held in treasury	(12,538,039)	(12,917,713)
Common shares outstanding	59,888,100	59,508,426

See Notes to Condensed Consolidated Financial Statements.

CRANE CO. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(IN MILLIONS)
(UNAUDITED)

	Three Months Ended March 31, 2019	2018
Operating activities:		
Net income attributable to common shareholders	$82.4	$68.7
Noncontrolling interests in subsidiaries’ earnings	0.1	—
Net income before allocation to noncontrolling interests	82.5	68.7
Loss on deconsolidation of joint venture	1.2	—
Depreciation and amortization	27.7	27.9
Stock-based compensation expense	5.5	5.6
Defined benefit plans and postretirement credit	(2.0)	(3.9)
Deferred income taxes	5.4	12.7
Cash used for operating working capital	(203.4)	(29.5)
Defined benefit plans and postretirement contributions	(4.3)	(4.5)
Environmental payments, net of reimbursements	(1.6)	(2.3)
Asbestos related payments, net of insurance recoveries	(9.7)	(2.9)
Other	(1.7)	2.4
Total (used for) provided by operating activities	(100.4)	74.2
Investing activities:		
Capital expenditures	(19.8)	(27.5)
Proceeds from disposition of capital assets	—	0.3
Impact of deconsolidation of joint venture	(0.2)	—
Payment for acquisition - net of cash acquired	—	(672.3)
Total used for investing activities	(20.0)	(699.5)
Financing activities:		
Dividends paid	(23.4)	(20.9)
Stock options exercised - net of shares reacquired	(0.4)	4.5
Debt issuance costs	—	(5.4)
Proceeds received from issuance of long-term debt	3.0	550.0
Proceeds received from issuance of short-term debt	—	100.0
Proceeds from commercial paper	55.5	272.7
Repayment of long-term debt	(1.4)	(250.0)
Repayment of short-term debt	—	(100.0)
Total provided by financing activities	33.3	550.9
Effect of exchange rates on cash and cash equivalents	0.5	10.5
Decrease in cash and cash equivalents	(86.6)	(63.9)
Cash and cash equivalents at beginning of period	343.4	706.2
Cash and cash equivalents at end of period	$256.8	$642.3
Detail of cash used for operating working capital:		
Accounts receivable	$(65.4)	$50.1
Inventories	(29.9)	(12.6)
Other current assets	(7.6)	(3.9)
Accounts payable	(65.9)	(53.6)
Accrued liabilities	(45.6)	(6.8)
U.S. and foreign taxes on income	11.0	(2.7)

Total	$(203.4)	$(29.5)
Supplemental disclosure of cash flow information:		
Interest paid	$9.1	$4.4
Income taxes paid	$5.5	$5.6

See Notes to Condensed Consolidated Financial Statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 1 - Basis of Presentation

The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America for interim financial reporting and the instructions to Form 10-Q and, therefore, reflect all adjustments which are, in the opinion of management, necessary for a fair statement of the results for the interim periods presented. All such adjustments are of a normal recurring nature. These interim condensed consolidated financial statements should be read in conjunction with the Consolidated Financial Statements and Notes to Consolidated Financial Statements in our Annual Report on Form 10-K for the year ended December 31, 2018.

Recent Accounting Pronouncements - Not Yet Adopted

Disclosure Requirements for Defined Benefit Plans

In August 2018, the Financial Accounting Standards Board (“FASB”) issued amended guidance to add, remove, and clarify disclosure requirements related to defined benefit pension and other postretirement plans. The amended guidance removes the requirements to disclose: amounts in accumulated other comprehensive income (loss) expected to be recognized as components of net periodic benefit cost over the next fiscal year; the amount and timing of plan assets expected to be returned to the entity; and the effects of a one-percentage point change in assumed health care cost trend rates. The amended guidance requires disclosure of an explanation of the reasons for significant gains and losses related to changes in the benefit obligation for the period. This guidance is effective for fiscal years ending after December 15, 2020, with early adoption permitted. The amended guidance is required to be applied on a retrospective basis to all periods presented. We are currently evaluating this guidance to determine the impact on our disclosures.

Measurement of Credit Losses on Financial Instruments

In June 2016, the FASB issued amended guidance that changes the impairment model for most financial assets and certain other instruments. For trade and other receivables, held-to-maturity debt securities, loans and other instruments, entities will be required to use a new forward-looking “expected loss” model that will replace today’s “incurred loss” model and generally will result in the earlier recognition of allowances for losses. For available-for-sale debt securities with unrealized losses, entities will measure credit losses in a manner similar to current practice, except that the losses will be recognized as an allowance. This amended guidance is effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. Entities will apply the standard’s provisions as a cumulative-effect adjustment to retained earnings as of the beginning of the first effective reporting period. We do not expect that the amended guidance will have a material effect on our consolidated financial statements and related disclosures.

Recent Accounting Pronouncements - Adopted

Leases

In February 2016, the FASB issued amended guidance on accounting for leases. The amended guidance requires the recognition of a right-of-use asset and a lease liability for all leases by lessees with the exception of leases with an initial term of twelve months or less and amends disclosure requirements associated with leasing arrangements.

On January 1, 2019, we adopted Accounting Standards Codification (“ASC”) 842, “Leases” (“the new standard” or “ASC 842”) using the modified retrospective method. Under this method, we elected to apply the new standard as of the application date. Results for reporting periods beginning after January 1, 2019 are presented under ASC 842, while prior period amounts continue to be reported under ASC 840, “Leases”. We elected to apply the package of practical expedients permitted within the new standard, which among other things, allows us to carryforward the historical lease classification. No other transition practical expedients were elected. We implemented a new system, processes, and controls to enable the preparation of financial information upon adoption.

The adoption of the new standard primarily impacted our accounting for operating leases which resulted in the recognition of right-of-use assets and corresponding lease liabilities. The accounting for finance leases did not substantially change under the new standard and we do not have significant finance leases. Upon adoption, we established a right-of-use asset of $109.1 million (included in Other assets) and a lease liability of $110.4 million (included in Accrued Liabilities and Other liabilities) at January 1, 2019. The adoption did not result in a cumulative-effect adjustment to retained earnings. The new standard did not impact our consolidated statements of operations or consolidated statements of cash flows.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 2 - Segment Results
Our segments are reported on the same basis used internally for evaluating performance and for allocating resources. We have four reportable segments: Fluid Handling, Payment & Merchandising Technologies, Aerospace & Electronics and Engineered Materials. Assets of the reportable segments exclude general corporate assets, which principally consist of cash, deferred tax assets, insurance receivables, certain property, plant and equipment, and certain other assets. Corporate consists of corporate office expenses including compensation and benefits for corporate employees, occupancy, depreciation, and other administrative costs.
A brief description of each of our segments are as follows:
Fluid Handling
The Fluid Handling segment is a provider of highly engineered fluid handling equipment for critical performance applications that require high reliability. The segment is comprised of Process Valves and Related Products, Commercial Valves, and Other Products. Process Valves and Related Products include on/off valves and related products for critical and demanding applications in the chemical, oil & gas, power, and general industrial end markets globally. Commercial Valves includes the manufacturing and distribution of valves and related products for the non-residential construction, general industrial, and to a lesser extent, municipal markets. Other Products include pumps and related products primarily for water and wastewater applications in the industrial, municipal, commercial and military markets.
Payment & Merchandising Technologies
The Payment & Merchandising Technologies segment consists of Crane Payment Innovations ("CPI"), Crane Merchandising Systems ("CMS") and Crane Currency. CPI provides high technology payment acceptance and dispensing products to original equipment manufacturers, including coin accepters and dispensers, coin hoppers, coin recyclers, bill validators and bill recyclers. CMS provides merchandising equipment, including include food, snack and beverage vending machines and vending machine software and online solutions. Crane Currency is a supplier of banknotes and highly engineered banknote security features.
Aerospace & Electronics
Aerospace & Electronics segment supplies critical components and systems, including original equipment and aftermarket parts, primarily for the commercial aerospace and military aerospace and defense markets.
Engineered Materials
Engineered Materials segment manufactures fiberglass-reinforced plastic ("FRP") panels and coils, primarily for use in the manufacturing of recreational vehicles ("RVs"), truck bodies and trailers (Transportation), with additional applications in commercial and industrial buildings (Building Products).

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

For the three months ended March 31, 2019, operating profit includes acquisition-related and integration charges and restructuring charges. For the three months ended March 31, 2018, operating profit includes acquisition-related and integration charges, acquisition-related inventory and backlog amortization and restructuring charges. See Note 4, “Acquisitions” for discussion of the acquisition-related costs. See Note 15, “Restructuring” for discussion of the restructuring charges.

	Three Months Ended March 31,	
(in millions)	2019	2018
Net sales		
Fluid Handling	$273.7	$266.6
Payment & Merchandising Technologies	303.8	292.4
Aerospace & Electronics	194.6	170.4
Engineered Materials	59.6	69.7
Total	$831.7	$799.1
Operating profit (loss)		
Fluid Handling	$34.1	$28.1
Payment & Merchandising Technologies	43.2	36.5
Aerospace & Electronics	44.8	34.2
Engineered Materials	9.4	12.4
Corporate	(17.8)	(16.9)
Total	113.7	94.3
Interest income	0.6	0.8
Interest expense	(11.9)	(14.6)
Miscellaneous income	2.0	3.9
Income before income taxes	$104.4	$84.4

(in millions)	March 31, 2019	December 31, 2018
Assets		
Fluid Handling	$936.9	$878.2
Payment & Merchandising Technologies	2,133.2	2,074.4
Aerospace & Electronics	632.7	603.9
Engineered Materials	232.2	222.1
Corporate	207.3	264.1
Total	$4,142.3	$4,042.7

(in millions)	March 31, 2019	December 31, 2018
Goodwill		
Fluid Handling	$240.2	$240.8
Payment & Merchandising Technologies	797.7	789.2
Aerospace & Electronics	202.4	202.4
Engineered Materials	171.3	171.3

Total	$ 1,411.6	$ 1,403.7

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 3 - Revenue
Disaggregation of Revenues
The following table presents net sales disaggregated by product line for each segment:

	Three Months Ended March 31,	
(in millions)	2019	2018
Fluid Handling		
Process Valves and Related Products	$168.0	$165.0
Commercial Valves	80.8	80.5
Other Products	24.9	21.1
Total Fluid Handling	$273.7	$266.6
Payment & Merchandising Technologies		
Payment Acceptance and Dispensing Products	$158.8	$145.4
Banknotes and Security Products	98.6	99.8
Merchandising Equipment	46.4	47.2
Total Payment & Merchandising Technologies	$303.8	$292.4
Aerospace & Electronics		
Commercial Original Equipment	$90.3	$84.7
Military and Other Original Equipment	51.5	42.1
Commercial Aftermarket Products	38.2	32.6
Military Aftermarket Products	14.6	11.0
Total Aerospace & Electronics	$194.6	$170.4
Engineered Materials		
FRP - Recreational Vehicles	$26.6	$37.4
FRP - Building Products	23.6	23.8
FRP - Transportation	9.4	8.5
Total Engineered Materials	$59.6	$69.7
Total net sales	$831.7	$799.1

Remaining Performance Obligations
The transaction price allocated to remaining performance obligations represents the transaction price of firm orders which have not yet been fulfilled, which we also refer to as total backlog. As of March 31, 2019, backlog was $1,106.5 million. We expect to recognize approximately 87% of our remaining performance obligations as revenue in 2019, an additional 10% by 2020 and the balance thereafter.
Contract Assets and Contract Liabilities
Contract assets represent unbilled amounts that typically arise from contracts for customized products or contracts for products sold directly to the U.S. government or indirectly to the U.S. government through subcontracts, where revenue recognized using the cost-to-cost method exceeds the amount billed to the customer. Contract assets are assessed for impairment and recorded at their net realizable value. Contract liabilities represent advance payments from customers. Revenue related to contract liabilities is recognized when control is transferred to the customer. We report contract assets, which are included within “Other current assets” in our Condensed Consolidated Balance Sheets, and contract liabilities, which are included within “Accrued liabilities” on our Condensed Consolidated Balance Sheets, on a contract-by-contract net basis at the end of each reporting period. Net contract assets and contract liabilities

consisted of the following:

(in millions)	March 31, 2019	December 31, 2018
Contract assets	$ 58.9	$ 54.9
Contract liabilities	$ 40.8	$ 50.8

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Revenue recognized in the three-month periods ended March 31, 2019 and 2018, that was included in the contract liability balance at the beginning of each year was $16.7 million and $10.8 million, respectively.

Note 4 - Acquisitions

Acquisitions are accounted for in accordance with ASC Topic 805, "Business Combinations" ("ASC 805"). Accordingly, we make an initial allocation of the purchase price at the date of acquisition based upon our understanding of the fair value of the acquired assets and assumed liabilities. We obtain this information during due diligence and through other sources. In the months after closing, as we obtain additional information about these assets and liabilities, including through tangible and intangible asset appraisals, we are able to refine estimates of fair value and more accurately allocate the purchase price. Only items identified as of the acquisition date are considered for subsequent adjustment. We will make appropriate adjustments to the purchase price allocation prior to completion of the measurement period, as required.

Crane Currency Acquisition

On January 10, 2018, we completed the acquisition of Crane & Co., Inc. ("Crane Currency"). The base purchase price of the acquisition was $800 million on a cash-free, debt-free basis, subject to a later adjustment reflecting Crane Currency's net working capital, cash, the assumption of certain debt-like items, and Crane Currency's transaction expenses. The amount paid, net of cash acquired, was $672.3 million. In July 2018, we received $24.3 million related to the final working capital adjustment of the Crane Currency acquisition, resulting in net cash paid of $648.0 million. To finance the acquisition, we issued commercial paper under our commercial paper program and utilized proceeds from term loans that we issued at the closing of the acquisition, as well as available cash on hand. At the closing, the transitory subsidiary of Crane Co. merged with and into Crane Currency, with Crane Currency surviving as a wholly owned subsidiary of Crane Co.

Crane Currency is a supplier of banknotes and highly engineered banknote security features which complement the existing portfolio of currency and payment products within the Payment & Merchandising Technologies segment. As such, Crane Currency was integrated into our Payment & Merchandising Technologies segment. The amount allocated to goodwill reflects the benefits we expect to realize from the acquisition, as the acquisition is expected to strengthen and broaden our product offering within the currency and payment markets. Goodwill from this acquisition is not deductible for tax purposes.

Crane Currency's results of operations have been included in our financial statements for the period subsequent to the completion of the acquisition on January 10, 2018. The pro forma impact for the stub period (January 1, 2018 through January 9, 2018) is not material.

Allocation of Consideration Transferred to Net Assets Acquired

The following amounts represent the determination of the fair value of identifiable assets acquired and liabilities assumed from our acquisition of Crane Currency. The fair value of certain assets and liabilities has been completed as required by ASC 805.

Net assets acquired (in millions)	
Total current assets	$199.6
Property, plant and equipment	298.0
Other assets	5.3
Intangible assets	252.8
Goodwill	217.1
Total assets acquired	$972.8
Total current liabilities	$107.2
Long-term debt	97.3
Other liabilities	120.3
Total assumed liabilities	$324.8

Net assets acquired	$648.0

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The amounts allocated to acquired intangible assets, and their associated weighted-average useful lives which were determined based on the period in which the assets are expected to contribute directly or indirectly to our future cash flows, consist of the following:

Intangible Assets (dollars in millions)	Intangible Fair Value	Weighted Average Life
Trademarks/trade names	$ 42.0	indefinite
Customer relationships	135.8	23.1
Product technology	74.0	8.4
Backlog	1.0	1.0
Total acquired intangible assets	$ 252.8	

In order to allocate the consideration transferred for Crane Currency, the fair values of all identifiable assets and liabilities must be established. For accounting and financial reporting purposes, fair value is defined under ASC Topic 820, "Fair Value Measurement and Disclosure" as the price that would be received upon sale of an asset or the amount paid to transfer a liability in an orderly transaction between market participants at the measurement date. Market participants are assumed to be buyers and sellers in the principal (most advantageous) market for the asset or liability. Additionally, fair value measurements for an asset assume the highest and best use of that asset by market participants. Use of different estimates and judgments could yield different results.

The fair values of the trademark and trade name intangible assets were determined by using an "income approach", specifically the relief-from-royalty approach, which is a commonly accepted valuation approach. This approach is based on the assumption that in lieu of ownership, a firm would be willing to pay a royalty in order to exploit the related benefits of this asset. Therefore, a portion of Crane Currency's earnings, equal to the after-tax royalty that would have been paid for the use of the asset, can be attributed to the firm's ownership. The trademark and trade names, Crane Currency and Crane are assigned an indefinite life and therefore will not be amortized.

The fair values of the product technology intangible assets were also determined by the relief-from-royalty approach. Similarly, this approach is based on the assumption that in lieu of ownership, a firm would be willing to pay a royalty in order to exploit the related benefits of the technology. Therefore, a portion of Crane Currency's earnings, equal to the after-tax royalty that would have been paid for the use of the technology, can be attributed to the firm's ownership of the technology. The technology assets are being amortized on a straight-line basis (which approximates the economic pattern of benefits) over the estimated economic life of 7 to 11 years.

The fair values of the customer relationships and backlog intangible assets were determined by using an "income approach" which is a commonly accepted valuation approach. Under this approach, the net earnings attributable to the asset or liability being measured are isolated using the discounted projected net cash flows. These projected cash flows are isolated from the projected cash flows of the combined asset group over the remaining economic life of the intangible asset or liability being measured. Both the amount and the duration of the cash flows are considered from a market participant perspective. Our estimates of market participant net cash flows considered historical and projected pricing, operational performance including market participant synergies, aftermarket retention, product life cycles, material and labor pricing, and other relevant customer, contractual and market factors. Where appropriate, the net cash flows were adjusted to reflect the potential attrition of existing customers in the future, as existing customers are a "wasting" asset and are expected to decline over time. The attrition-adjusted future cash flows are then discounted to present value using an appropriate discount rate. The customer relationship is being amortized on a straight-line basis (which approximates the economic pattern of benefits) over the estimated economic life of 18 to 24 years.

Acquisition-Related Costs

Acquisition-related costs are being expensed as incurred. For the three months ended March 31, 2019 and 2018, we recorded $1.1 million and $5.2 million, respectively, of integration and transaction costs in our Condensed Consolidated Statements of Operations. For the three months ended March 31, 2018, we also recorded $6.6 million of inventory step-up and backlog amortization within "Cost of sales" in our Condensed Consolidated Statements of

Operations.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 5 - Earnings Per Share

Our basic earnings per share calculations are based on the weighted average number of common shares outstanding during the period. Potentially dilutive securities include outstanding stock options, restricted share units, deferred stock units and performance-based restricted share units. The effect of potentially dilutive securities is reflected in diluted earnings per common share by application of the treasury method. Diluted earnings per share gives effect to all potentially dilutive common shares outstanding during the period.

	Three Months Ended March 31,	
(in millions, except per share data)	2019	2018
Net income attributable to common shareholders	$82.4	$68.7
Average basic shares outstanding	59.8	59.7
Effect of dilutive stock options	0.9	1.3
Average diluted shares outstanding	60.7	61.0
Earnings per basic share	$1.38	$1.15
Earnings per diluted share	$1.36	$1.13

The computation of diluted earnings per share excludes the effect of the potential exercise of stock options when the average market price of the common stock is lower than the exercise price of the related stock options. For the three-month periods ended March 31, 2019 and 2018, the number of stock options excluded from the computation was 1.2 million and 0.3 million, respectively.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 6 - Changes in Equity and Accumulated Other Comprehensive Loss

A summary of changes in equity for the three months ended March 31, 2019 and 2018 is provided below:

(in millions, except share data)	Common Shares Issued at Par Value	Capital Surplus	Retained Earnings	Accumulated Other Comprehensive Loss	Treasury Stock	Total Shareholders' Equity	Noncontrolling Interest	Total Equity
BALANCE DECEMBER 31, 2017	72.4	$291.7	$1,813.3	$ (380.1)	$(452.1)	$ 1,345.2	$ 3.3	$1,348.5
Net income	—	—	68.7	—	—	68.7	—	68.7
Cash dividends ($0.35 per share)	—	—	(20.9)	—	—	(20.9)	—	(20.9)
Cumulative effect of adoption ASC 606			6.7			6.7		6.7
Impact from settlement of share-based awards, net of shares acquired	—	(9.7)	—	—	14.2	4.5	—	4.5
Stock-based compensation expense	—	5.6	—	—	—	5.6	—	5.6
Changes in pension and postretirement plan assets and benefit obligation, net of tax	—	—	—	9.6	—	9.6	—	9.6
Currency translation adjustment	—	—	—	25.4	—	25.4	—	25.4
BALANCE MARCH 31, 2018	72.4	$287.6	$1,867.8	$ (345.1)	$(437.9)	$ 1,444.8	$ 3.3	$1,448.1
BALANCE DECEMBER 31, 2018	72.4	$303.5	$2,072.1	$ (447.6)	$(476.2)	$ 1,524.2	$ 2.9	$1,527.1
Net income	—	—	82.4	—	—	82.4	0.1	82.5
Cash dividends ($0.39 per share)	—	—	(23.4)	—	—	(23.4)	—	(23.4)
Impact from settlement of share-based awards, net of shares acquired	—	(9.8)	—	—	9.6	(0.2)		(0.2)
Stock-based compensation expense	—	5.5	—	—	—	5.5	—	5.5
Deconsolidation of a joint venture	—	—	—	—	—	—	(0.5)	(0.5)
Changes in pension and postretirement plan assets and benefit obligation, net of tax	—	—	—	2.9	—	2.9	—	2.9
Currency translation adjustment	—	—	—	(0.8)	—	(0.8)	(0.1)	(0.9)
BALANCE MARCH 31, 2019	72.4	$299.2	$2,131.1	$ (445.5)	$(466.6)	$ 1,590.6	$ 2.4	$1,593.0

The table below provides the accumulated balances for each classification of accumulated other comprehensive loss, as reflected on our Condensed Consolidated Balance Sheets.

(in millions)	Total

	Defined Benefit Pension and Postretirement Items*	Currency Translation Adjustment	
Balance as of December 31, 2018	$ (318.3)	$ (129.3)	$(447.6)
Other comprehensive income (loss) before reclassifications	0.7	(0.8)	(0.1)
Amounts reclassified from accumulated other comprehensive loss	2.2	—	2.2
Net current-period other comprehensive income (loss)	2.9	(0.8)	2.1
Balance as of March 31, 2019	$ (315.4)	$ (130.1)	$(445.5)

* Net of tax benefit of $123.0 million and $122.2 million as of March 31, 2019 and December 31, 2018, respectively.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The table below illustrates the amounts reclassified out of each component of accumulated other comprehensive loss for the three-month periods ended March 31, 2019 and 2018. Amortization of pension and postretirement components have been recorded within "Miscellaneous income" on our Condensed Consolidated Statements of Operations.

	Three Months Ended March 31,	
(in millions)	2019	2018
Amortization of pension items:		
Prior-service costs	$(0.2)	$(0.1)
Net loss	3.3	3.6
Amortization of postretirement items:		
Net gain	(0.1)	(0.3)
Total before tax	$3.0	$3.2
Tax impact	0.8	0.6
Total reclassifications for the period	$2.2	$2.6

Note 7 - Defined Benefit and Postretirement Benefits

For all plans, the components of net periodic (benefit) cost for the three months ended March 31, 2019 and 2018 are as follows:

	Pension		Postretirement		SERP	
(in millions)	2019	2018	2019	2018	2019	2018
Service cost	$1.3	$1.5	$ —	$ 0.1	$—	$—
Interest cost	7.7	7.5	0.1	0.3	0.1	0.1
Expected return on plan assets	(14.1)	(16.4)	—	—	—	—
Amortization of prior service cost	(0.2)	(0.1)	—	—	—	—
Amortization of net loss (gain)	3.3	3.6	(0.1)	(0.3)	—	—
Net periodic (benefit) cost	$(2.0)	$(3.9)	$ —	$ 0.1	$0.1	$0.1

Effective January 1, 2018, the components of net periodic (benefit) cost other than the service cost component are included in "Miscellaneous income" in our Condensed Consolidated Statements of Operations. Service cost is recorded within "Cost of sales" and "Selling, general and administrative" in our Condensed Consolidated Statements of Operations.

We expect, based on current actuarial calculations, to contribute the following to our pension plans, postretirement plans and Supplemental Executive Retirement Plan ("SERP"):

(in millions)	Pension	Postretirement	SERP
Expected contributions in 2019	$ 3.1	$ 0.7	$ 2.2
Amounts contributed during the three months ended March 31, 2019	$ 1.4	$ 0.8	$ 2.1

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 8 - Income Taxes
Effective Tax Rates
Our quarterly provision for income taxes is measured using an annual effective tax rate, adjusted for discrete items within the period presented.
Our effective tax rates are as follows:

	Three Months Ended March 31,	
	2019	2018
Effective Tax Rate	21.0%	18.6%

Our tax rate for the three months ended March 31, 2019 is higher than the prior year's comparable period primarily due to lower share-based compensation benefits and tax credit utilization, partially offset by lower U.S. taxation of non-U.S. earnings.
Unrecognized Tax Benefits
During the three months ended March 31, 2019, our gross unrecognized tax benefits, excluding interest and penalties, increased by $1.3 million primarily as a result of tax positions taken in both the current and prior periods. During the three months ended March 31, 2019, the total amount of unrecognized tax benefits that, if recognized, would affect our effective tax rate increased by $1.6 million. The difference between these amounts relates to (1) offsetting tax effects from other tax jurisdictions, and (2) interest expense, net of deferred taxes.
During the three months ended March 31, 2019, we recognized $0.6 million of interest and penalty expense related to unrecognized tax benefits in our Condensed Consolidated Statement of Operations. At March 31, 2019 and December 31, 2018, the total amount of accrued interest and penalty expense related to unrecognized tax benefits recorded in our Condensed Consolidated Balance Sheets was $7.8 million and $7.2 million, respectively.
During the next twelve months, it is reasonably possible that our unrecognized tax benefits may decrease by $8.3 million due to expiration of statutes of limitations and settlements with tax authorities. However, if the ultimate resolution of income tax examinations results in amounts that differ from this estimate, we will record additional income tax expense or benefit in the period in which such matters are effectively settled.

Note 9 - Leases
Arrangements that explicitly or implicitly relate to property, plant and equipment are assessed at inception to determine if the arrangement is or contains a lease. Generally, we enter into operating leases as the lessee and recognize right-of-use assets and lease liabilities based on the present value of future lease payments over the lease term.
We lease certain vehicles, equipment, manufacturing facilities, and non-manufacturing facilities. We have leases with both lease components and non-lease components, such as common area maintenance, utilities, or other repairs and maintenance. For all asset classes, we applied the practical expedient to account for each separate lease component and its associated non-lease component(s) as a single lease component.
We identify variable lease payments, such as maintenance payments based on actual activities performed or costs incurred, at lease commencement by assessing the nature of the payment provisions, including whether the payments are subject to a minimum.
Certain leases include options to renew for an additional term or company-controlled options to terminate. As renewal options are typically priced at fair market value, we generally determine it is not reasonably certain to exercise renewal options because there is no economic incentive to renew. As termination options often include penalties, we generally determine it is reasonably certain that termination options will not be exercised because there is an economic incentive not to terminate. Therefore, these options generally do not impact the lease term or the determination or classification of the right-of-use asset and lease liability.

In the third quarter of 2017, we entered into a seven-year lease for a used airplane which includes a maximum residual value guarantee of $11.1 million if the fair value of the airplane is less than $14.4 million at the end of the lease term. We do not believe it is probable that any amount will be owed under this guarantee. Therefore, no amount related to the residual value guarantee is included in the lease payments used to measure the right-of-use asset and lease liability. We have not entered into any other leases where a residual value guarantee is provided to the lessor.

We do not enter into arrangements where restrictions or covenants are imposed by the lessor that, for example, relate to incurring additional financial obligations. Furthermore, we also have not entered into any significant sublease arrangements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

We use our collateralized incremental borrowing rate based on the information available at commencement date to determine the present value of future payments and the appropriate lease classification. The rate implicit in the lease is generally unknown, as we generally operate in the capacity of the lessee.

Our Condensed Consolidated Balance Sheet include the following related to leases:

(in millions)	Classification	March 31, 2019
Assets		
Operating right-of-use assets	Other assets	$112.7
Liabilities		
Current lease liabilities	Accrued liabilities	$20.0
Long-term lease liabilities	Other liabilities	94.6
Total lease liabilities		$114.6

The components of lease cost were as follows:

(in millions)	Three Months Ended March 31, 2019
Operating lease cost	$ 7.4
Variable lease cost	$ 1.5

Other information related to leases was as follows:

(dollars in millions)	March 31, 2019
Cash paid for amounts included in measurement of operating lease liabilities - operating cash flows	$6.4
Right-of-use assets obtained in exchange for new operating lease liabilities	$9.4
Weighted-average remaining lease term - operating leases	10.25
Weighted-average discount rate - operating leases	4.03 %

Future minimum operating lease payments were as follows:

(in millions)	March 31, 2019
Remainder of 2019	$17.7
2020	21.3
2021	18.5
2022	15.9
2023	13.7
2024	11.4
Thereafter	53.4
Total future minimum operating lease payments	$151.9
Imputed interest	37.3
Present value of lease liabilities reported	$114.6

Future minimum operating lease payments for leases with initial or remaining terms of one year or more consisted of the following as of December 31, 2018 under ASC 840, the predecessor to ASC 842.

(in millions)	December 31, 2018
2019	$ 23.4
2020	19.6
2021	17.0
2022	14.2
2023	12.4
Thereafter	60.7
Total minimum lease payments	$ 147.3

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 10 - Goodwill and Intangible Assets

Our business acquisitions have typically resulted in the recognition of goodwill and other intangible assets. We follow the provisions under ASC Topic 350, “Intangibles – Goodwill and Other” (“ASC 350”) as it relates to the accounting for goodwill in our condensed consolidated financial statements. These provisions require that we, on at least an annual basis, evaluate the fair value of the reporting units to which goodwill is assigned and attributed and compare that fair value to the carrying value of the reporting unit to determine if an impairment has occurred. We perform our annual impairment testing during the fourth quarter. Impairment testing takes place more often than annually if events or circumstances indicate a change in status that would indicate a potential impairment. We believe that there have been no events or circumstances which would more likely than not reduce the fair value for our reporting units below its carrying value. A reporting unit is an operating segment unless discrete financial information is prepared and reviewed by segment management for businesses one level below that operating segment (a “component”), in which case the component would be the reporting unit. As of March 31, 2019, we had eight reporting units.

When performing our annual impairment assessment, we compared the fair value of each of our reporting units to its respective carrying value. Goodwill is considered to be potentially impaired when the net book value of the reporting unit exceeds its estimated fair value. Fair values are established primarily by discounting estimated future cash flows at an estimated cost of capital which varies for each reporting unit and which, as of our most recent annual impairment assessment, ranged between 10.0% and 13.0% (a weighted average of 10.9%), reflecting the respective inherent business risk of each of the reporting units tested. This methodology for valuing our reporting units (commonly referred to as the Income Method) has not changed since the adoption of the provisions under ASC 350. The determination of discounted cash flows is based on the businesses’ strategic plans and long-range planning forecasts, which change from year to year. The revenue growth rates included in the forecasts represent best estimates based on current and forecasted market conditions. Profit margin assumptions are projected by each reporting unit based on the current cost structure and anticipated net cost increases/reductions. There are inherent uncertainties related to these assumptions, including changes in market conditions, and management judgment is necessary in applying them to the analysis of goodwill impairment. In addition to the foregoing, for each reporting unit, market multiples are used to corroborate its discounted cash flow results where fair value is estimated based on earnings multiples determined by available public information of comparable businesses. While we believe we have made reasonable estimates and assumptions to calculate the fair value of our reporting units, it is possible a material change could occur. If actual results are not consistent with management’s estimates and assumptions, goodwill and other intangible assets may then be determined to be overstated and a charge would need to be taken against net earnings. Furthermore, in order to evaluate the sensitivity of the fair value calculations on the goodwill impairment test performed during the fourth quarter of 2018, we applied a hypothetical, reasonably possible 10% decrease to the fair values of each reporting unit. The effects of this hypothetical 10% decrease would still result in the fair value calculation exceeding the carrying value for each reporting unit.

Changes to goodwill are as follows:

(in millions)	Fluid Handling	Payment & Merchandising Technologies	Aerospace & Electronics	Engineered Materials	Total
Balance as of December 31, 2017	$ 245.4	$ 587.7	$ 202.4	$ 171.4	$ 1,206.9
Additions	—	208.4	—	—	208.4
Currency translation	(4.6)	(6.9)	—	(0.1)	(11.6)
Balance at December 31, 2018	$ 240.8	$ 789.2	$ 202.4	$ 171.3	$ 1,403.7
Additions	—	8.7	—	—	8.7
Currency translation	(0.6)	(0.2)	—	—	(0.8)
March 31, 2019	$ 240.2	$ 797.7	$ 202.4	$ 171.3	$ 1,411.6

For the three months ended March 31, 2019 and for the year ended December 31, 2018, additions to goodwill represent the purchase price allocation related to the January 2018 acquisition of Crane Currency. See discussion in Note 4, "Acquisitions" for further details.

As of March 31, 2019, we had $471.0 million of net intangible assets, of which $69.8 million were intangibles with indefinite useful lives, consisting of trade names. Intangibles with indefinite useful lives are tested annually for impairment, or when events or changes in circumstances indicate the potential for impairment. If the carrying amount of an indefinite lived intangible asset exceeds its fair value, the intangible asset is written down to its fair value. Fair value is calculated using relief from royalty method. We amortize the cost of definite-lived intangibles over their estimated useful lives.

In addition to annual testing for impairment of indefinite-lived intangible assets, we review all of our definite-lived intangible assets for impairment whenever events or changes in circumstances indicate the carrying amount of an asset may not be

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

recoverable. Examples of events or changes in circumstances could include, but are not limited to, a prolonged economic downturn, current period operating or cash flow losses combined with a history of losses or a forecast of continuing losses associated with the use of an asset or asset group, or a current expectation that an asset or asset group will be sold or disposed of before the end of its previously estimated useful life. Recoverability is based upon projections of anticipated future undiscounted cash flows associated with the use and eventual disposal of the definite-lived intangible asset (or asset group), as well as specific appraisal in certain instances. Reviews occur at the lowest level for which identifiable cash flows are largely independent of cash flows associated with other long-lived assets or asset groups and include estimated future revenues, gross profit margins, operating profit margins and capital expenditures which are based on the businesses' strategic plans and long-range planning forecasts, which change from year to year. The revenue growth rates included in the forecasts represent our best estimates based on current and forecasted market conditions, and the profit margin assumptions are based on the current cost structure and anticipated net cost increases/reductions. There are inherent uncertainties related to these assumptions, including changes in market conditions, and management's judgment in applying them to the analysis. If the future undiscounted cash flows are less than the carrying value, then the definite-lived intangible asset is considered impaired and a charge would be taken against net earnings based on the amount by which the carrying amount exceeds the estimated fair value. Judgments that we make which impact these assessments relate to the expected useful lives of definite-lived assets and our ability to realize any undiscounted cash flows in excess of the carrying amounts of such assets, and are affected primarily by changes in the expected use of the assets, changes in technology or development of alternative assets, changes in economic conditions, changes in operating performance and changes in expected future cash flows. Since judgment is involved in determining the recoverable amount of definite-lived intangible assets, there is risk that the carrying value of our definite-lived intangible assets may require adjustment in future periods. Historical results to date have generally approximated expected cash flows for the identifiable cash flow generating level. We believe there have been no events or circumstances which would more likely than not reduce the fair value of our indefinite-lived or definite-lived intangible assets below their carrying value.

Changes to intangible assets are as follows:

(in millions)	Three Months Ended March 31, 2019	Year Ended December 31, 2018
Balance at beginning of period, net of accumulated amortization	$481.8	$ 276.8
Additions	—	252.8
Amortization expense	(10.3)	(44.5)
Currency translation and other	(0.5)	(3.3)
Balance at end of period, net of accumulated amortization	$471.0	$ 481.8

For the year ended December 31, 2018, additions to intangible assets represent the purchase price allocation related to the January 2018 acquisition of Crane Currency. See discussion in Note 4, "Acquisitions" for further details.

A summary of intangible assets follows:

(in millions)	Weighted Average Amortization Period of Finite Lived Assets (in years)	March 31, 2019			December 31, 2018		
		Gross Asset	Accumulated Amortization	Net	Gross Asset	Accumulated Amortization	Net
Intellectual property rights	17.3	$130.7	$ 55.9	$74.8	$130.7	$ 55.6	$75.1
Customer relationships and backlog	18.4	546.7	218.2	328.5	546.8	210.7	336.1
Drawings	37.9	11.1	10.5	0.6	11.1	10.5	0.6

Other	10.2	135.1	68.0	67.1	135.0	65.0	70.0
Total	17.7	$823.6	$ 352.6	$471.0	$823.6	$ 341.8	$481.8

Future amortization expense associated with intangible assets is expected to be:

(in millions)	
Remainder of 2019	$31.1
2020	40.8
2021	34.5
2022	34.3
2023 and thereafter	260.5

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Note 11 - Accrued Liabilities

Accrued liabilities consist of:

(in millions)	March 31, 2019	December 31, 2018
Employee related expenses	$ 89.5	$ 124.7
Warranty	16.8	18.2
Contract liabilities	40.8	50.8
Other	163.2	143.4
Total	$ 310.3	$ 337.1

We accrue warranty liabilities when it is probable that an asset has been impaired or a liability has been incurred and the amount of the loss can be reasonably estimated. Warranty provision is included within “Cost of sales” in our Condensed Consolidated Statements of Operations.

A summary of the warranty liabilities is as follows:

(in millions)	Three Months Ended March 31, 2019	Year Ended December 31, 2018
Balance at beginning of period	$ 18.2	$ 14.6
Expense	2.2	14.6
Changes due to acquisitions	—	1.1
Payments / deductions	(3.5)	(12.0)
Currency translation	(0.1)	(0.1)
Balance at end of period	$ 16.8	$ 18.2

Note 12 - Commitments and Contingencies

Asbestos Liability

Information Regarding Claims and Costs in the Tort System

As of March 31, 2019, we were a defendant in cases filed in numerous state and federal courts alleging injury or death as a result of exposure to asbestos. Activity related to asbestos claims during the periods indicated was as follows:

	Three Months Ended March 31,		Year Ended December 31,
	2019	2018	2018
Beginning claims	29,089	32,234	32,234
New claims	675	608	2,434
Settlements	(408)	(273)	(1,011)
Dismissals	(858)	(1,579)	(4,568)
Ending claims	28,498	30,990	29,089

Of the 28,498 pending claims as of March 31, 2019, approximately 18,000 claims were pending in New York, approximately 100 claims were pending in Texas, approximately 300 claims were pending in Mississippi, and approximately 200 claims were pending in Ohio, all jurisdictions in which legislation or judicial orders restrict the types of claims that can proceed to trial on the merits.

We have tried several cases resulting in defense verdicts by the jury or directed verdicts for the defense by the court. We further have pursued appeals of certain adverse jury verdicts that have resulted in reversals in favor of the defense.

On March 23, 2010, a Philadelphia, Pennsylvania, state court jury found us responsible for a 1/11th share of a $14.5 million verdict in the James Nelson claim. On February 23, 2011, the court entered judgment on the verdict in the amount of $4.0 million, jointly, against us and two other defendants, with additional interest in the amount of $0.01 million being assessed against us, only. All defendants, including us, and the plaintiffs took timely appeals of certain aspects of those judgments. On September 5, 2013, a panel of the Pennsylvania Superior Court, in a 2-1 decision, vacated the Nelson verdict against all defendants, reversing and remanding for a new trial. Plaintiffs requested a rehearing in the Superior Court and by order dated November 18, 2013, the Superior Court vacated the panel opinion, and granted en banc reargument. On December 23, 2014, the Superior Court issued a second opinion reversing the jury verdict. Plaintiffs sought leave to appeal to the Pennsylvania

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Supreme Court, which defendants opposed. By order dated June 21, 2017, the Supreme Court of Pennsylvania denied plaintiffs' petition for leave to appeal. The case was set for a new trial in April 2018. We settled the matter. The settlement was reflected in the second quarter 2018 indemnity amount.

On February 25, 2013, a Philadelphia, Pennsylvania, state court jury found us responsible for a 1/10th share of a $2.5 million verdict in the Thomas Amato claim and a 1/5th share of a $2.3 million verdict in the Frank Vinciguerra claim, which were consolidated for trial. We filed post-trial motions requesting judgments in our favor notwithstanding the jury's verdicts or new trials, and also requesting that settlement offsets be applied to reduce the judgment in accordance with Pennsylvania law. These motions were denied. We appealed, and on April 17, 2015, a panel of the Superior Court of Pennsylvania affirmed the trial court's ruling. The Supreme Court of Pennsylvania accepted our petition for review and heard oral arguments on September 13, 2016. On November 22, 2016, the Court dismissed our appeal as improvidently granted. We paid the Vinciguerra judgment in the amount of $0.6 million in the fourth quarter 2016. We paid the Amato judgment, with interest, in the amount of $0.3 million in the second quarter of 2017.

On March 1, 2013, a New York City state court jury entered a $35 million verdict against us in the Ivo Peraica claim. We filed post-trial motions seeking to overturn the verdict, to grant a new trial, or to reduce the damages, which we argue was excessive under New York appellate case law governing awards for non-economic losses and further were subject to settlement offsets. After the trial court remitted the verdict to $18 million, but otherwise denied our post-trial motion, judgment was entered against us in the amount of $10.6 million (including interest). We appealed. We took a separate appeal of the trial court's denial of our summary judgment motion. The Court consolidated the appeals, which were heard in the fourth quarter of 2014. In July 2016, we supplemented our briefing based on the New York Court of Appeals Dummitt/Suttner decision. On October 6, 2016, a panel of the Appellate Division, First Department, affirmed the rulings of the trial court on liability issues but further reduced the damages award to $4.25 million, which after settlement offsets was calculated to be $1.94 million. Plaintiff had the option of accepting the reduced amount or having a new trial on damages. We filed a motion with the Appellate Division requesting a rehearing on liability issues. The motion was denied. The New York Court of Appeals also denied review. We paid the Peraica judgment in the amount of $2.7 million in the first quarter of 2017.

On September 17, 2013, a Fort Lauderdale, Florida state court jury in the Richard DeLisle claim found us responsible for 16% of an $8 million verdict. The trial court denied all parties' post-trial motions, and entered judgment against us in the amount of $1.3 million. We appealed and oral argument on the appeal took place on February 16, 2016. On September 14, 2016, a panel of the Florida Court of Appeals reversed and entered judgment in favor of us. Plaintiff filed with the Court of Appeals a motion for rehearing and/or certification of an appeal to the Florida Supreme Court, which the Court denied on November 9, 2016. Plaintiffs subsequently requested review by the Supreme Court of Florida. Plaintiffs' motion was granted on July 11, 2017. Oral argument took place on March 6, 2018. On October 15, 2018, the Supreme Court of Florida reversed and remanded with instructions to reinstate the trial court's judgment. We paid the judgment on December 28, 2018. That payment is reflected in the fourth quarter 2018 indemnity amount.

On June 16, 2014, a New York City state court jury entered a $15 million verdict against us in the Ivan Sweberg claim and a $10 million verdict against us in the Selwyn Hackshaw claim. The two claims were consolidated for trial. We filed post-trial motions seeking to overturn the verdicts, to grant new trials, or to reduce the damages, which were denied, except that the Court reduced the Sweberg award to $10 million, and reduced the Hackshaw award to $6 million. Judgments were entered in the amount of $5.3 million in Sweberg and $3.1 million in Hackshaw. We appealed. Oral argument on Sweberg took place on February 16, 2016, and oral argument on Hackshaw took place on March 9, 2016. On October 6, 2016, two panels of the Appellate Division, First Department, affirmed the rulings of the trial court on liability issues but further reduced the Sweberg damages award to $9.5 million and further reduced the Hackshaw damages award to $3 million, which after settlement offsets are calculated to be $4.73 million in Sweberg and $0 in Hackshaw. Plaintiffs were given the option of accepting the reduced awards or having new trials on damages. Plaintiffs subsequently brought an appeal in Hackshaw before the New York Court of Appeals, which the Court denied. We filed a motion with the Appellate Division requesting a rehearing on liability issues in Sweberg. That motion was denied. The New York Court of Appeals also denied review. We paid in the first quarter of 2017 the

Sweberg plaintiffs $5.7 million, which was the amount owed under this judgment. No damages were owed in Hackshaw.

On July 2, 2015, a St. Louis, Missouri state court jury in the James Poage claim entered a $1.5 million verdict for compensatory damages against us. The jury also awarded exemplary damages against us in the amount of $10 million. We filed a motion seeking to reduce the verdict to account for the verdict set-offs. That motion was denied, and judgment was entered against us in the amount of $10.8 million. We initiated an appeal. Oral argument was held on December 13, 2016. In an opinion dated May 2, 2017, a Missouri Court of Appeals panel affirmed the judgment in all respects. The Court of Appeals denied our motion to transfer the case to the Supreme Court of Missouri. We sought leave to appeal before the Supreme Court of Missouri, which denied that request. The Supreme Court of the United States denied further review on March 26, 2018. We settled the matter. The settlement was reflected in the second quarter 2018 indemnity amount.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

On February 9, 2016, a Philadelphia, Pennsylvania, federal court jury found us responsible for a 30% share of a $1.085 million verdict in the Valent Rabovsky claim. The court ordered briefing on the amount of the judgment. We argued, among other things, that settlement offsets reduce the award to plaintiff under Pennsylvania law. A further hearing was held April 26, 2016, after which the court denied our request and entered judgment in the amount of $0.4 million. We filed post-trial motions, which were denied in two decisions issued on August 26, 2016 and September 28, 2016. We pursued an appeal to the Third Circuit Court of Appeals, which was argued on June 12, 2017. On September 27, 2017, the Court entered an order asking the Supreme Court of Pennsylvania to decide one of the issues raised in our appeal. The Supreme Court of Pennsylvania accepted the request, and we settled the matter. The settlement was reflected in the fourth quarter 2017 indemnity amount.

On April 22, 2016, a Phoenix, Arizona federal court jury found us responsible for a 20% share of a $9 million verdict in the George Coulbourn claim, and further awarded exemplary damages against us in the amount of $5 million. The jury also awarded compensatory and exemplary damages against the other defendant present at trial. The court entered judgment against us in the amount of $6.8 million. We filed post-trial motions, which were denied on September 20, 2016. We pursued an appeal to the Ninth Circuit Court of Appeals which affirmed the judgment on March 29, 2018. We settled the matter. The settlement was reflected in the second quarter 2018 indemnity amount.

On June 30, 2017, a New York City state court jury entered a $20 million verdict against us in the Geoffrey Anisansel claim. We settled the matter in August 2017. The settlement was reflected in the third quarter 2017 indemnity amount.

Such judgment amounts were not included in our incurred costs until all available appeals are exhausted and the final payment amount is determined.

The gross settlement and defense costs incurred (before insurance recoveries and tax effects) by us for the three-month periods ended March 31, 2019 and 2018 totaled $26.5 million and $14.8 million, respectively. In contrast to the recognition of settlement and defense costs, which reflect the current level of activity in the tort system, cash payments and receipts generally lag the tort system activity by several months or more, and may show some fluctuation from period to period. Cash payments of settlement amounts are not made until all releases and other required documentation are received by us, and reimbursements of both settlement amounts and defense costs by insurers may be uneven due to insurer payment practices, transitions from one insurance layer to the next excess layer and the payment terms of certain reimbursement agreements. Our total pre-tax payments for settlement and defense costs, net of funds received from insurers, for the three-month periods ended March 31, 2019 and 2018 totaled $9.7 million and $2.9 million, respectively. Detailed below are the comparable amounts for the periods indicated.

(in millions)	Three Months Ended March 31, 2019	Three Months Ended March 31, 2018	Year Ended December 31, 2018
Settlement / indemnity costs incurred [(1)]	$21.4	$8.3	$ 63.0
Defense costs incurred [(1)]	5.1	6.5	25.8
Total costs incurred	$26.5	$14.8	$ 88.8
Settlement / indemnity payments	$8.8	$4.6	$ 61.5
Defense payments	4.0	5.0	26.5
Insurance receipts	(3.1)	(6.7)	(24.1)
Pre-tax cash payments	$9.7	$2.9	$ 63.9

[(1)] Before insurance recoveries and tax effects.

The amounts shown for settlement and defense costs incurred, and cash payments, are not necessarily indicative of future period amounts, which may be higher or lower than those reported.

Cumulatively through March 31, 2019, we have resolved (by settlement or dismissal) approximately 137,000 claims. The related settlement cost incurred by us and our insurance carriers is approximately $620 million, for an average settlement cost per resolved claim of approximately $4,500. The average settlement cost per claim resolved during the years ended December 31, 2018, 2017 and 2016 was $11,300, $7,800, and $3,900, respectively. Because claims are sometimes dismissed in large groups, the average cost per resolved claim, as well as the number of open claims, can fluctuate significantly from period to period. In addition to large group dismissals, the nature of the disease and corresponding settlement amounts for each claim resolved will also drive changes from period to period in the average settlement cost per claim. Accordingly, the average cost per resolved claim is not considered in our periodic review of our estimated asbestos liability. For a discussion regarding the four most significant factors affecting the liability estimate, see “Effects on the Condensed Consolidated Financial Statements”.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Effects on the Condensed Consolidated Financial Statements
We have retained an independent actuarial firm to assist management in estimating our asbestos liability in the tort system. The actuarial consultants review information provided by us concerning claims filed, settled and dismissed, amounts paid in settlements and relevant claim information such as the nature of the asbestos-related disease asserted by the claimant, the jurisdiction where filed and the time lag from filing to disposition of the claim. The methodology used by the actuarial consultants to project future asbestos costs is based on our recent historical experience for claims filed, settled and dismissed during a base reference period. Our experience is then compared to estimates of the number of individuals likely to develop asbestos-related diseases determined based on widely used previously conducted epidemiological studies augmented with current data inputs. Those studies were undertaken in connection with national analyses of the population of workers believed to have been exposed to asbestos. Using that information, the actuarial consultants estimate the number of future claims that would be filed against us and estimates the aggregate settlement or indemnity costs that would be incurred to resolve both pending and future claims based upon the average settlement costs by disease during the reference period. This methodology has been accepted by numerous courts. After discussions with us, the actuarial consultants augment our liability estimate for the costs of defending asbestos claims in the tort system using a forecast from us which is based upon discussions with our defense counsel. Based on this information, the actuarial consultants compile an estimate of our asbestos liability for pending and future claims using a range of reference periods based on claim experience and covering claims expected to be filed through the indicated forecast period. The most significant factors affecting the liability estimate are (1) the number of new mesothelioma claims filed against us, (2) the average settlement costs for mesothelioma claims, (3) the percentage of mesothelioma claims dismissed against us and (4) the aggregate defense costs incurred by us. These factors are interdependent, and no one factor predominates in determining the liability estimate.
In our view, the forecast period used to provide the best estimate for asbestos claims and related liabilities and costs is a judgment based upon a number of trend factors, including the number and type of claims being filed each year; the jurisdictions where such claims are filed, and the effect of any legislation or judicial orders in such jurisdictions restricting the types of claims that can proceed to trial on the merits; and the likelihood of any comprehensive asbestos legislation at the federal level. In addition, the dynamics of asbestos litigation in the tort system have been significantly affected by the substantial number of companies that have filed for bankruptcy protection, thereby staying any asbestos claims against them until the conclusion of such proceedings, and the establishment of a number of post-bankruptcy trusts for asbestos claimants, which have been estimated to provide $36 billion for payments to current and future claimants. These trend factors have both positive and negative effects on the dynamics of asbestos litigation in the tort system and the related best estimate of our asbestos liability, and these effects do not move in a linear fashion but rather change over multi-year periods. Accordingly, management continues to monitor these trend factors over time and periodically assesses whether an alternative forecast period is appropriate.
Each quarter, the actuarial consultants compile an update based upon our experience in claims filed, settled and dismissed as well as average settlement costs by disease category (mesothelioma, lung cancer, other cancer, and non-malignant conditions including asbestosis). In addition to this claims experience, we also consider additional quantitative and qualitative factors such as the nature of the aging of pending claims, significant appellate rulings and legislative developments, and their respective effects on expected future settlement values. As part of this process, we also take into account trends in the tort system such as those enumerated above. Management considers all these factors in conjunction with the liability estimate of the actuarial consultants and determines whether a change in the estimate is warranted.
Liability Estimate. Effective as of December 31, 2016, we extended our estimate of the asbestos liability, including the costs of settlement or indemnity payments and defense costs relating to currently pending claims and future claims projected to be filed against us through the generally accepted end point of such claims in 2059. Our previous estimate was for asbestos claims filed or projected to be filed through 2021. Our estimate of the asbestos liability for pending and future claims through 2059 is based on the projected future asbestos costs resulting from our experience using a range of reference periods for claims filed, settled and dismissed. Based on this estimate, we recorded an additional

liability of $227 million as of December 31, 2016. This action was based on several factors which contribute to our ability to reasonably estimate this liability through 2059. First, the number of mesothelioma claims (which, although constituting approximately 10% of our total pending asbestos claims, have consistently accounted for approximately 90% of our aggregate settlement and defense costs) being filed against us and associated settlement costs have stabilized. Second, there have been generally favorable developments in the trend of case law, which has been a contributing factor in stabilizing the asbestos claims activity and related settlement costs. Third, there have been significant actions taken by certain state legislatures and courts that have reduced the number and types of claims that can proceed to trial, which has been a significant factor in stabilizing the asbestos claims activity. Fourth, recent court decisions in certain jurisdictions have provided additional clarity regarding the nature of claims that may proceed to trial in those jurisdictions and greater predictability regarding future claim activity. Fifth, we have coverage-in-place agreements with almost all of our excess insurers, which enables us to project a stable relationship between settlement and defense costs

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

paid by us and reimbursements from our insurers. Sixth, annual settlements with respect to groups of cases with certain plaintiff firms have helped to stabilize indemnity payments and defense costs. Taking these factors into account, we believe that we can reasonably estimate the asbestos liability for pending claims and future claims to be filed through 2059.

Management has made its best estimate of the costs through 2059. Through March 31, 2019, our actual experience during the updated reference period for mesothelioma claims filed and dismissed generally approximated the assumptions in our liability estimate. In addition to this claims experience, we considered additional quantitative and qualitative factors such as the nature of the aging of pending claims, significant appellate rulings and legislative developments, and their respective effects on expected future settlement values. Based on this evaluation, we determined that no change in the estimate was warranted for the period ended March 31, 2019.

A liability of $696 million was recorded as of December 31, 2016 to cover the estimated cost of asbestos claims now pending or subsequently asserted through 2059, of which approximately 80% is attributable to settlement and defense costs for future claims projected to be filed through 2059. The liability is reduced when cash payments are made in respect of settled claims and defense costs. The liability was $504 million as of March 31, 2019. It is not possible to forecast when cash payments related to the asbestos liability will be fully expended; however, it is expected such cash payments will continue for a number of years past 2059, due to the significant proportion of future claims included in the estimated asbestos liability and the lag time between the date a claim is filed and when it is resolved. None of these estimated costs have been discounted to present value due to the inability to reliably forecast the timing of payments. The current portion of the total estimated liability at March 31, 2019 was $66 million and represents our best estimate of total asbestos costs expected to be paid during the twelve-month period. Such amount is based upon the actuarial model together with our prior year payment experience for both settlement and defense costs.

Insurance Coverage and Receivables. Prior to 2005, a significant portion of our settlement and defense costs were paid by our primary insurers. With the exhaustion of that primary coverage, we began negotiations with our excess insurers to reimburse us for a portion of our settlement and/or defense costs as incurred. To date, we have entered into agreements providing for such reimbursements, known as “coverage-in-place”, with eleven of our excess insurer groups. Under such coverage-in-place agreements, an insurer’s policies remain in force and the insurer undertakes to provide coverage for our present and future asbestos claims on specified terms and conditions that address, among other things, the share of asbestos claims costs to be paid by the insurer, payment terms, claims handling procedures and the expiration of the insurer’s obligations. Similarly, under a variant of coverage-in-place, we have entered into an agreement with a group of insurers confirming the aggregate amount of available coverage under the subject policies and setting forth a schedule for future reimbursement payments to us based on aggregate indemnity and defense payments made. In addition, with ten of our excess insurer groups, we entered into agreements settling all asbestos and other coverage obligations for an agreed sum, totaling $82.5 million in aggregate. Reimbursements from insurers for past and ongoing settlement and defense costs allocable to their policies have been made in accordance with these coverage-in-place and other agreements. All of these agreements include provisions for mutual releases, indemnification of the insurer and, for coverage-in-place, claims handling procedures. With the agreements referenced above, we have concluded settlements with all but one of our solvent excess insurers whose policies are expected to respond to the aggregate costs included in the liability estimate. That insurer, which issued a single applicable policy, has been paying the shares of defense and indemnity costs we have allocated to it, subject to a reservation of rights. There are no pending legal proceedings between us and any insurer contesting our asbestos claims under our insurance policies.

In conjunction with developing the aggregate liability estimate referenced above, we also developed an estimate of probable insurance recoveries for our asbestos liabilities. In developing this estimate, we considered our coverage-in-place and other settlement agreements described above, as well as a number of additional factors. These additional factors include the financial viability of the insurance companies, the method by which losses will be allocated to the various insurance policies and the years covered by those policies, how settlement and defense costs will be covered by the insurance policies and interpretation of the effect on coverage of various policy terms and limits and their interrelationships. In addition, the timing and amount of reimbursements will vary because our insurance coverage for asbestos claims involves multiple insurers, with different policy terms and certain gaps in coverage. In addition to consulting with legal counsel on these insurance matters, we retained insurance consultants to assist management in the estimation of probable insurance recoveries based upon the aggregate liability estimate described above and assuming the continued viability of all solvent insurance carriers. Based upon the analysis of policy terms and other factors noted above by our legal counsel, and incorporating risk mitigation judgments by us where policy terms or other factors were not certain, our insurance consultants compiled a model indicating how our historical insurance policies would respond to varying levels of asbestos settlement and defense costs and the allocation of such costs between such insurers and us. Using the estimated liability as of December 31, 2016 (for claims filed or expected to be filed through 2059), the insurance consultant's model forecasted that approximately 21% of the liability would be reimbursed by our insurers. While there are overall limits on the aggregate amount of insurance available to us with respect to asbestos claims, those overall limits were not reached by the total estimated liability currently recorded by us, and such overall limits did not

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

influence us in our determination of the asset amount to record. The proportion of the asbestos liability that is allocated to certain insurance coverage years, however, exceeds the limits of available insurance in those years. We allocate to ourselves the amount of the asbestos liability (for claims filed or expected to be filed through 2059) that is in excess of available insurance coverage allocated to such years. An asset of $143 million was recorded as of December 31, 2016 representing the probable insurance reimbursement for such claims expected through 2059. The asset is reduced as reimbursements and other payments from insurers are received. The asset was $88 million as of March 31, 2019.

We review the aforementioned estimated reimbursement rate with our insurance consultants on a periodic basis in order to confirm overall consistency with our established reserves. The reviews encompass consideration of the performance of the insurers under coverage-in-place agreements and the effect of any additional lump-sum payments under other insurer agreements. Actual insurance reimbursements vary from period to period, and will decline over time, for the reasons cited above.

Uncertainties. Estimation of our ultimate exposure for asbestos-related claims is subject to significant uncertainties, as there are multiple variables that can affect the timing, severity and quantity of claims and the manner of their resolution. We caution that our estimated liability is based on assumptions with respect to future claims, settlement and defense costs based on past experience that may not prove reliable as predictors; the assumptions are interdependent and no single factor predominates in determining the liability estimate. A significant upward or downward trend in the number of claims filed, depending on the nature of the alleged injury, the jurisdiction where filed and the quality of the product identification, or a significant upward or downward trend in the costs of defending claims, could change the estimated liability, as would substantial adverse verdicts at trial that withstand appeal. A legislative solution, structured settlement transaction, or significant change in relevant case law could also change the estimated liability.

The same factors that affect developing estimates of probable settlement and defense costs for asbestos-related liabilities also affect estimates of the probable insurance reimbursements, as do a number of additional factors. These additional factors include the financial viability of the insurance companies, the method by which losses will be allocated to the various insurance policies and the years covered by those policies, how settlement and defense costs will be covered by the insurance policies and interpretation of the effect on coverage of various policy terms and limits and their interrelationships. In addition, due to the uncertainties inherent in litigation matters, no assurances can be given regarding the outcome of any litigation, if necessary, to enforce our rights under our insurance policies or settlement agreements.

Many uncertainties exist surrounding asbestos litigation, and we will continue to evaluate our estimated asbestos-related liability and corresponding estimated insurance reimbursement as well as the underlying assumptions and process used to derive these amounts. These uncertainties may result in our incurring future charges or increases to income to adjust the carrying value of recorded liabilities and assets, particularly if the number of claims and settlement and defense costs change significantly, or if there are significant developments in the trend of case law or court procedures, or if legislation or another alternative solution is implemented. Although the resolution of these claims will likely take many years, the effect on the results of operations, financial position and cash flow in any given period from a revision to these estimates could be material.

Other Contingencies

Environmental Matters

For environmental matters, we record a liability for estimated remediation costs when it is probable that we will be responsible for such costs and they can be reasonably estimated. Generally, third party specialists assist in the estimation of remediation costs. The environmental remediation liability as of March 31, 2019 is substantially related to the former manufacturing site in Goodyear, Arizona (the “Goodyear Site”) discussed below.

Goodyear Site

The Goodyear Site was operated by Unidynamics/Phoenix, Inc. (“UPI”), which became an indirect subsidiary in 1985 when we acquired UPI’s parent company, Unidynamics Corporation. UPI manufactured explosive and pyrotechnic compounds, including components for critical military programs, for the U.S. government at the Goodyear Site from 1962 to 1993, under contracts with the Department of Defense and other government agencies and certain of their prime contractors. In 1990, the U.S. Environmental Protection Agency (“EPA”) issued administrative orders requiring UPI to design and carry out certain remedial actions, which UPI has done. Groundwater extraction and treatment systems have been in operation at the Goodyear Site since 1994. On July 26, 2006, we entered into a consent decree with the EPA with respect to the Goodyear Site providing for, among other things, a work plan for further investigation and remediation activities (inclusive of a supplemental remediation investigation and feasibility study). During the third quarter of 2014, the EPA issued a Record of Decision amendment permitting, among other things, additional source area remediation resulting in us recording a charge of $49.0 million, extending the accrued costs through 2022. The total estimated gross liability was $30.9 million as of March 31, 2019, and as

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

described below, a portion is reimbursable by the U.S. Government. The current portion of the total estimated liability was $10.9 million as of March 31, 2019 and represents our best estimate, in consultation with our technical advisors, of total remediation costs expected to be paid during the twelve-month period.

It is not possible at this point to reasonably estimate the amount of any obligation in excess of our current accruals through the 2022 forecast period because of the aforementioned uncertainties, in particular, the continued significant changes in the Goodyear Site conditions and additional expectations of remediation activities experienced in recent years.

On July 31, 2006, we entered into a consent decree with the U.S. Department of Justice on behalf of the Department of Defense and the Department of Energy pursuant to which, among other things, the U.S. Government reimburses us for 21% of qualifying costs of investigation and remediation activities at the Goodyear Site. As of March 31, 2019, we have recorded a receivable of $6.0 million for the expected reimbursements from the U.S. Government in respect of the aggregate liability as at that date. The receivable is reduced as reimbursements and other payments from the U.S. Government are received.

Other Environmental Matters

We have been identified as a potentially responsible party (“PRP”) with respect to environmental contamination at the Crab Orchard National Wildlife Refuge Superfund Site (the “Crab Orchard Site”). The Crab Orchard Site is located near Marion, Illinois, and consists of approximately 55,000 acres. Beginning in 1941, the United States used the Crab Orchard Site for the production of ordnance and other related products for use in World War II. In 1947, about half of the Crab Orchard Site was leased to a variety of industrial tenants whose activities (which continue to this day) included manufacturing ordnance and explosives. A predecessor of us formerly leased portions of the Crab Orchard Site and conducted manufacturing operations at the Crab Orchard Site from 1952 until 1964. General Dynamics Ordnance and Tactical Systems, Inc. (“GD-OTS”) is in the process of conducting a remedial investigation and feasibility study for a portion of the Crab Orchard Site (referred to as the “AUS-OU”), which includes an area where we maintained operations, pursuant to an Administrative Order on Consent. A remedial investigation report was approved in February 2015, and work on the feasibility study is underway. It is unclear when the final feasibility study will be completed, or when a final Record of Decision may be issued.

GD-OTS has asked us to participate in a voluntary cost allocation/mediation exercise with respect to response costs it has incurred or will incur with respect to the AUS-OU. We, along with a number of other PRPs that were contacted, initially declined, but in light of the ongoing investigative activities, and the willingness of the U.S. government to participate in a mediation proceeding, we and a number of PRPs have agreed to participate in a non-binding mediation process. We and other PRPs executed a mediation agreement on March 16, 2015, and the U.S. government, following the resolution of an inter-agency dispute, executed the mediation agreement on August 6, 2015. The participants have selected a mediator, have exchanged relevant information, and have agreed upon a framework for the mediation to address the numerous sub-areas at the Site in a coherent fashion. The first phase of the mediation, involving former munitions or ordnance storage areas, began in November 2017, and a second mediation session took place in March 2018. A further mediation session has not yet been scheduled. Discussions between us and GD-OTS, with a view toward resolving our equitable share of response costs associated with the first phase areas of concern, are projected to take place in the second quarter of 2019. We at present cannot predict whether the mediation proceeding, or the further discussions with GD-OTS, will result in an agreement, or when any determination of the allocable share of the various PRPs, including the U.S. Government, is likely to be completed. Although a loss is probable, it is not possible at this time to reasonably estimate the amount of any obligation for remediation of the Crab Orchard Site because the allocation among PRPs, selection of remediation alternatives, and concurrence of regulatory authorities have not yet advanced to the stage where a reasonable estimate can be made. We notified our insurers of this potential liability and have obtained coverage, subject to reservations of rights, under certain of our insurance policies.

Other Proceedings

We regularly review the status of lawsuits, claims and proceedings that have been or may be asserted against us relating to the conduct of our business, including those pertaining to product liability, patent infringement, commercial, employment, employee benefits, environmental and stockholder matters. We record a provision for a liability for such matters when it is considered probable that a liability has been incurred and the amount of the loss can be reasonably estimated. These provisions, if any, are reviewed quarterly and adjusted as additional information becomes available. If either or both of the criteria are not met, we assess whether there is at least a reasonable possibility that a loss, or additional losses, may have been incurred. If there is a reasonable possibility that a loss or additional loss may have been incurred for such matters, we disclose the estimate of the amount of loss or range of loss, disclose that the amount is immaterial, or disclose that an estimate of loss cannot be made, as applicable. We believe that as of March 31, 2019, there was no reasonable possibility that a material loss, or any additional material losses, may have been incurred for such matters, and that adequate provision has been made in our financial statements for the potential impact of all such matters.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 13 - Financing

The following table summarizes our short-term debt and current maturities of long-term debt as of March 31, 2019 and December 31, 2018:

(in millions)	March 31, 2019	December 31, 2018
Commercial paper	$55.5	$ —
Syndicated loan facility	5.9	5.3
Building loan facility	1.7	1.6
Total short-term borrowings and current maturities of long-term debt	$63.1	$ 6.9

As of March 31, 2019, there were $55.5 million of outstanding borrowings under the commercial paper program. Amounts available under the commercial paper program may be borrowed, repaid and re-borrowed from time to time, with the aggregate principal amount of the notes outstanding under the commercial paper program at any time not to exceed $550 million. At December 31, 2018, there were no borrowings outstanding under the commercial paper program.

As of March 31, 2019, the Company had a revolving credit agreement permitting borrowings of up to $550 million which expires in December 2022. As of March 31, 2019, there were no borrowings under this revolving credit agreement. The undrawn portion of this revolving credit agreement is also available to serve as a backstop facility for the issuance of commercial paper.

The following table summarizes our long-term debt as of March 31, 2019 and December 31, 2018:

(in millions)	March 31, 2019	December 31, 2018
4.45% notes due December 2023	$298.7	$ 298.6
6.55% notes due November 2036	198.2	198.2
4.20% notes due March 2048	346.0	345.9
Syndicated loan facility	72.0	76.1
Building loan facility	26.9	25.1
Other deferred financing costs associated with credit facilities	(1.6)	(1.6)
Total long-term debt [(a)]	$940.2	$ 942.3

(a) Debt discounts and debt issuance costs totaled $7.5 and $6.7 as of March 31, 2019 and December 31, 2018, respectively, and have been netted against the aggregate principal amounts of the related debt in the components of the debt table above.

Note 14 - Fair Value Measurements

Accounting standards define fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value measurements are to be considered from the perspective of a market participant that holds the asset or owes the liability. The standards also establish a fair value hierarchy which requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value.

The standards describe three levels of inputs that may be used to measure fair value:

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

Level 2: Quoted prices for identical or similar assets and liabilities in markets that are not active or observable inputs other than quoted prices in active markets for identical or similar assets and liabilities. Level 2 assets and liabilities include over-the-counter derivatives, principally forward foreign exchange contracts, whose value is determined using pricing models with inputs that are generally based on published foreign exchange rates and exchange traded prices, adjusted for other specific inputs that are primarily observable in the market or can be derived principally from or

corroborated by observable market data.
Level 3: Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Valuation Technique

We are exposed to certain risks related to our ongoing business operations, including market risks related to fluctuation in currency exchange. We use foreign exchange contracts to manage the risk of certain cross-currency business relationships to minimize the impact of currency exchange fluctuations on our earnings and cash flows. We do not hold or issue derivative financial instruments for trading or speculative purposes. Foreign exchange contracts not designated as hedging instruments had a notional value of $38.1 million and $2.1 million as of March 31, 2019 and December 31, 2018, respectively. Our derivative assets and liabilities include foreign exchange contract derivatives that are measured at fair value using internal models based on observable market inputs such as forward rates and interest rates. Based on these inputs, the derivatives are classified within Level 2 of the valuation hierarchy. Such derivative receivable amounts are recorded within “Other current assets” on our Consolidated Balance Sheets and were less than $0.1 million as of March 31, 2019 and December 31, 2018. Such derivative liability amounts are recorded within “Accrued liabilities” on our Consolidated Balance Sheets and $0.6 million as of March 31, 2019 and less than $0.1 million as of December 31, 2018.

The available-for-sale securities, which are included in “Other assets” on our Consolidated Balance Sheets, consist of two rabbi trusts that hold marketable securities for the benefit of participants in the SERP. Available-for-sale securities are measured at fair value using quoted market prices in an active market, and are therefore classified within Level 1 of the valuation hierarchy. The fair value of available-for-sale securities was $3.3 million and $3.4 million as of March 31, 2019 and December 31, 2018, respectively.

The carrying value of our financial assets and liabilities, including cash and cash equivalents, accounts receivable, accounts payable and short-term loans payable approximate fair value, without being discounted, due to the short periods during which these amounts are outstanding. Long-term debt rates currently available to us for debt with similar terms and remaining maturities are used to estimate the fair value for debt issues that are not quoted on an exchange. The estimated fair value of total debt is measured using Level 2 inputs and was $990.1 million and $977.6 million as of March 31, 2019 and December 31, 2018, respectively.

Note 15 - Restructuring

In 2018, we recorded restructuring charges of $7.2 million related to the acquisition of Crane Currency and the 2017 repositioning actions described below. In the first three months of 2019, we recorded additional restructuring charges of $2.9 million related to these actions.

Acquisition-Related Restructuring

In 2018, we initiated actions within our Payment & Merchandising Technologies segment related to the closure of Crane Currency’s printing operations in Sweden, which will be transitioned to a new print facility in Malta. We expect these actions to result in workforce reductions of approximately 170 employees, or less than 2% of our global workforce. We recorded pre-tax restructuring charges of $1.6 million, all of which were severance-related cash costs, in 2018. In the first three months of 2019, we recorded pre-tax restructuring charges $2.2 million, of which $0.2 million were severance-related cash costs and $2.0 million were other restructuring related costs. There was no liability remaining associated with these actions as of March 31, 2019.

We expect to incur additional restructuring and related charges of $2.4 million in 2019 to complete these actions. We expect recurring pre-tax savings subsequent to initiating all actions to approximate $23 million annually.

2017 Repositioning

During the fourth quarter of 2017, we initiated broad-based repositioning actions designed to improve profitability. These actions include headcount reductions of approximately 300 employees, or about 3% of our global workforce, and select facility consolidations in North America and Europe.

Restructuring charges included severance and other costs related to the consolidation of certain manufacturing operations, all of which are cash costs. The following table summarizes the restructuring charges by business segment in 2019 and cumulatively

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

through March 31, 2019:

	Severance		Other		Total	
(in millions)	2019	Cumulative	2019	Cumulative	2019	Cumulative
Fluid Handling	$0.6	$ 17.3	$—	$ —	$0.6	$ 17.3
Payment & Merchandising Technologies	—	12.3	0.2	0.6	0.2	12.9
Aerospace & Electronics	—	1.3	(0.1)	(1.1)	(0.1)	0.2
	$0.6	$ 30.9	$0.1	$ (0.5)	$0.7	$ 30.4

Related to the 2017 repositioning actions, we recorded $2.1 million and $7.5 million of additional costs associated with facility consolidations in 2019 and 2018, respectively.

To complete these actions, we expect to incur a total of $8.9 million of restructuring and facility consolidation related charges in 2019 and 2020 in each of the segments as follows:

(in millions)	2019	2020	Total
Fluid Handling	$3.5	$1.6	$5.1
Payment & Merchandising Technologies	1.1	—	1.1
Aerospace & Electronics	2.7	—	2.7
	$7.3	$1.6	$8.9

The following table summarizes the expected costs by nature of costs and year:

(in millions)	2019	2020	Total
Restructuring	$1.0	$—	$1.0
Facility consolidation	6.3	1.6	7.9
	$7.3	$1.6	$8.9

We expect recurring pre-tax savings subsequent to initiating all actions to approximate $30 million annually.

The following table summarizes the accrual balances related to these restructuring charges:

(in millions)	Balance at December 31, 2018	Expense (Gain) [1]	Utilization	Balance at March 31, 2019
Fluid Handling				
Severance	$ 12.9	$ 0.6	$ (1.4)	$ 12.1
Other	—	—	—	—
Total Fluid Handling	$ 12.9	$ 0.6	$ (1.4)	$ 12.1
Payment & Merchandising Technologies				
Severance	$ 9.4	$ —	$ (6.3)	$ 3.1
Other	—	0.2	(0.2)	—
Total Payment & Merchandising Technologies	$ 9.4	$ 0.2	$ (6.5)	$ 3.1
Aerospace & Electronics				
Severance	$ 0.9	$ —	$ (0.2)	$ 0.7
Other	—	(0.1)	0.1	—
Total Aerospace & Electronics	$ 0.9	$ (0.1)	$ (0.1)	$ 0.7
Total Restructuring	$ 23.2	$ 0.7	$ (8.0)	$ 15.9

(1) Reflected in our Condensed Consolidated Statements of Operations as “Restructuring charges”

MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

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

This Quarterly Report on Form 10-Q contains information about Crane Co., some of which includes “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are statements other than historical information or statements about our current condition. You can identify forward-looking statements by the use of terms such as “believes,” “contemplates,” “expects,” “may,” “could,” “should,” “wou “anticipates,” other similar phrases, or the negatives of these terms.

Reference herein to “Crane”, “the Company”, “we”, “us” and “our” refer to Crane Co. and its subsidiaries unless the context specifically states or implies otherwise. References to “core business” or “core sales” in this report include sales from acquired businesses starting from and after the first anniversary of the acquisition, but exclude currency effects. Amounts in the following discussion are presented in millions, except employee, share and per share data, or unless otherwise stated.

We have based the forward-looking statements relating to our operations on our current expectations, estimates and projections about us and the markets we serve. We caution you that these statements are not guarantees of future performance and involve risks and uncertainties. In addition, we have based many of these forward-looking statements on assumptions about future events that may prove to be inaccurate. There are a number of other factors that could cause actual results or outcomes to differ materially from those addressed in the forward-looking statements. The factors that we currently believe to be material are detailed in Part II, Item 1A of this Quarterly Report on Form 10-Q and in our Annual Report on Form 10-K for the fiscal year ended December 31, 2018 filed with the Securities and Exchange Commission and are incorporated by reference herein.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

OUTLOOK

Overall

Our sales depend heavily on industries that are cyclical in nature or are subject to market conditions which may cause customer demand for our products to be volatile and unpredictable. Demand in these industries is affected by fluctuations in domestic and international economic conditions, as well as currency fluctuations, commodity costs, and a variety of other factors.

For 2019, we expect a total year-over-year sales decline of approximately 2%, driven by a slight core sales decline, and a 1% to 2% impact from unfavorable foreign exchange. We expect an improvement in operating profit, driven primarily by improved productivity and benefits from repositioning actions, and lower acquisition-related and integration charges and restructuring related costs.

Fluid Handling

In 2019, we expect Fluid Handling sales to increase in the low single-digit range compared to 2018, driven by mid single-digit core sales growth, largely offset by unfavorable foreign currency translation.

We expect Process Valves and Related Products sales to increase in the low single-digit range compared to 2018, driven by a mid single-digit core sales increase, partially offset by unfavorable foreign exchange. Excluding foreign exchange, we expect order rates in 2019 to improve compared to 2018 as our end markets continue to slowly recover.

We expect Commercial Valves sales to decrease in the low single-digit range compared to 2018, driven by a mid single-digit impact from unfavorable foreign exchange, partially offset by low single-digit core growth.

We expect Other Products sales to increase in the mid to high single-digit range compared to 2018 driven by growth in the U.S. military, municipal and non-residential construction markets.

For the segment, we expect an improvement in both operating profit and operating margin compared to 2018, driven by benefits from core sales growth, strong productivity, restructuring savings and lower restructuring and related costs.

Payment & Merchandising Technologies

We expect Payment & Merchandising Technologies sales to decline in the high single-digit range compared to 2018, driven by a mid to high single-digit decline in core sales, and a low single-digit impact from unfavorable foreign exchange.

At Crane Payment Innovations, we expect core sales growth to be positive despite very challenging comparisons in the gaming and retail vertical markets, with growth across vending, financial services and transportation vertical markets. At Crane Merchandising Systems, we expect an improvement in core sales driven primarily by better demand from large bottler customers and full-line operators. At Crane Currency, we expect core sales to decline driven by substantially lower sales to one particular customer. We expect the segment's operating profit and operating margin to increase compared to 2018, driven by substantially lower acquisition and restructuring costs, along with benefits from repositioning actions and productivity, partially offset by the impact of the lower volume.

Aerospace & Electronics

We expect Aerospace & Electronics core sales to increase in the mid single-digit range compared to 2018. For 2019, we expect that commercial market conditions will remain generally positive, and we expect continued sales growth from our commercial original equipment manufacturer ("OEM") business. We expect a decline in our defense OEM business because of challenging comparisons from a large ground-based radar program in 2018. We expect 2019 aftermarket sales to be approximately flat compared to last year after extremely strong shipments in 2018 and reflecting timing related to certain initial provisioning orders. We expect segment operating profit and operating margin in 2019 to increase compared to 2018 driven primarily by the impact of the higher volume, improved productivity, and benefits from repositioning actions, partially offset by unfavorable mix.

Engineered Materials

In 2019, we expect the Engineered Materials segment sales will be comparable to 2018. We expect a modest decline in sales to recreational vehicle ("RV") manufacturers, offset by higher sales to our building product customers. Segment operating profit and operating margin are expected to decline slightly compared to 2018.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Results from Operations – Three Month Periods Ended March 31

All comparisons below refer to the first quarter 2019 versus the first quarter 2018, unless otherwise specified.

	First Quarter		Change	
(dollars in millions)	2019	2018	$	%
Net sales	$831.7	$799.1	$32.6	4.1 %
Operating profit	113.7	94.3	19.4	20.6 %
Acquisition-related and integration charges *	1.1	5.2	(4.1)	(78.8)%
Restructuring and related charges *	5.0	0.8	4.2	525.0 %
Operating margin	13.7 %	11.8 %		
Other income (expense):				
Interest income	0.6	0.8	(0.2)	(25.0)%
Interest expense	(11.9)	(14.6)	2.7	18.5 %
Miscellaneous income	2.0	3.9	(1.9)	(48.7)%
	(9.3)	(9.9)	0.6	6.1 %
Income before income taxes	104.4	84.4	20.0	23.7 %
Provision for income taxes	21.9	15.7	6.2	39.5 %
Net income before allocation to noncontrolling interests	82.5	68.7	13.8	20.1 %
Less: Noncontrolling interest in subsidiaries' earnings	0.1	—	0.1	NM
Net income attributable to common shareholders	$82.4	$68.7	$13.7	19.9 %

* Acquisition-related and integration charges and restructuring and related charges are included in operating profit and operating margin.

Sales increased by $32.6 million, or 4.1%, to $831.7 million in 2019. Net sales related to operations outside the United States were 35.0% and 33.4% of total net sales for the quarters ended March 31, 2019 and 2018, respectively. The year-over-year change in sales included:

- an increase in core sales of $45.8 million, or 5.7%, and
- an increase in sales related to a benefit from acquisitions, net of $7.0 million, or 0.9%; partially offset by
- unfavorable foreign currency translation of $20.2 million, or 2.5%.

Operating profit increased by $19.4 million, or 20.6%, to $113.7 million in 2019. The increase in operating profit reflected the higher operating profit in our Aerospace & Electronics, Payment & Merchandising Technologies and Fluid Handling segments, partially offset by lower operating profit in our Engineered Materials and higher Corporate costs. Operating profit in the first quarter of 2019 included 1) acquisition-related and integration charges of $1.1 million in connection with the acquisition of Crane Currency and 2) restructuring and related charges of $5.0 million. Operating profit in the first quarter of 2018 included 1) acquisition-related and integration charges of $5.2 million in connection with the acquisition of Crane Currency; 2) acquisition-related inventory and backlog amortization of $6.6 million, primarily associated with the acquisition of Crane Currency and 3) restructuring charges of $0.8 million.

Other expense decreased $0.6 million, or 6.1%. The decrease was primarily related to lower interest expense, partially offset by a lower pension net periodic benefit related to our defined benefit plans.

Our effective tax rate is affected by a number of items, both recurring and discrete, including the amount of income we earn in different jurisdictions and their respective statutory tax rates, acquisitions and dispositions, changes in the valuation of our deferred tax assets and liabilities, changes in tax laws, regulations and accounting principles, the continued availability of statutory tax credits and deductions, the continued reinvestment of our overseas earnings, and examinations initiated by tax authorities around the world.

Our tax rate for the three months ended March 31, 2019 is higher than the prior year's comparable period primarily due to lower share-based compensation benefits and tax credit utilization, partially offset by lower U.S. taxation of non-U.S. earnings.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Comprehensive Income

(in millions)	Three Months Ended March 31, 2019	2018
Net income before allocation to noncontrolling interests	$82.5	$68.7
Components of other comprehensive income (loss), net of tax		
Currency translation adjustment	(0.8)	25.4
Changes in pension and postretirement plan assets and benefit obligation, net of tax	2.9	9.6
Other comprehensive income, net of tax	2.1	35.0
Comprehensive income before allocation to noncontrolling interests	84.6	103.7
Less: Noncontrolling interests in comprehensive income	(0.6)	—
Comprehensive income attributable to common shareholders	$85.2	$103.7

For the three months ended March 31, 2019, comprehensive income before allocations to noncontrolling interests was $84.6 million compared to $103.7 million in the same period of 2018. The $19.1 million decrease was driven by a $26.2 million year over year unfavorable impact of foreign currency translation adjustments primarily reflecting fluctuations in the euro, British pound and Canadian dollar, partially offset by higher net income before allocation to noncontrolling interests of $13.8 million.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Segment Results of Operations - Three Month Periods Ended March 31
The following information should be read in conjunction with our condensed consolidated financial statements and related notes.

Fluid Handling

	First Quarter		Change	
(dollars in millions)	2019	2018	$	%
Net sales by product line:				
Process Valves and Related Products	$168.0	$165.0	$3.0	1.8 %
Commercial Valves	80.8	80.5	0.3	0.4 %
Other Products	24.9	21.1	3.8	18.0 %
Total net sales	$273.7	266.6	$7.1	2.7 %
Operating profit	$34.1	$28.1	$6.0	21.4 %
Restructuring and related charges *	$2.1	$0.4	$1.7	425.0%
Operating margin	12.5 %	10.5 %		

* Restructuring and related charges are included in operating profit and operating margin.

Fluid Handling sales increased by $7.1 million, or 2.7%, to $273.7 million in 2019, driven by an increase in core sales of $17.2 million, or 6.5%, partially offset by unfavorable foreign currency translation of $10.1 million, or 3.8%.

- Sales of Process Valves and Related Products increased by $3.0 million, or 1.8%, to $168.0 million in 2019. The increase reflected a core sales increase of $8.3 million, or 5.0%, partially offset by unfavorable foreign currency translation of $5.3 million, or 3.2%, as the euro weakened against the U.S. dollar. The core sales increase primarily reflected stronger sales to the general industrial vertical market.
- Sales of Commercial Valves increased by $0.3 million, or 0.4%, to $80.8 million in 2019, primarily driven by a core sales increase of $5.1 million, or 6.3%, substantially offset by unfavorable foreign currency translation of $4.8 million, or 5.9%, as the British pound and Canadian dollar weakened against the U.S. dollar. The core sales increase primarily reflected higher sales to the United Kingdom and Canadian non-residential construction markets.
- Sales of Other Products increased by $3.8 million, or 18.0%, to $24.9 million in 2019. The increase primarily reflected higher sales to military customers.

Fluid Handling operating profit increased by $6.0 million, or 21.4%, to $34.1 million in 2019. The increase primarily reflected productivity, the impact from higher sales volumes and repositioning benefits.

The Fluid Handling segment backlog was $284.8 million as of March 31, 2019, compared with $279.6 million as of December 31, 2018 and $281.2 million as of March 31, 2018.

MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Payment & Merchandising Technologies

	First Quarter		Change	
(dollars in millions)	2019	2018	$	%
Net sales by product line:				
Payment Acceptance and Dispensing Products	$158.8	$145.4	$13.4	9.2 %
Banknotes and Security Products	98.6	99.8	(1.2)	(1.2)%
Merchandising Equipment	46.4	47.2	(0.8)	(1.7)%
Total net sales	$303.8	$292.4	$11.4	3.9 %
Operating profit	$43.2	$36.5	$6.7	18.4 %
Acquisition-related and integration charges *	$1.1	$5.2	$(4.1)	(78.8)%
Restructuring and related charges *	$2.6	$0.2	$2.4	1,200.0 %
Operating margin	14.2 %	12.5 %		

* Acquisition-related and integration charges and restructuring and related charges are included in operating profit and operating margin.

Payment & Merchandising Technologies sales increased $11.4 million, or 3.9%, to $303.8 million in 2019, reflecting an increase in sales related to higher core sales of $14.3 million, or 4.9% and a benefit from acquisitions, net, of $7.0 million, or 2.4%, partially offset by unfavorable foreign currency translation of $9.9 million, or 3.4%.

- Sales of Payment Acceptance and Dispensing Products increased $13.4 million, or 9.2%, to $158.8 million in 2019. The increase reflected higher core sales of $19.0 million, or 13.1%, partially offset by unfavorable foreign currency translation of $4.6 million, or 3.2%, as the British pound weakened against the U.S. dollar and a loss of sales related to a small divestiture of $1.0 million, or 0.7%. The core sales increase primarily reflected higher sales to the retail end market, as well as higher sales to the transportation, gaming and vending end markets.
- Sales of Banknotes and Security Products decreased $1.2 million, or 1.2%, to $98.6 million. The decrease reflected a core sales decrease of $4.7 million, or 4.7%, and unfavorable foreign currency translation of $4.5 million, or 4.5% as the euro weakened against the U.S. dollar, partially offset by a benefit of $8.0 million, or 8.0%, due to the acquisition of Crane Currency on January 10, 2018. The core sales decrease reflected lower sales to U.S. customers.
- Sales of Merchandising Equipment decreased $0.8 million, or 1.7%, to $46.4 million in 2018.

Payment & Merchandising Technologies operating profit increased by $6.7 million, or 18.4%, to $43.2 million in 2019. The increase was driven by the absence of $6.4 million of inventory step-up and backlog amortization recorded in the first quarter of 2018, lower acquisition-related and integration charges, repositioning benefits and the impact from higher sales volumes, partially offset by unfavorable mix.

The Payment & Merchandising Technologies segment backlog was $322.2 million as of March 31, 2019, compared with $331.5 million as of December 31, 2018 and $301.0 million as of March 31, 2018.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Aerospace & Electronics

	First Quarter		Change	
(dollars in millions)	2019	2018	$	%
Net sales by product line:				
Commercial Original Equipment	$90.3	$84.7	$5.6	6.6 %
Military Original Equipment	51.5	42.1	9.4	22.3%
Commercial Aftermarket Products	38.2	32.6	5.6	17.2%
Military Aftermarket Products	14.6	11.0	3.6	32.7%
Total net sales	$194.6	$170.4	$24.2	14.2%
Operating profit	$44.8	$34.2	$10.6	31.0%
Restructuring and related charges*	$0.3	$0.2	$0.1	50.0%
Operating margin	23.0 %	20.1 %		

* Restructuring and related charges are included in operating profit and operating margin.

Aerospace & Electronics sales increased $24.2 million, or 14.2%, to $194.6 million in 2019.

- Sales of Commercial Original Equipment increased by $5.6 million, or 6.6%, to $90.3 million in 2019, primarily reflecting higher commercial aircraft build rates.
- Sales of Military Original Equipment increased by $9.4 million, or 22.3%, to $51.5 million in 2019, primarily reflecting higher sales of power products, as well as higher funded engineering sales.
- Sales of Commercial Aftermarket Products increased by $5.6 million, or 17.2%, to $38.2 million in 2019, primarily reflecting higher sales of commercial spares and modernization and upgrade products.
- Sales of Military Aftermarket Products increased by $3.6 million, or 32.7%, to $14.6 million in 2019, primarily reflecting higher sales of military spares.

Aerospace & Electronics operating profit increased by $10.6 million, or 31.0%, to $44.8 million in 2019, driven primarily by the impact from higher sales volumes and benefit from productivity initiatives.

The Aerospace & Electronics segment backlog was $487.1 million as of March 31, 2019, compared with $446.6 million as of December 31, 2018 and $381.2 million as of March 31, 2018.

Engineered Materials

	First Quarter		Change	
(dollars in millions)	2019	2018	$	%
Net sales by product line:				
FRP- Recreational Vehicles	$26.6	$37.4	$(10.8)	(28.9)%
FRP- Building Products	23.6	23.8	(0.2)	(0.8)%
FRP- Transportation	9.4	8.5	0.9	10.6 %
Total net sales	$59.6	$69.7	$(10.1)	(14.5)%
Operating profit	$9.4	$12.4	$(3.0)	(24.2)%
Operating margin	15.8 %	17.8 %		

Engineered Materials sales decreased by $10.1 million, or 14.5%, to $59.6 million in 2019, primarily resulting from lower sales to recreational vehicle customers. Engineered Materials operating profit decreased by $3.0 million, or 24.2%, to $9.4 million in 2019, primarily reflecting the impact from lower sales volumes.

The Engineered Materials segment backlog was $12.3 million as of March 31, 2019, compared with $14.9 million as of December 31, 2018 and $13.4 million as of March 31, 2018.

MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Liquidity and Capital Resources

(in millions)	Three Months Ended March 31, 2019	2018
Net cash provided by (used for):		
Operating activities	$ (100.4)	$ 74.2
Investing activities	(20.0)	(699.5)
Financing activities	33.3	550.9
Effect of foreign currency exchange rate changes on cash and cash equivalents	0.5	10.5
Decrease in cash and cash equivalents	$ (86.6)	$ (63.9)

Our operating philosophy is to deploy cash provided from operating activities, when appropriate, to provide value to shareholders by reinvesting in existing businesses, by making acquisitions that will strengthen and complement our portfolio, by divesting businesses that are no longer strategic and by paying dividends and/or repurchasing shares.

Our current cash balance, together with cash we expect to generate from future operations along with our commercial paper program or borrowings available under our revolving credit facility, is expected to be sufficient to finance our short- and long-term capital requirements, as well as to fund payments associated with our asbestos and environmental liabilities and expected pension contributions. In addition, we believe our investment grade credit ratings afford us adequate access to public and private debt markets.

In 2018, we increased the size of our commercial paper program to permit the issuance of commercial paper notes in an aggregate principal amount not to exceed $550 million at any time outstanding. As of March 31, 2019, there were $55.5 million of outstanding borrowings under the commercial paper program. There were no borrowings outstanding under our commercial paper program as of December 31, 2018.

Operating Activities

Cash used for operating activities was $100.4 million in the first three months of 2019, compared to cash provided by operating activities of $74.2 million during the same period last year. The increase in cash used was primarily driven by higher working capital requirements, principally due to significant cash receipts from one large international customer in 2018 that did not repeat in 2019. Net asbestos-related payments in the first three months of 2019 and 2018 were $9.7 million and $2.9 million, respectively. In 2019, we expect to make payments related to asbestos settlement and defense costs, net of related insurance recoveries, of approximately $50 million.

Investing Activities

Cash flows relating to investing activities consist primarily of cash used for acquisitions and capital expenditures. Cash used for investing activities was $20.0 million in the first three months of 2019, compared to $699.5 million in the comparable period of 2018. The decrease in cash used for investing activities was driven by the absence of net cash paid in 2018 of $672.3 million for the acquisition of Crane Currency and, to a lesser extent, lower capital expenditures compared to the prior year. Capital expenditures are made primarily for increasing capacity, replacing equipment, supporting new product development and improving information systems. We expect capital expenditures of approximately $90 million in 2019, reflecting $30 million of capital requirements resulting from Crane Currency, as well as continued investments in new product development initiatives, primarily in our Aerospace & Electronics, Payment & Merchandising Technologies and Fluid Handling segments.

Financing Activities

Financing cash flows consist primarily of dividend payments to shareholders, share repurchases, repayments of indebtedness, proceeds from the issuance of long-term debt and commercial paper and proceeds from the issuance of common stock. Cash provided by financing activities was $33.3 million during the first three months of 2019, compared to $550.9 million in the comparable period of 2018. The decrease was driven by lower debt proceeds, net of repayments of $510.2 million, partially offset by $4.9 million of lower proceeds from stock option exercises.

Recent Accounting Pronouncements

Information regarding new accounting pronouncements is included in Note 1 to our Condensed Consolidated Financial Statements.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

There have been no material changes in the information called for by this item since the disclosure in our Annual Report on Form 10-K for the year ended December 31, 2018.

Item 4. Controls and Procedures

Disclosure Controls and Procedures. The Company's Chief Executive Officer and Chief Financial Officer have evaluated the effectiveness of the design and operation of the Company's disclosure controls and procedures as of the end of the period covered by this quarterly report. The Company's disclosure controls and procedures are designed to ensure that information required to be disclosed by the Company in the reports that are filed or submitted under the Securities Exchange Act of 1934 is recorded, processed, summarized, and reported within the time periods specified in the Securities and Exchange Commission's rules and forms and that the information is accumulated and communicated to the Company's Chief Executive Officer and Chief Financial Officer to allow timely decisions regarding required disclosure. Based on this evaluation, the Company's Chief Executive Officer and Chief Financial Officer have concluded that these controls are effective as of the end of the period covered by this quarterly report.

Changes in Internal Control over Financial Reporting. During the fiscal quarter ended March 31, 2019, there have been no changes in the Company's internal control over financial reporting, identified in connection with our evaluation thereof, that have materially affected, or are reasonably likely to materially affect, its internal control over financial reporting.

Part II: Other Information

Item 1. Legal Proceedings
Discussion of legal matters is incorporated by reference from Part 1, Item 1, Note 12, “Commitments and Contingencies”, of this Quarterly Report on Form 10-Q, and should be considered an integral part of Part II, Item 1, “Legal Proceedings”.

Item 1A. Risk Factors
Information regarding risk factors appears in Item 1A of Crane Co.’s Annual Report on Form 10-K for the year ended December 31, 2018.

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

(a) Not applicable

(b) Not applicable

(c) Share Repurchases

We did not make any open-market share repurchases of our common stock during the quarter ended March 31, 2019. We routinely receive shares of our common stock as payment for stock option exercises and the withholding taxes due on stock option exercises and the vesting of restricted stock awards from stock-based compensation program participants.

Item 4. Mine Safety Disclosures
Not applicable

Item 5. Other Information
Not applicable

Item 6. Exhibits

Exhibit 31.1*	Certification of Chief Executive Officer pursuant to Rule 13a-14(a) or 15d-14(a)
Exhibit 31.2*	Certification of Chief Financial Officer pursuant to Rule 13a-14(a) or 15d-14(a)
Exhibit 32.1**	Certification of Chief Executive Officer pursuant to Rule 13a-14(b) or 15d-14(b)
Exhibit 32.2**	Certification of Chief Financial Officer pursuant to Rule 13a-14(b) or 15d-14(b)
Exhibit 101.INS*	XBRL Instance Document
Exhibit 101.SCH*	XBRL Taxonomy Extension Schema Document
Exhibit 101.CAL*	XBRL Taxonomy Calculation Linkbase Document
Exhibit 101.DEF*	XBRL Taxonomy Extension Definition Linkbase Document
Exhibit 101.LAB*	XBRL Taxonomy Label Linkbase Document
Exhibit 101.PRE*	XBRL Taxonomy Presentation Linkbase Document

Notes to Exhibits List:
Attached as Exhibit 101 to this Quarterly Report on Form 10-Q are the following documents formatted in XBRL (Extensible Business Reporting Language): (i) the Condensed Consolidated Statements of Operations for the three months ended March 31, 2019 and 2018, respectively; (ii) the Condensed Consolidated Statements of Comprehensive Income for the three months ended March 31, 2019 and 2018, respectively; (iii) the Condensed Consolidated Balance Sheets at March 31, 2019 and December 31, 2018; and (iv) the Condensed Consolidated Statements of Cash Flows for the three months ended March 31, 2019 and 2018, respectively and (v) Notes to Condensed Consolidated Financial Statements.
* Filed with this report
** Furnished with this draft

SIGNATURES

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

		CRANE CO.
		REGISTRANT
Date		
April 30, 2019	By	/s/ Max H. Mitchell
		Max H. Mitchell
		President and Chief Executive Officer
Date	By	/s/ Richard A. Maue
April 30, 2019		Richard A. Maue
		Senior Vice President and Chief Financial Officer