

ALLEGHENY TECHNOLOGIES INC
Form 10-Q
October 31, 2018
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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

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

For the Quarterly Period Ended September 30, 2018

OR

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

For the Transition Period From _____ to _____
Commission File Number 1-12001

ALLEGHENY TECHNOLOGIES INCORPORATED
(Exact name of registrant as specified in its charter)

Delaware 25-1792394
(State or other jurisdiction of (I.R.S. Employer
incorporation or organization) Identification No.)

1000 Six PPG Place
Pittsburgh, Pennsylvania 15222-5479
(Address of Principal Executive Offices) (Zip Code)
(412) 394-2800
(Registrant's telephone number, including area code)

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes No

Indicate by check mark whether the Registrant submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

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

Large accelerated filer Accelerated filer

Non-accelerated filer Smaller reporting company

Emerging growth company

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

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

Yes " No ý

At October 19, 2018, the registrant had outstanding 125,684,396 shares of its Common Stock.

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PART I. FINANCIAL INFORMATION

Item 1. Financial Statements

Allegheny Technologies Incorporated and Subsidiaries

Consolidated Balance Sheets

(In millions, except share and per share amounts)

(Current period unaudited)

	September 30, 2018	December 31, 2017
ASSETS		
Current Assets:		
Cash and cash equivalents	\$ 153.5	\$ 141.6
Accounts receivable, net	588.3	545.3
Short-term contract assets	51.6	—
Inventories, net	1,239.8	1,176.1
Prepaid expenses and other current assets	89.2	52.7
Total Current Assets	2,122.4	1,915.7
Property, plant and equipment, net	2,472.6	2,495.7
Goodwill	536.4	531.4
Other assets	257.6	242.6
Total Assets	\$ 5,389.0	\$ 5,185.4
LIABILITIES AND EQUITY		
Current Liabilities:		
Accounts payable	\$ 416.1	\$ 420.1
Accrued liabilities	228.7	282.4
Short-term contract liabilities	69.2	—
Short-term debt and current portion of long-term debt	16.6	10.1
Total Current Liabilities	730.6	712.6
Long-term debt	1,535.3	1,530.6
Accrued postretirement benefits	301.1	317.8
Pension liabilities	652.7	697.0
Deferred income taxes	12.1	9.7
Long-term contract liabilities	7.3	—
Other long-term liabilities	66.7	73.2
Total Liabilities	3,305.8	3,340.9
Equity:		
ATI Stockholders' Equity:		
Preferred stock, par value \$0.10: authorized-50,000,000 shares; issued-none	—	—
Common stock, par value \$0.10: authorized-500,000,000 shares; issued-126,695,171 shares at September 30, 2018 and December 31, 2017; outstanding-125,684,396 shares at September 30, 2018 and 125,857,197 shares at December 31, 2017	12.7	12.7
Additional paid-in capital	1,608.5	1,596.3
Retained earnings	1,380.9	1,184.3
Treasury stock: 1,010,775 shares at September 30, 2018 and 837,974 shares at December 31, 2017	(30.6)	(26.1)
Accumulated other comprehensive loss, net of tax	(991.3)	(1,027.8)
Total ATI stockholders' equity	1,980.2	1,739.4
Noncontrolling interests	103.0	105.1
Total Equity	2,083.2	1,844.5
Total Liabilities and Equity	\$ 5,389.0	\$ 5,185.4

The accompanying notes are an integral part of these statements.

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Allegheny Technologies Incorporated and Subsidiaries
Consolidated Statements of Operations
(In millions, except per share amounts)
(Unaudited)

	Three months ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
Sales	\$1,020.2	\$869.1	\$3,008.7	\$2,615.2
Cost of sales	859.8	763.8	2,526.0	2,260.8
Gross profit	160.4	105.3	482.7	354.4
Selling and administrative expenses	65.5	64.6	195.3	187.5
Impairment of goodwill	—	114.4	—	114.4
Operating income (loss)	94.9	(73.7)	287.4	52.5
Nonoperating retirement benefit expense	(8.4)	(13.6)	(25.5)	(40.9)
Interest expense, net	(24.8)	(34.2)	(75.8)	(102.2)
Other income, net	0.8	0.2	22.4	3.7
Income (loss) before income taxes	62.5	(121.3)	208.5	(86.9)
Income tax provision (benefit)	6.9	(1.9)	16.8	(2.0)
Net income (loss)	55.6	(119.4)	191.7	(84.9)
Less: Net income attributable to noncontrolling interests	5.1	1.8	10.4	8.7
Net income (loss) attributable to ATI	\$50.5	\$(121.2)	\$181.3	\$(93.6)
Basic net income (loss) attributable to ATI per common share	\$0.40	\$(1.12)	\$1.45	\$(0.87)
Diluted net income (loss) attributable to ATI per common share	\$0.37	\$(1.12)	\$1.31	\$(0.87)
Dividends declared per common share	\$—	\$—	\$—	\$—

The accompanying notes are an integral part of these statements.

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Allegheny Technologies Incorporated and Subsidiaries
Consolidated Statements of Comprehensive Income (Loss)
(In millions)
(Unaudited)

	Three months ended September 30, 2018		Nine months ended September 30, 2018	
	2017	2018	2017	2018
Net income (loss)		\$55.6		\$191.7
Currency translation adjustment				\$(84.9)
Unrealized net change arising during the period				
Derivatives				
Net derivatives gain (loss) on hedge transactions	(10.8)	9.2	2.4	(1.6)
Reclassification to net income (loss) of net realized gain	(2.6)	(1.2)	(10.3)	(3.5)
Income taxes on derivative transactions	—	4.8	—	(0.2)
Total	(13.4)	3.2	(7.9)	(4.9)
Postretirement benefit plans				
Actuarial loss				
Amortization of net actuarial loss	19.2	17.8	57.5	53.6
Prior service cost				
Amortization to net income (loss) of net prior service credits	(0.7)	(0.4)	(1.9)	(1.2)
Income taxes on postretirement benefit plans	—	(11.1)	—	1.9
Total	18.5	28.5	55.6	50.5
Other comprehensive income (loss), net of tax	(8.7)	55.9	31.3	84.6
Comprehensive income (loss)	46.9	(63.5)	223.0	(0.3)
Less: Comprehensive income (loss) attributable to noncontrolling interests	(3.9)	6.8	5.2	15.9
Comprehensive income (loss) attributable to ATI	\$50.8	\$(70.3)	\$217.8	\$(16.2)

The accompanying notes are an integral part of these statements.

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Allegheny Technologies Incorporated and Subsidiaries
 Consolidated Statements of Cash Flows
 (In millions)
 (Unaudited)

	Nine months ended September 30,	
	2018	2017
Operating Activities:		
Net income (loss)	\$191.7	\$(84.9)
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:		
Depreciation and amortization	117.1	120.7
Deferred taxes	2.8	1.7
Gain on joint venture deconsolidation	(15.9)	—
Impairment of goodwill	—	114.4
Changes in operating assets and liabilities:		
Inventories	(137.2)	(64.1)
Accounts receivable	(43.0)	(73.8)
Accounts payable	71.0	56.2
Retirement benefits	(10.1)	(117.6)
Accrued liabilities and other	(59.8)	(6.4)
Cash provided by (used in) operating activities	116.6	(53.8)
Investing Activities:		
Purchases of property, plant and equipment	(101.3)	(85.3)
Purchases of businesses	(10.0)	—
Asset disposals and other	2.2	3.2
Cash used in investing activities	(109.1)	(82.1)
Financing Activities:		
Borrowings on long-term debt	7.1	8.5
Payments on long-term debt and capital leases	(4.6)	(1.9)
Net borrowings under credit facilities	4.0	28.0
Debt issuance costs	—	(0.8)
Dividends paid to noncontrolling interests	(10.0)	—
Sales to noncontrolling interests	14.4	2.2
Shares repurchased for income tax withholding on share-based compensation and other	(6.5)	(4.8)
Cash provided by financing activities	4.4	31.2
Increase (decrease) in cash and cash equivalents	11.9	(104.7)
Cash and cash equivalents at beginning of period	141.6	229.6
Cash and cash equivalents at end of period	\$153.5	\$124.9
The accompanying notes are an integral part of these statements.		

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Allegheny Technologies Incorporated and Subsidiaries
 Statements of Changes in Consolidated Equity
 (In millions, except per share amounts)
 (Unaudited)

	ATI Stockholders						
	Common Stock	Additional Paid-In Capital	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Income (Loss)	Non- controlling Interests	Total Equity
Balance, December 31, 2016	\$ 11.0	\$ 1,188.8	\$ 1,277.1	\$ (28.0)	\$ (1,093.7)	\$ 89.6	\$ 1,444.8
Net income (loss)	—	—	(93.6)	—	—	8.7	(84.9)
Other comprehensive income	—	—	—	—	77.4	7.2	84.6
Dividends to noncontrolling interests	—	—	—	—	—	(8.0)	(8.0)
Sales of subsidiary shares to noncontrolling interest	—	—	—	—	—	2.2	2.2
Employee stock plans	—	7.6	(0.9)	2.1	—	—	8.8
Balance, September 30, 2017	\$ 11.0	\$ 1,196.4	\$ 1,182.6	\$ (25.9)	\$ (1,016.3)	\$ 99.7	\$ 1,447.5
Balance, December 31, 2017	\$ 12.7	\$ 1,596.3	\$ 1,184.3	\$ (26.1)	\$ (1,027.8)	\$ 105.1	\$ 1,844.5
Net income	—	—	181.3	—	—	10.4	191.7
Other comprehensive income (loss)	—	—	—	—	36.5	(5.2)	31.3
Cumulative effect of adoption of new accounting standard	—	—	15.5	—	—	—	15.5
Dividends to noncontrolling interests	—	—	—	—	—	(10.0)	(10.0)
Sales of subsidiary shares to noncontrolling interest	—	—	—	—	—	2.7	2.7
Employee stock plans	—	12.2	(0.2)	(4.5)	—	—	7.5
Balance, September 30, 2018	\$ 12.7	\$ 1,608.5	\$ 1,380.9	\$ (30.6)	\$ (991.3)	\$ 103.0	\$ 2,083.2

The accompanying notes are an integral part of these statements.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Unaudited

Note 1. Accounting Policies

The interim consolidated financial statements include the accounts of Allegheny Technologies Incorporated and its subsidiaries. Unless the context requires otherwise, “Allegheny Technologies”, “ATI” and “the Company” refer to Allegheny Technologies Incorporated and its subsidiaries.

These unaudited consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles for interim financial information and with the instructions for Form 10-Q and Article 10 of Regulation S-X. Accordingly, they do not include all of the information and note disclosures required by U.S. generally accepted accounting principles for complete financial statements. In management’s opinion, all adjustments (which include only normal recurring adjustments) considered necessary for a fair presentation have been included. These unaudited consolidated financial statements should be read in conjunction with the consolidated financial statements and notes thereto included in the Company’s 2017 Annual Report on Form 10-K. The results of operations for these interim periods are not necessarily indicative of the operating results for any future period. The December 31, 2017 financial information has been derived from the Company’s audited consolidated financial statements.

New Accounting Pronouncements Adopted

In January 2018, the Company adopted changes issued by the Financial Accounting Standards Board (FASB) related to revenue recognition with customers. See Note 2 for further explanation related to this adoption, including all newly expanded disclosure requirements.

In January 2018, the Company adopted changes issued by the FASB related to changes to the accounting for defined benefit pension and other postretirement benefit expenses. This new guidance requires the disaggregation of the service cost component from the other components of net benefit cost. The service cost component of net benefit cost is to be reported in the same line item on the consolidated statement of operations as other compensation costs arising from services rendered by the pertinent employees, while the other components of net benefit cost are to be presented in the consolidated statement of operations separately, outside a subtotal of operating income. The amendments also provide explicit guidance to allow only the service cost component of net benefit cost to be eligible for capitalization. With this adoption, the change in presentation of net benefit cost in the consolidated statement of operations was applied retrospectively, and the change in capitalization for only service cost was applied prospectively. The Company adopted this new guidance using the practical expedient that permits the use of the amounts disclosed in the retirement benefits footnote for the prior comparative periods as the estimation basis for applying the retrospective presentation requirements. This required accounting change did have a material impact to previously-reported operating income (loss) in the consolidated statement of operations due to the change in presentation of non-service cost expense components. For the third quarter and first nine months of 2017, applying the practical expedient, operating results were higher by \$13.6 million and \$40.9 million, respectively, with the reclassification of this amount representing the other components of net benefit cost to a newly-created nonoperating retirement benefit expense category. There was no net impact to the reported results before income taxes as a result of this accounting change. This change in presentation of net benefit cost did not affect ATI’s measure of segment operating profit; all defined benefit pension and other postretirement benefit expense attributable to business segment operations remains a component of business segment financial performance. The Company did have a one-time, unfavorable impact of \$5.4 million to pre-tax reported results in the first quarter of 2018 upon adoption, primarily affecting the Flat Rolled Products business segment, due to the change limiting only the service cost component of net benefit cost to be capitalizable into inventory.

In January 2018, the Company early adopted changes issued by the FASB related to changes to its accounting guidance for derivatives and hedging, which changes both the designation and measurement guidance for qualifying hedging relationships and the presentation of hedge results. Some changes resulting from this new guidance include

the elimination of the concept of recognizing periodic hedge ineffectiveness for cash flow hedges, changes to the recognition and presentation of changes in the fair value of the hedging instrument, enhancement of the ability to use the critical-terms-match method for the cash flow hedge of groups of forecasted transactions when the timing of the hedged transactions does not perfectly match the hedging instrument's maturity date, and the addition of new disclosure requirements and amendments to existing ones. The Company applied this new guidance to hedging relationships existing on January 1, 2018, the date of adoption. The adoption of these changes did not have a material impact on the Company's financial statements, and disclosures in Note 7 reflect the requirements of this adoption.

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In August 2018, the FASB issued new accounting guidance for implementation costs incurred in a cloud computing arrangement that is a service contract. This guidance specifies which implementation costs can be capitalized in a hosting arrangement that is a service contract. The guidance aligns the accounting for implementation costs for hosting arrangements, regardless of whether they convey a license to the hosted software. This guidance is required to be adopted either retrospectively or prospectively by the Company beginning in fiscal year 2020 with early adoption permitted, including adoption in any interim period. The Company early adopted this guidance in the third quarter of 2018 on a retrospective basis, which did not have a material impact on the Company's consolidated financial statements.

Pending Accounting Pronouncements

In February 2016, the FASB issued new accounting guidance for leases. This new guidance will require that a lessee recognize assets and liabilities on the balance sheet for all leases with a lease term of more than twelve months, with the result being the recognition of a right of use asset and a lease liability. The new lease accounting requirements are effective for ATI's 2019 fiscal year. In July 2018, the FASB added an additional adoption method, which ATI will use to initially apply the new standard at the adoption date, January 1, 2019. This adoption method recognizes any impact to prior years' results as a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption. The Company is currently in the process of evaluating its existing lease portfolio, including accumulating all of the necessary information required to properly account for the leases under the new standard. In addition, ATI is implementing a company-wide lease management system to assist in the accounting and is evaluating additional changes to its processes and internal controls to ensure the standard's reporting and disclosure requirements are met. The Company is currently evaluating the impact of the new guidance on its consolidated financial statements.

In August 2018, the FASB issued new disclosure guidance on fair value measurement. This new guidance modifies the disclosure requirements on fair value measurements, including removal and modifications of various current disclosures as well as some additional disclosure requirements for Level 3 fair value measurements. Some of these disclosure changes must be applied prospectively while others retrospectively depending on requirement. This guidance is required to be adopted by the Company beginning in fiscal year 2020 with early adoption permitted. The Company does not plan to early adopt this guidance. The adoption of these changes is not expected to have an impact on the Company's consolidated financial statements other than disclosures.

In August 2018, the FASB issued new disclosure guidance for defined benefit plans, which modified certain required disclosures. This guidance is required to be adopted retrospectively by the Company beginning in fiscal year 2021, with early adoption permitted. The Company plans to early adopt this guidance in the fourth quarter of 2018, which is not expected to have an impact on the Company's consolidated financial statements other than disclosures.

Note 2. Revenue from Contracts with Customers

Accounting Policy

On January 1, 2018, the Company adopted Accounting Standards Codification Topic 606 (ASC 606), Revenue from Contracts with Customers. This new guidance provides a five-step analysis of transactions to determine when and how revenue is recognized, and requires an entity to recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services.

The following is the Company's accounting policy as it relates to the new five-step analysis for revenue recognition:

1. Identify the contract: The Company has determined that the contract with the customer is established when the customer purchase order is accepted or acknowledged. Long-term agreements (LTAs), which typically extend multiple years, are used by the Company and certain of its customers for its specialty materials, in the form of mill products, powders, parts and components, to reduce their supply uncertainty. While these LTAs generally define commercial terms including pricing, termination clauses and other contractual requirements, they do not represent the contract with the customer.

Identify the performance obligation in the contract: When the Company accepts or acknowledges the customer purchase order, the type of good or service is defined on a line by line basis. Individual performance obligations are established by virtue of the individual line items identified on the sales order acknowledgment at the time of issuance. Generally, the Company's revenue relates to the sale of goods and contains a single performance obligation for each distinct good. Conversion services that transform customer-owned inventory to a different dimension, product form, and/or changed mechanical properties are classified as "goods".

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Determine the transaction price: Pricing is also defined on a sales order acknowledgment on a line item basis and includes an estimate of variable consideration when required by the terms of the individual customer contract.

Variable consideration is when the selling price of the good is not known, or is subject to adjustment under certain conditions. Types of variable consideration that the Company typically has include volume discounts, customer rebates and surcharges. ATI also provides assurances that goods or services will meet the product specifications contained within the acknowledged customer contract. As such, returns and refunds reserves are estimated based upon past product line history or, at certain locations, on a claim by claim basis.

4. Allocate the transaction price to the performance obligation: Since a customer contract generally contains only one performance obligation, this step of the analysis is generally not applicable to the Company.

5. Recognize revenue when or as the performance obligation is satisfied: Performance obligations generally occur at a point in time and are satisfied when control passes to the customer. For most transactions, control passes at the time of shipment in accordance with agreed upon delivery terms. On occasion, shipping and handling charges occur after the customer obtains control of the good. When this occurs, the shipping and handling services are considered activities to fulfill the promise to transfer the good. This approach is consistent with our revenue recognition approach in prior years.

The Company has several customer agreements involving production of parts and components in the High Performance Materials and Components segment that require revenue to be recognized over time in accordance with the new guidance due to there being no alternative use for the product without significant economic loss and an enforceable right to payment including a normal profit margin from the customer in the event of contract termination. Over-time recognition was a change from the accounting for these products, which was point-in-time prior to the adoption of the new standard. The Company uses an input method for determining the amount of revenue, and associated standard cost, to recognize over-time revenue, cost and gross margin for these customer agreements. The input methods used for these agreements include costs incurred and labor hours expended, both of which give an accurate representation of the progress made toward complete satisfaction of that particular performance obligation.

Contract assets are recognized when ATI's conditional right to consideration for goods or services have transferred to the customer. A conditional right indicates that additional performance obligations associated with the contract are yet to be satisfied. Contract assets are assessed separately for impairment purposes. If ATI's right to consideration from the customer is unconditional, this asset is accounted for as a receivable and presented separately from other contract assets. A right is unconditional if nothing other than the passage of time is required before payment of that consideration is due. Performance obligations that are recognized as revenue at a point-in-time and are billed to the customer are recognized as accounts receivable. Payment terms vary from customer to customer depending upon credit worthiness, prior payment history and other credit considerations.

Contract costs are the incremental costs of obtaining and fulfilling a contract (i.e., costs that would not have been incurred if the contract had not been obtained) to provide goods and services to customers. Contract costs for ATI largely consist of design and development costs for molds, dies and other tools that ATI will own and that will be used in producing the products under the supply arrangement. Contract costs are classified as non-current assets and amortized to expense on a systematic and rational basis over a period consistent with the transfer to the customer of the goods or services to which the asset relates.

Contract liabilities are recognized when ATI has received consideration from a customer to transfer goods or services at a future point in time when the Company performs under the contract. Elements of variable consideration discussed above may be recorded as contract liabilities. In addition, progress billings and advance payments from customers for costs incurred to date are also reported as contract liabilities.

Adoption Method and Impact

The Company applied ASC 606 to all contracts not completed at January 1, 2018 and adopted the accounting standard using the modified retrospective method, with the cumulative effect of initially applying ASC 606 recognized at the beginning of the 2018 fiscal year. Comparative information has not been adjusted and continues to be reported under the previous accounting guidance. The Company recognized a \$15.5 million increase to retained earnings at the beginning of the 2018 fiscal year for the cumulative effect of adoption of this standard, representing the favorable impact to prior results had the over-time revenue recognition for several customer agreements, as discussed above, been applied. Contract assets of \$49.7 million were recorded, along with a \$34.2 million reduction to work-in-process inventory as a result of the ASC 606 adoption using the modified retrospective method. A portion of the cumulative effect impact of over-time revenue recognition related to inventory that is

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valued utilizing the last-in, first-out (LIFO) costing methodology. As such, an \$11.8 million adjustment to the LIFO inventory valuation balance was required, with an equal and offsetting adjustment to net realizable value (NRV) inventory reserves, resulting in no net cumulative effect retained earnings impact for LIFO using the modified retrospective adoption method. See Note 3 for further information on inventory.

In addition, as a result of this over-time recognition of these customer agreements, third quarter and first nine months of 2018 sales on the consolidated statement of operations were higher by \$1.8 million and lower by \$2.5 million, respectively, and cost of sales were higher by \$1.1 million and lower by \$4.1 million, respectively, as compared to what those amounts would have been under the previous revenue recognition guidance. On the consolidated balance sheet, inventories, net, were \$4.1 million higher at September 30, 2018 as compared to what this amount would have been under the previous guidance. Also, \$47.1 million of contract assets were recognized on the consolidated balance sheet at September 30, 2018 (\$47.0 million in short-term contract assets and \$0.1 million in other long-term assets) related to this over-time revenue recognition.

Also, as of January 1, 2018, amounts related largely to cash in advance from customers and progress billings were reclassified on the consolidated balance sheet to contract assets and liabilities in accordance with the new accounting guidance. Such reclassification resulted in a \$3.9 million increase in accounts receivable, \$28.8 million increase in inventories, net, \$44.8 million decrease in accrued liabilities, and \$10.7 million decrease in other-long term liabilities on January 1, 2018, with an offsetting increase in contract assets and liabilities (\$3.7 million in short-term contracts assets, \$69.7 million in short-term contract liabilities and \$22.2 million in other long-term liabilities). There was no impact to cash flow from operating activities on the consolidated statement of cash flows as a result of this accounting standard adoption. As of September 30, 2018, accounts receivable were higher by \$3.7 million, inventories were higher by \$14.2 million, accrued liabilities were lower by \$46.7 million, and other long-term liabilities were lower by \$7.3 million due to these reclassifications to contract assets and liabilities (\$4.6 million in short-term contract assets, \$69.2 million short-term contract liabilities and \$7.3 million in long-term contract liabilities).

Disaggregation of Revenue

The Company operates in two business segments; High Performance Materials & Components (HPMC) and Flat Rolled Products (FRP). Revenue is disaggregated within these two business segments by diversified global markets, primary geographical markets, and diversified products. Comparative information of the Company's overall revenues (in millions) by global and geographical markets for the third quarters and nine months ended September 30, 2018 and 2017 were as follows:

(in millions)	Third quarter ended			September 30, 2017		
	September 30, 2018			September 30, 2017		
	HPMC	FRP	Total	HPMC	FRP	Total
Diversified Global Markets:						
Aerospace & Defense	\$446.5	\$52.7	\$499.2	\$389.5	\$38.2	\$427.7
Oil & Gas	17.9	110.3	128.2	14.3	84.1	98.4
Automotive	2.0	83.0	85.0	2.4	59.3	61.7
Electrical Energy	30.9	29.0	59.9	30.4	18.1	48.5
Medical	44.3	3.6	47.9	41.8	2.7	44.5
Total Key Markets	541.6	278.6	820.2	478.4	202.4	680.8
Food Equipment & Appliances	0.2	58.6	58.8	0.2	54.3	54.5
Construction/Mining	18.5	39.9	58.4	13.5	34.8	48.3
Electronics/Computers/Communications	1.0	40.3	41.3	1.1	41.2	42.3
Other	24.2	17.3	41.5	19.7	23.5	43.2
Total	\$585.5	\$434.7	\$1,020.2	\$512.9	\$356.2	\$869.1

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(in millions)	Nine months ended					
	September 30, 2018			September 30, 2017		
	HPMC	FRP	Total	HPMC	FRP	Total
Diversified Global Markets:						
Aerospace & Defense	\$1,311.7	\$131.9	\$1,443.6	\$1,169.7	\$110.8	\$1,280.5
Oil & Gas	51.4	362.1	413.5	49.7	240.0	289.7
Automotive	7.4	237.1	244.5	6.4	200.0	206.4
Electrical Energy	101.9	78.4	180.3	84.1	60.1	144.2
Medical	131.5	11.3	142.8	134.2	8.5	142.7
Total Key Markets	1,603.9	820.8	2,424.7	1,444.1	619.4	2,063.5
Food Equipment & Appliances	0.3	181.0	181.3	1.0	167.9	168.9
Construction/Mining	55.1	114.8	169.9	37.6	107.0	144.6
Electronics/Computers/Communications	4.7	105.0	109.7	3.5	104.7	108.2
Other	74.1	49.0	123.1	63.5	66.5	130.0
Total	\$1,738.1	\$1,270.6	\$3,008.7	\$1,549.7	\$1,065.5	\$2,615.2

(in millions)	Third quarter ended					
	September 30, 2018			September 30, 2017		
	HPMC	FRP	Total	HPMC	FRP	Total
Primary Geographical Market:						
United States	\$316.7	\$290.9	\$607.6	\$273.4	\$233.1	\$506.5
Europe	173.2	40.5	213.7	164.8	23.8	188.6
Asia	60.9	84.0	144.9	45.1	75.2	120.3
Canada	16.3	7.5	23.8	15.3	5.8	21.1
South America, Middle East and other	18.4	11.8	30.2	14.3	18.3	32.6
Total	\$585.5	\$434.7	\$1,020.2	\$512.9	\$356.2	\$869.1

(in millions)	Nine months ended					
	September 30, 2018			September 30, 2017		
	HPMC	FRP	Total	HPMC	FRP	Total
Primary Geographical Market:						
United States	\$898.6	\$839.1	\$1,737.7	\$820.5	\$735.2	\$1,555.7
Europe	565.4	104.3	669.7	502.2	74.4	576.6
Asia	180.7	258.7	439.4	127.3	190.2	317.5
Canada	51.3	29.0	80.3	52.4	21.1	73.5
South America, Middle East and other	42.1	39.5	81.6	47.3	44.6	91.9
Total	\$1,738.1	\$1,270.6	\$3,008.7	\$1,549.7	\$1,065.5	\$2,615.2

Comparative information of the Company's major high-value and standard products based on their percentages of total sales is as follows:

Diversified Products and Services:	Third quarter ended								
	September 30, 2018				September 30, 2017				
	HPMC	FRP	Total	HPMC	FRP	Total	HPMC	FRP	Total
High-Value Products									
Nickel-based alloys and specialty alloys	32	%29	%30	%30	%27	%28	%		
Precision forgings, castings and components	33	%—	%18	%33	%—	%19	%		
Titanium and titanium-based alloys	25	%3	%16	%26	%3	%17	%		
Precision and engineered strip	—	%34	%14	%—	%34	%14	%		
Zirconium and related alloys	10	%—	%6	%11	%—	%6	%		

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Total High-Value Products	100%	66%	84%	%	100%	64%	84%	%
Standard Products								
Stainless steel sheet	—	%20	%9	%	—	%20	%9	%
Specialty stainless sheet	—	%9	%4	%	—	%11	%4	%
Stainless steel plate and other	—	%5	%3	%	—	%5	%3	%
Total Standard Products	—	%34	%16	%	—	%36	%16	%
Total	100%	100%	100%	%	100%	100%	100%	%

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	Nine months ended							
	September 30, 2018				September 30, 2017			
	HPM	CFRP	Total	%	HPM	CFRP	Total	%
Diversified Products and Services:								
High-Value Products								
Nickel-based alloys and specialty alloys	31	%29	%30	%	30	%23	%27	%
Precision forgings, castings and components	35	%—	%20	%	32	%—	%19	%
Titanium and titanium-based alloys	24	%5	%15	%	27	%4	%17	%
Precision and engineered strip	—	%32	%14	%	—	%34	%14	%
Zirconium and related alloys	10	%—	%5	%	11	%—	%6	%
Total High-Value Products	100	%66	%84	%	100	%61	%83	%
Standard Products								
Stainless steel sheet	—	%20	%9	%	—	%22	%9	%
Specialty stainless sheet	—	%10	%4	%	—	%12	%4	%
Stainless steel plate and other	—	%4	%3	%	—	%5	%4	%
Total Standard Products	—	%34	%16	%	—	%39	%17	%
Total	100	%100	%100	%	100	%100	%100	%

The Company maintains a backlog of confirmed orders totaling \$2.17 billion and \$1.81 billion at September 30, 2018 and 2017, respectively. Due to the structure of the Company's LTAs, 82% of this backlog at September 30, 2018 represented booked orders with performance obligations that will be satisfied within the next twelve months. The backlog does not reflect any elements of variable consideration.

Contract balances

As of September 30, 2018 and December 31, 2017, accounts receivable with customers were \$594.5 million and \$550.9 million, respectively. The following represents the rollforward of accounts receivable - reserve for doubtful accounts and contract assets and liabilities for the nine months ended September 30, 2018:

(in millions)

Accounts Receivable - Reserve for
Doubtful Accounts

Balance as of January 1, 2018	\$5.9
Expense to increase the reserve	0.7
Write-off of uncollectible accounts	(0.4)
Balance as of September 30, 2018	\$6.2

(in millions)

Contract Assets

Short-term

Balance as of January 1, 2018	\$36.5
Recognized in current year	66.2
Reclassified to accounts receivable	(67.9)
Impairment	—
Reclassification to/from long-term	16.8
Balance as of September 30, 2018	\$51.6

Long-term

Balance as of January 1, 2018	\$16.9
Recognized in current year	—
Reclassified to accounts receivable	—
Impairment	—

Reclassification to/from short-term (16.8)
Balance as of September 30, 2018 \$0.1

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(in millions)

Contract Liabilities

Short-term

Balance as of January 1, 2018	\$69.7
Recognized in current year	46.9
Amounts in beginning balance reclassified to revenue	(40.1)
Current year amounts reclassified to revenue	(23.6)
Other	1.7
Reclassification to/from long-term	14.6
Balance as of September 30, 2018	\$69.2

Long-term

Balance as of January 1, 2018	\$22.2
Recognized in current year	0.5
Amounts in beginning balance reclassified to revenue	(0.8)
Current year amounts reclassified to revenue	—
Other	—
Reclassification to/from short-term	(14.6)
Balance as of September 30, 2018	\$7.3

Contract costs for obtaining and fulfilling a contract were \$5.2 million as of September 30, 2018, which are reported in other long-term assets on the consolidated balance sheet. Amortization expense for the three and nine months ended September 30, 2018 of these contract costs was \$0.3 million and \$0.9 million, respectively.

Note 3. Inventories

Inventories at September 30, 2018 and December 31, 2017 were as follows (in millions):

	September 30, December 31,	
	2018	2017
Raw materials and supplies	\$ 204.3	\$ 162.8
Work-in-process	929.9	955.5
Finished goods	190.0	165.0
Total inventories at current cost	1,324.2	1,283.3
Adjustment from current cost to LIFO cost basis	1.7	43.1
Inventory valuation reserves	(86.1)	(121.5)
Progress payments	—	(28.8)
Total inventories, net	\$ 1,239.8	\$ 1,176.1

Inventories are stated at the lower of cost (LIFO, first-in, first-out (FIFO), and average cost methods) or market. Most of the Company's inventory is valued utilizing the LIFO costing methodology. Inventory of the Company's non-U.S. operations is valued using average cost or FIFO methods. Due to deflationary impacts primarily related to raw materials, the carrying value of the Company's inventory as valued on LIFO exceeds current replacement cost, and based on a lower of cost or market value analysis, the Company maintains NRV inventory valuation reserves to adjust carrying value of LIFO inventory to current replacement cost. These NRV reserves were \$47.5 million at December 31, 2017 and \$6.2 million at September 30, 2018. Impacts to cost of sales for changes in the LIFO costing methodology and associated NRV inventory reserves were as follows (in millions):

	Nine months ended	
	September 30, 2018	2017
LIFO benefit (charge)	\$(29.5)	\$(51.5)

NRV benefit (charge)	29.5	51.3
Net cost of sales impact	\$—	\$(0.2)

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As a result of the adoption of ASC 606 on revenue recognition on January 1, 2018, progress payments were reclassified on the consolidated balance sheet from inventories to contract liabilities. In addition, a cumulative effect adjustment for the ASC 606 adoption relating to contracts requiring over-time revenue recognition resulted in a \$34.2 million reduction to work-in-process inventory at the January 1 adoption date. A portion of that inventory is valued utilizing the LIFO costing methodology. As such, an \$11.8 million reduction to the LIFO valuation balance was required, with an offsetting \$11.8 million adjustment to the NRV reserve, resulting in no retained earnings impact. See Note 2 for further explanation of the ASC 606 adoption.

Note 4. Property, Plant and Equipment

Property, plant and equipment at September 30, 2018 and December 31, 2017 was as follows (in millions):

	September 30, 2018	December 31, 2017
Land	\$ 31.6	\$ 31.7
Buildings	851.1	844.5
Equipment and leasehold improvements	3,646.0	3,597.6
	4,528.7	4,473.8
Accumulated depreciation and amortization	(2,056.1)	(1,978.1)
Total property, plant and equipment, net	\$ 2,472.6	\$ 2,495.7

The construction in progress portion of property, plant and equipment at September 30, 2018 was \$128.1 million.

Note 5. Joint Ventures

The financial results of majority-owned joint ventures are consolidated into the Company's operating results and financial position, with the minority ownership interest recognized in the consolidated statement of operations as net income attributable to noncontrolling interests, and as equity attributable to the noncontrolling interests within total stockholders' equity. Investments in which the Company exercises significant influence, but which it does not control (generally a 20% to 50% ownership interest) are accounted for under the equity method of accounting.

Majority-Owned Joint Ventures

The Company has a 60% interest in the Chinese joint venture known as Shanghai STAL Precision Stainless Steel Company Limited (STAL). The remaining 40% interest in STAL is owned by China Baowu Steel Group Corporation Limited, a state authorized investment company whose equity securities are publicly traded in the People's Republic of China. STAL is part of ATI's Flat Rolled Products segment, and manufactures Precision Rolled Strip stainless products mainly for the electronics, communication equipment, computers and automotive markets located in Asia. Cash and cash equivalents held by STAL as of September 30, 2018 were \$30.0 million.

During 2017, the Company formed Next Gen Alloys LLC, a joint venture with GE Aviation for the development of a new meltless titanium alloy powder manufacturing technology. ATI owns a 51% interest in this joint venture. The titanium alloy powders are being developed for use in additive manufacturing applications, including 3D printing. Cash and cash equivalents held by this joint venture as of September 30, 2018 were \$10.4 million. During the first quarter of 2018, the Company received \$2.7 million for the sale of noncontrolling interest related to Next Gen Alloys LLC, which is reported as a financing activity on the consolidated statements of cash flows.

Equity Method Joint Ventures

On March 1, 2018, the Company announced the formation of the Allegheny & Tsingshan Stainless (A&T Stainless) joint venture with an affiliate company of Tsingshan Group (Tsingshan) to produce 60-inch wide stainless sheet products for sale in North America. Tsingshan purchased a 50% joint venture interest in A&T Stainless for \$17.5 million, of which \$12.0 million was received in the first nine months of 2018 and reported as a financing activity on the consolidated statements of cash flows. The A&T Stainless operations include the Company's previously-idled

direct roll and pickle (DRAP) facility in Midland, PA. ATI provides hot-rolling conversion services to A&T Stainless using the FRP segment's Hot-Rolling and Processing Facility. As a result of this sale of a 50% noncontrolling interest and the subsequent deconsolidation of the A&T Stainless entity, the Company recognized a \$15.9 million gain during the first quarter of 2018 under deconsolidation and derecognition accounting guidance covering the loss of control of a subsidiary determined to be a business. The gain, including ATI's retained 50% share, was based on the fair value of the joint venture, as determined by the cash purchase price for the noncontrolling interest,

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and is reported in other income, net on the consolidated statement of operations, and is excluded from FRP segment results. Following this deconsolidation, ATI accounts for the A&T Stainless joint venture under the equity method of accounting. ATI's share of the A&T Stainless joint venture results was a \$0.3 million loss and \$0.2 million of income for the three and nine months ended September 30, 2018, respectively, which is included in the FRP segment's operating results, and within other income, net, on the consolidated statements of operations. In late March 2018, ATI filed for an exclusion from the recently enacted Section 232 tariffs on behalf of the A&T Stainless JV, which imports semi-finished stainless slab products from Indonesia. In the absence of an exclusion, these slabs will be subject to the 25% tariff levied on all stainless steel products imported into the United States. The Company continues to work within the U.S. Commerce Department's Section 232 tariff exclusion request process to secure an exclusion on behalf of the A&T Stainless joint venture. Third quarter 2018 results of A&T Stainless were negatively impacted by these tariffs.

ATI has a 50% interest in the industrial titanium joint venture known as Uniti LLC (Uniti), with the remaining 50% interest held by VSMPO, a Russian producer of titanium, aluminum, and specialty steel products. Uniti is accounted for under the equity method of accounting. ATI's share of Uniti's income/(loss) was \$0.5 million and \$2.3 million for the three and nine months ended September 30, 2018, respectively, and \$(0.1) million and \$0.1 million for the three and nine months ended September 30, 2017, respectively, which is included in the FRP segment's operating results, and within other income, net, in the three and nine months ended September 30, 2018 on the consolidated statements of operations. This equity income is classified in cost of sales for the three and nine months ended September 30, 2017 on the consolidated statements of operations.

Note 6. Debt

Debt at September 30, 2018 and December 31, 2017 was as follows (in millions):

	September 30, 2018	December 31, 2017
Allegheny Technologies 5.875% Notes due 2023 (a)	\$ 500.0	\$ 500.0
Allegheny Technologies 5.95% Notes due 2021	500.0	500.0
Allegheny Technologies 4.75% Convertible Senior Notes due 2022	287.5	287.5
Allegheny Ludlum 6.95% debentures due 2025	150.0	150.0
Term Loan due 2022	100.0	100.0
U.S. revolving credit facility	—	—
Foreign credit facilities	10.0	6.3
Other	15.5	10.0
Debt issuance costs	(11.1)	(13.1)
Total debt	1,551.9	1,540.7
Short-term debt and current portion of long-term debt	16.6	10.1
Total long-term debt	\$ 1,535.3	\$ 1,530.6

(a) Bearing interest at 7.875% effective February 15, 2016.

Revolving Credit Facility

The Company has a \$500 million Asset Based Lending (ABL) Credit Facility, which is collateralized by the accounts receivable and inventory of the Company's domestic operations. The ABL facility, which matures in February 2022, includes a \$400 million revolving credit facility, a letter of credit sub-facility of up to \$200 million, and a \$100 million term loan (Term Loan). The Term Loan has an interest rate of 3.0% plus a LIBOR spread and can be prepaid in increments of \$50 million if certain minimum liquidity conditions are satisfied. In July 2018, the ABL facility was amended to reduce the Term Loan base interest rate to 2.5% plus a LIBOR spread. In conjunction with this amendment, the Company entered into a \$50 million floating-for-fixed interest rate swap which converts half of the Term Loan to a 5.44% fixed interest rate. The swap matures in January 2021.

The applicable interest rate for revolving credit borrowings under the ABL facility includes interest rate spreads based on available borrowing capacity that range between 1.75% and 2.25% for LIBOR-based borrowings and between

1.0% and 1.5% for base rate borrowings. The ABL facility contains a financial covenant whereby the Company must maintain a fixed charge coverage ratio of not less than 1.00:1.00 after an event of default has occurred and is continuing or if the undrawn availability under the ABL revolving credit portion of the facility is less than the greater of (i) 10% of the then applicable maximum borrowing amount under the revolving credit portion of the ABL and any outstanding Term Loan balance, or (ii) \$40.0 million. The Company was in compliance with the fixed charge coverage ratio covenant at September 30, 2018. Additionally, the

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Company must demonstrate liquidity, as calculated in accordance with the terms of the ABL facility, of at least \$700 million on the date that is 91 days prior to January 15, 2021, the maturity date of the 5.95% Senior Notes due 2021, and that such liquidity is available at all times thereafter until the 5.95% Senior Notes due 2021 are paid in full or refinanced. As of September 30, 2018, there were no outstanding borrowings under the revolving portion of the ABL facility, and \$35.1 million was utilized to support the issuance of letters of credit. Average revolving credit borrowings under the ABL facility for the first nine months of 2018 and 2017 were \$56 million and \$46 million, respectively, bearing an average annual interest rate of 3.651% and 3.276%, respectively.

Note 7. Derivative Financial Instruments and Hedging

As part of its risk management strategy, the Company, from time-to-time, utilizes derivative financial instruments to manage its exposure to changes in raw material prices, energy costs, foreign currencies, and interest rates. In accordance with applicable accounting standards, the Company accounts for most of these contracts as hedges. In January 2018, the Company early adopted changes issued by the FASB related to accounting guidance for derivatives and hedging, which includes, among other things, the elimination of the concept of recognizing periodic hedge ineffectiveness for cash flow hedges.

The Company sometimes uses futures and swap contracts to manage exposure to changes in prices for forecasted purchases of raw materials, such as nickel, and natural gas. Under these contracts, which are generally accounted for as cash flow hedges, the price of the item being hedged is fixed at the time that the contract is entered into, and the Company is obligated to make or receive a payment equal to the net change between this fixed price and the market price at the date the contract matures.

The majority of ATI's products are sold utilizing raw material surcharges and index mechanisms. However, as of September 30, 2018, the Company had entered into financial hedging arrangements, primarily at the request of its customers, related to firm orders, for an aggregate notional amount of approximately 12 million pounds of nickel with hedge dates through 2021. The aggregate notional amount hedged is approximately 12% of a single year's estimated nickel raw material purchase requirements.

At September 30, 2018, the outstanding financial derivatives used to hedge the Company's exposure to energy cost volatility included natural gas cost hedges. At September 30, 2018, the Company hedged approximately 35% of the Company's forecasted domestic requirements for natural gas for the remainder of 2018, approximately 35% for 2019, and approximately 30% for 2020.

While the majority of the Company's direct export sales are transacted in U.S. dollars, foreign currency exchange contracts are used, from time-to-time, to limit transactional exposure to changes in currency exchange rates for those transactions denominated in a non-U.S. currency. The Company sometimes purchases foreign currency forward contracts that permit it to sell specified amounts of foreign currencies expected to be received from its export sales for pre-established U.S. dollar amounts at specified dates. The forward contracts are denominated in the same foreign currencies in which export sales are denominated. These contracts are designated as hedges of the variability in cash flows of a portion of the forecasted future export sales transactions which otherwise would expose the Company to foreign currency risk, primarily euros. At September 30, 2018, the Company held euro forward sales contracts designated as cash flow hedges with a notional value of approximately 16 million euros with maturity dates through May 2019. In addition, the Company may also designate cash balances held in foreign currencies as hedges of forecasted foreign currency transactions.

The Company may enter into derivative interest rate contracts to maintain a reasonable balance between fixed- and floating-rate debt. In July 2018, the Company entered into a \$50 million floating-for-fixed interest rate swap which converts half of the Term Loan to a 5.44% fixed interest rate. The Company designated the interest rate swap as a cash flow hedge of the Company's exposure to the variability of the payment of interest on a portion of its Term Loan borrowings. The swap matures in January 2021.

There are no credit risk-related contingent features in the Company's derivative contracts, and the contracts contained no provisions under which the Company has posted, or would be required to post, collateral. The counterparties to the Company's derivative contracts are substantial and creditworthy commercial banks that are recognized market makers. The Company controls its credit exposure by diversifying across multiple counterparties and by monitoring credit ratings and credit default swap spreads of its counterparties. The Company also enters into master netting agreements

with counterparties when possible.

The fair values of the Company's derivative financial instruments are presented below, representing the gross amounts recognized which are not offset by counterparty or by type of item hedged. All fair values for these derivatives were measured using Level 2 information as defined by the accounting standard hierarchy, which includes quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, and inputs derived principally from or corroborated by observable market data.

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(In millions)	Balance sheet location	September 30, 2018	December 31, 2017
Asset derivatives			
Derivatives designated as hedging instruments:			
Foreign exchange contracts	Prepaid expenses and other current assets	\$ 0.3	\$ —
Natural gas contracts	Prepaid expenses and other current assets	0.3	0.1
Nickel and other raw material contracts	Prepaid expenses and other current assets	4.3	10.5
Interest rate swap	Other assets	0.1	—
Natural gas contracts	Other assets	0.1	0.3
Nickel and other raw material contracts	Other assets	2.7	5.5
Total derivatives designated as hedging instruments		7.8	16.4
Derivatives not designated as hedging instruments:			
Foreign exchange contracts	Prepaid expenses and other current assets	0.3	0.1
Total derivatives not designated as hedging instruments		0.3	0.1
Total asset derivatives		\$ 8.1	\$ 16.5

	Balance sheet location		
Liability derivatives			
Derivatives designated as hedging instruments:			
Interest rate swap	Accrued liabilities	\$ 0.2	\$ —
Natural gas contracts	Accrued liabilities	0.2	0.9
Nickel and other raw material contracts	Accrued liabilities	2.9	2.1
Natural gas contracts	Other long-term liabilities	0.4	0.3
Nickel and other raw material contracts	Other long-term liabilities	1.0	2.2
Total derivatives designated as hedging instruments		4.7	5.5
Total liability derivatives		\$ 4.7	\$ 5.5

For derivative financial instruments that are designated as cash flow hedges, the gain or loss on the derivative is reported as a component of other comprehensive income (OCI) and reclassified into earnings in the same period or periods during which the hedged item affects earnings. For derivative financial instruments that are designated as fair value hedges, changes in the fair value of these derivatives are recognized in current period results and are reported as changes within accrued liabilities and other on the consolidated statements of cash flows. There were no outstanding fair value hedges as of September 30, 2018. The Company did not use net investment hedges for the periods presented. The effects of derivative instruments in the tables below are presented net of related income taxes, excluding any impacts of changes to income tax valuation allowances effecting results of operations or other comprehensive income, when applicable (see Note 14 for further explanation).

Assuming market prices remain constant with those at September 30, 2018, a pre-tax gain of \$1.6 million is expected to be recognized over the next 12 months.

Activity with regard to derivatives designated as cash flow hedges for the three and nine month periods ended September 30, 2018 and 2017 was as follows (in millions):

	Amount of Gain (Loss) Recognized in OCI on Derivatives		Amount of Gain (Loss) Reclassified from Accumulated OCI into Income (a)	
	Three months ended September 30,		Three months ended September 30,	
	2018	2017	2018	2017
Derivatives in Cash Flow Hedging Relationships				
Nickel and other raw material contracts	\$ (8.0)	\$ 5.6	\$ 1.7	\$ (0.9)
Natural gas contracts	(0.1)	—	—	(0.7)
Foreign exchange contracts	0.2	0.1	0.4	2.4
Interest rate swap	(0.2)	—	(0.1)	—
Total	\$ (8.1)	\$ 5.7	\$ 2.0	\$ 0.8

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	Amount of Gain (Loss) Recognized in OCI on Derivatives		Amount of Gain (Loss) Reclassified from Accumulated OCI into Income (a)	
	Nine months ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
Derivatives in Cash Flow Hedging Relationships				
Nickel and other raw material contracts	\$ 1.3	\$ 1.2	\$ 7.9	\$ (2.5)
Natural gas contracts	0.1	(2.1)	(0.4)	(2.8)
Foreign exchange contracts	0.7	(0.1)	0.4	7.5
Interest rate swap	(0.2)	—	(0.1)	—
Total	\$ 1.9	\$ (1.0)	\$ 7.8	\$ 2.2

The gains (losses) reclassified from accumulated OCI into income related to the derivatives, with the exception of the interest rate swap, are presented in cost of sales in the same period or periods in which the hedged item affects earnings. The gains (losses) reclassified from accumulated OCI into income on the interest rate swap are presented in interest expense in the same period as the interest expense on the Term Loan is recognized in earnings.

The disclosures of gains or losses presented above for nickel and other raw material contracts and foreign currency contracts do not take into account the anticipated underlying transactions. Since these derivative contracts represent hedges, the net effect of any gain or loss on results of operations may be fully or partially offset.

The Company has 10 million euro notional value outstanding as of September 30, 2018 of foreign currency forward contracts not designated as hedges, with maturity dates into the second quarter of 2019. These derivatives that are not designated as hedging instruments were as follows:

(In millions)	Amount of Gain (Loss) Recognized in Income on Derivatives	
	Three months ended September 30,	Nine months ended September 30,
	2017	2018
Derivatives Not Designated as Hedging Instruments	2017	2018
Foreign exchange contracts	\$(0.1)	\$0.1

Changes in the fair value of foreign exchange contract derivatives not designated as hedging instruments are recorded in cost of sales and are reported as changes within accrued liabilities and other on the consolidated statements of cash flows.

Note 8. Fair Value of Financial Instruments

The estimated fair value of financial instruments at September 30, 2018 was as follows:

(In millions)	Fair Value Measurements at Reporting Date Using			
	Total Carrying Amount	Total Estimated Fair Value	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Observable Inputs (Level 2)
Cash and cash equivalents	\$ 153.5	\$ 153.5	\$ 153.5	\$ —
Derivative financial instruments:				
Assets	8.1	8.1	—	8.1
Liabilities	4.7	4.7	—	4.7
Debt (a)	1,563.0	1,945.8	1,820.3	125.5

The estimated fair value of financial instruments at December 31, 2017 was as follows:

(In millions)	Fair Value Measurements at Reporting Date Using			
	Total Carrying Amount	Total Estimated Fair Value	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Observable Inputs (Level 2)
Cash and cash equivalents	\$ 141.6	\$ 141.6	\$ 141.6	\$ —
Derivative financial instruments:				
Assets	16.5	16.5	—	16.5
Liabilities	5.5	5.5	—	5.5
Debt (a)	1,553.8	1,853.2	1,736.9	116.3

(a) The total carrying amount for debt excludes debt issuance costs related to the recognized debt liability which is presented in the consolidated balance sheet as a direct reduction from the carrying amount of the debt liability.

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In accordance with accounting standards, fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants at the measurement date. Accounting standards established three levels of a fair value hierarchy that prioritizes the inputs used to measure fair value. This hierarchy requires entities to maximize the use of observable inputs and minimize the use of unobservable inputs. The three levels of inputs used to measure fair value are as follows:

Level 1 – Quoted prices in active markets for identical assets or liabilities.

Level 2 – Observable inputs other than quoted prices included in Level 1, such as quoted prices for similar assets and liabilities in active markets; quoted prices for identical or similar assets and liabilities in markets that are not active; or other inputs that are observable or can be 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 and liabilities. This includes certain pricing models, discounted cash flow methodologies and similar techniques that use significant unobservable inputs.

The availability of observable market data is monitored to assess the appropriate classification of financial instruments within the fair value hierarchy. Changes in economic conditions or model-based valuation techniques may require the transfer of financial instruments from one fair value level to another. In such instances, the transfer is reported at the beginning of the reporting period. No transfers between levels were reported in 2018 or 2017.

The following methods and assumptions were used by the Company in estimating the fair value of its financial instruments:

Cash and cash equivalents: Fair value was determined using Level 1 information.

Derivative financial instruments: Fair values for derivatives were measured using exchange-traded prices for the hedged items. The fair value was determined using Level 2 information, including consideration of counterparty risk and the Company's credit risk.

Short-term and long-term debt: The fair values of the Company's publicly traded debt were based on Level 1 information. The fair values of the other short-term and long-term debt were determined using Level 2 information.

Note 9. Retirement Benefits

The Company has defined contribution retirement plans or defined benefit pension plans covering substantially all employees. Company contributions to defined contribution retirement plans are generally based on a percentage of eligible pay or based on hours worked. Benefits under the defined benefit pension plans are generally based on years of service and/or final average pay. The Company funds the U.S. pension plans in accordance with the Employee Retirement Income Security Act of 1974, as amended, and the Internal Revenue Code (IRC).

The Company also sponsors several postretirement plans covering certain collectively-bargained salaried and hourly employees. The plans provide health care and life insurance benefits for eligible retirees. In most retiree health care plans, Company contributions towards premiums are capped based on the cost as of a certain date, thereby creating a defined contribution.

For the three month periods ended September 30, 2018 and 2017, the components of pension and other postretirement benefit expense for the Company's defined benefit plans included the following (in millions):

	Pension Benefits		Other Postretirement Benefits	
	Three months ended September 30,		Three months ended September 30,	
	2018	2017	2018	2017
Service cost - benefits earned during the year	\$4.1	\$3.5	\$ 0.6	\$ 0.6
Interest cost on benefits earned in prior years	26.2	29.2	3.2	3.7

Expected return on plan assets	(39.5)	(36.7)	—	—
Amortization of prior service cost (credit)	0.1	0.3	(0.8)	(0.7)
Amortization of net actuarial loss	16.5	15.6	2.7	2.2
Total retirement benefit expense	\$7.4	\$11.9	\$ 5.7	\$ 5.8

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For the nine month periods ended September 30, 2018 and 2017, the components of pension and other postretirement benefit expense for the Company's defined benefit plans included the following (in millions):

	Pension Benefits		Other Postretirement Benefits	
	Nine months ended September 30, 2018	Nine months ended September 30, 2017	Nine months ended September 30, 2018	Nine months ended September 30, 2017
Service cost - benefits earned during the year	\$12.4	\$10.5	\$1.8	\$1.8
Interest cost on benefits earned in prior years	78.5	87.6	9.5	11.0
Expected return on plan assets	(118.5)	(110.1)	—	—
Amortization of prior service cost (credit)	0.3	0.9	(2.2)	(2.1)
Amortization of net actuarial loss	49.5	46.9	8.0	6.7
Curtailment loss	0.4	—	—	—
Total retirement benefit expense	\$22.6	\$35.8	\$17.1	\$17.4

On June 1, 2018, a new four-year collective bargaining agreement (CBA) was ratified by USW-represented employees of the Company's Specialty Alloys & Components (SAC) operations in Millersburg, OR. The new SAC CBA resulted in changes to retirement benefit programs, including a freeze to new entrants to the U.S. defined benefit pension plan and to postretirement health care benefits, and a hard freeze for most current pension plan participants covered by the SAC CBA, effective July 31, 2018. New hires covered by the CBA, and pension plan participants who are subject to the hard freeze, will receive Company contributions to a defined contribution retirement plan. The CBA also included pension benefit increases for all current pension plan participants affecting both prior and future service. The Company recognized a \$0.4 million pension curtailment charge in the second quarter 2018 for the prior service cost of these pension benefit increases in connection with employees being hard frozen in the pension plan.

The Company has now completely closed its U.S. defined benefit pension plan to new entrants.

Note 10. Income Taxes

The Company maintains income tax valuation allowances on its U.S. Federal and state deferred tax assets due to a three year cumulative loss condition, which limits the ability to consider other positive subjective evidence, such as projections of future results, to assess the realizability of deferred tax assets. Results in both 2018 and 2017 include impacts from income taxes that differ from applicable standard tax rates, primarily related to income tax valuation allowances. Third quarter 2018 results included a provision for income taxes of \$6.9 million, or 11.0% of income before income taxes, primarily related to income taxes on non-U.S. operations. The overall income tax provision for the third quarter 2018 includes discrete adjustments of \$0.9 million of tax expense resulting from tax expense related to uncertain tax positions, impact of change in tax rates and tax calculations for entities excluded from the annual effective tax rate. The third quarter 2017 benefit for income taxes was \$1.9 million, which included \$0.3 million of discrete tax benefits.

The Company continues to account for impacts of the Tax Cuts and Jobs Act (Tax Act) as estimated amounts, pending further information and analysis, which includes final tax return filings, analysis of foreign earnings and profits (E&P), and interpretive Internal Revenue Service (IRS) guidance. The Company estimated the impact of the Tax Act as part of the 2017 year-end financial statements. Additional IRS guidance and IRC elections have been published, which have aided in refining the initial estimate related to the tax on the mandatory repatriation of foreign earnings, otherwise known as the "transition tax". The transition tax is a tax on certain previously untaxed accumulated and current E&P of the Company's foreign subsidiaries. The Company was able to reasonably estimate the transition tax and recorded an initial provisional transition tax liability of \$0 as of December 31, 2017. The initial estimate was approximately \$100 million of federal taxable income on the mandatory deemed repatriation of foreign E&P, for

which the Company planned to utilize a portion of its federal net operating loss (NOL) deferred tax asset to fully offset the estimated transition tax liability of \$35 million. On the basis of revised E&P computations that were calculated during the second quarter of 2018, as well as further IRS guidance issued during this 2018 period, the Company recognized an additional measurement-period adjustment of \$5.9 million related to the transition tax liability, with a corresponding adjustment of \$5.9 million to income tax expense during the nine months ended September 30, 2018. This was based on the Company's updated untaxed foreign E&P estimate of \$97.5 million, resulting in a transition tax liability of \$34.1 million. The Company's current strategy is to make an election to not utilize NOLs to offset the transition tax liability, and instead utilize available tax credits of \$28.2 million, resulting in a remaining transition tax liability of \$5.9 million. Due to final regulations not being issued, the accounting for this item is not yet complete. The Company expects to complete the

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accounting within the prescribed one-year measurement period from the Tax Act enactment date. The transition tax liability is payable over eight years under the IRC, and the first installment payment of \$0.5 million was paid in April 2018.

The adoption of this strategy would preserve \$97.5 million federal NOL tax attributes that the Company expects it will be able to utilize before expiration, while using tax credits that would potentially expire due to utilization limitations. The overall impact on the Company's deferred tax assets as of December 31, 2017 is zero due to the net valuation allowance position. Changes to certain deferred tax assets and the valuation allowance at December 31, 2017 as a result of the Company's expected use of tax credits to meet a portion of the transition tax were as follows (in millions):

Deferred Income Tax Assets	Estimate Refinement	Originally Reported	Change
Net operating loss tax carryovers	\$ 357.0	\$ 336.1	\$20.9
Tax credits	\$ 62.4	\$ 92.6	\$(30.2)
Gross deferred income tax assets	\$ 733.6	\$ 742.9	\$(9.3)
Valuation allowance	(264.7)	(274.0)	9.3
Total deferred income tax assets	\$ 468.9	\$ 468.9	\$—

The utilization of the tax credits of \$28.2 million does not match the change in the deferred tax asset amount due to the refinement of the transition tax calculation.

Discrete tax benefits of \$5.8 million were recognized in the first nine months of 2018 relating to valuation allowance releases resulting from the acceptance of net operating loss carryback claims and amendments of historical tax returns due to changes in estimated tax credit utilization resulting from recently-issued IRS guidance.

For the nine months of 2018, the provision for income taxes was \$16.8 million, or 8.1%, compared to a benefit for income taxes of \$2.0 million, for the comparable 2017 period. The first nine months of 2018 included discrete tax expense of \$0.9 million, while the comparable 2017 period included discrete tax benefits of \$7.0 million, largely for the effects of amending tax returns for prior periods in certain domestic jurisdictions.

Note 11. Business Segments

The Company operates in two business segments: High Performance Materials & Components and Flat Rolled Products. The measure of segment operating profit, which is used to analyze the performance and results of the business segments, excludes all effects of LIFO inventory accounting and any related changes in net realizable value inventory reserves which offset the Company's aggregate net debit LIFO valuation balance, income taxes, corporate expenses, net interest expense, closed operations and other expenses, restructuring and asset impairment charges, and non-operating gains and losses. Management believes segment operating profit, as defined, provides an appropriate measure of controllable operating results at the business segment level. Following is certain financial information with respect to the Company's business segments for the periods indicated (in millions):

	Three months ended September 30, 2018		Nine months ended September 30, 2017	
Total sales:				
High Performance Materials & Components	\$615.2	\$526.3	\$1,806.3	\$1,593.3
Flat Rolled Products	452.5	372.3	1,330.9	1,118.5
	1,067.7	898.6	3,137.2	2,711.8
Intersegment sales:				
High Performance Materials & Components	29.7	13.4	68.2	43.6
Flat Rolled Products	17.8	16.1	60.3	53.0
	47.5	29.5	128.5	96.6
Sales to external customers:				
High Performance Materials & Components	585.5	512.9	1,738.1	1,549.7
Flat Rolled Products	434.7	356.2	1,270.6	1,065.5

\$1,020.2 \$869.1 \$3,008.7 \$2,615.2

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	Three months ended September 30, 2018		Nine months ended September 30, 2017	
Operating profit:				
High Performance Materials & Components	\$76.0	\$61.7	\$259.4	\$180.6
Flat Rolled Products	29.5	(7.3)	66.5	14.6
Total operating profit	105.5	54.4	325.9	195.2
LIFO and net realizable value reserves	—	(0.1)	—	(0.2)
Corporate expenses	(14.8)	(14.8)	(40.9)	(36.9)
Closed operations and other expenses	(3.4)	(12.2)	(16.6)	(28.4)
Impairment of goodwill	—	(114.4)	—	(114.4)
Gain on joint venture deconsolidation (See Note 5)	—	—	15.9	—
Interest expense, net	(24.8)	(34.2)	(75.8)	(102.2)
Income before income taxes	\$62.5	\$(121.3)	\$208.5	\$(86.9)

Closed operations and other expenses were lower in the third quarter of 2018, compared to the prior year period, primarily due to lower carrying costs for closed facilities, mainly related to property taxes and insurance expenses for the Rowley, UT and Midland, PA locations, compared to the prior year period. On a year to date basis, closed operations and other expenses were lower in 2018 primary due to foreign currency remeasurement gains compared to remeasurement losses in 2017 from the Company's European Treasury Center operation as well as lower carrying costs for closed facilities. The reduction in interest expense compared to the prior year period is due to the redemption of the Company's previously outstanding 9.375% Senior Notes due 2019 in the fourth quarter of 2017.

During the third quarter of 2017, the Company recorded a \$114.4 million goodwill impairment charge to write-off all the goodwill assigned to ATI Cast Products, a titanium investment casting business in the HPMC segment. This goodwill impairment charge was excluded from 2017 HPMC business segment results.

On July 12, 2018, the Company acquired the assets of Addaero Manufacturing (Addaero) for \$10 million of cash consideration. Addaero is a leader in metal alloy-based additive manufacturing for the aerospace and defense industries, located in New Britain, CT. Management expects the acquisition to expand the Company's capabilities to provide comprehensive customer solutions ranging from the design of parts for additive manufacturing to the production of ready-to-install components. The acquisition of Addaero is another building block in the strategy to enhance ATI's full specialty materials capabilities to provide end customers with finished products. This business is reported as part of the HPMC segment from the date of the acquisition. The purchase price allocation includes a \$2.0 million technology intangible asset and goodwill of \$6.0 million, which is deductible for tax purposes. The final allocation of the purchase price was completed in the third quarter of 2018.

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Note 12. Per Share Information

The following table sets forth the computation of basic and diluted income (loss) per common share:

	Three months ended September 30, 2018		Nine months ended September 30, 2017	
(In millions, except per share amounts)				
Numerator:				
Numerator for basic income (loss) per common share –				
Net income (loss) attributable to ATI	\$50.5	\$(121.2)	\$181.3	\$(93.6)
Effect of dilutive securities:				
4.75% Convertible Senior Notes due 2022	3.2	—	9.6	—
Numerator for diluted income (loss) per common share –				
Net income (loss) attributable to ATI after assumed conversions	\$53.7	\$(121.2)	\$190.9	\$(93.6)
Denominator:				
Denominator for basic net income (loss) per common share – weighted average shares	25.2	107.7	125.1	107.7
Effect of dilutive securities:				
Share-based compensation	0.9	—	0.7	—
4.75% Convertible Senior Notes due 2022	19.9	—	19.9	—
Denominator for diluted net income (loss) per common share – adjusted weighted average shares and assumed conversions	146.0	107.7	145.7	107.7
Basic net income (loss) attributable to ATI per common share	\$0.40	\$(1.12)	\$1.45	\$(0.87)
Diluted net income (loss) attributable to ATI per common share	\$0.37	\$(1.12)	\$1.31	\$(0.87)

Common stock that would be issuable upon the assumed conversion of the 4.75% Convertible Senior Notes due 2022 and other option equivalents and contingently issuable shares are excluded from the computation of contingently issuable shares, and therefore, from the denominator for diluted earnings per share, if the effect of inclusion is anti-dilutive. There were no anti-dilutive shares for the three and nine month periods ended September 30, 2018. There were 20.9 million and 20.7 million anti-dilutive shares for the three and nine month periods ended September 30, 2017, respectively.

Note 13. Financial Information for Subsidiary and Guarantor Parent

The payment obligations under the \$150 million 6.95% debentures due 2025 issued by Allegheny Ludlum, LLC (the “Subsidiary”) are fully and unconditionally guaranteed by Allegheny Technologies Incorporated (the “Guarantor Parent”). In accordance with positions established by the Securities and Exchange Commission, the following financial information sets forth separately financial information with respect to the Subsidiary, the non-guarantor subsidiaries and the Guarantor Parent. The principal elimination entries eliminate investments in subsidiaries and certain intercompany balances and transactions.

ATI is the plan sponsor for the ATI Pension Plan, the Company’s U.S. qualified defined benefit pension plan (the “Plan”) which covers certain current and former employees of the Subsidiary and the non-guarantor subsidiaries. As a result, the balance sheets presented for the Subsidiary and the non-guarantor subsidiaries do not include any Plan assets or liabilities, or the related deferred taxes and valuation allowances. The Plan assets, liabilities and related deferred taxes and pension income or expense are recognized by the Guarantor Parent. Management and royalty fees charged to the Subsidiary and to the non-guarantor subsidiaries by the Guarantor Parent have been excluded solely for purposes of this presentation. The effects of income tax valuation allowances on U.S. Federal and State deferred tax assets are excluded from the Subsidiary’s financial results, and are reported by the Guarantor Parent or the non-guarantor subsidiaries, as applicable.

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Allegheny Technologies Incorporated
 Financial Information for Subsidiary and Guarantor Parent
 Balance Sheets
 September 30, 2018

(In millions)	Guarantor Parent	Subsidiary	Non-guarantor Subsidiaries	Eliminations	Consolidated
Assets:					
Cash and cash equivalents	\$ 1.1	\$ 6.8	\$ 145.6	\$—	\$ 153.5
Accounts receivable, net	—	156.4	431.9	—	588.3
Intercompany notes receivable	—	—	3,913.5	(3,913.5)	—
Short-term contract assets	—	—	51.6	—	51.6
Inventories, net	—	238.6	1,001.2	—	1,239.8
Prepaid expenses and other current assets	14.7	38.4	36.1	—	89.2
Total current assets	15.8	440.2	5,579.9	(3,913.5)	2,122.4
Property, plant and equipment, net	0.7	1,551.6	920.3	—	2,472.6
Goodwill	—	—	536.4	—	536.4
Intercompany notes receivable	—	—	200.0	(200.0)	—
Investment in subsidiaries	6,131.9	37.7	—	(6,169.6)	—
Other assets	34.1	40.5	183.0	—	257.6
Total assets	\$ 6,182.5	\$ 2,070.0	\$ 7,419.6	\$(10,283.1)	\$ 5,389.0
Liabilities and stockholders' equity:					
Accounts payable	\$ 4.6	\$ 153.4	\$ 258.1	\$—	\$ 416.1
Accrued liabilities	37.3	68.8	122.6	—	228.7
Intercompany notes payable	2,144.5	1,769.0	—	(3,913.5)	—
Short-term contract liabilities	—	30.7	38.5	—	69.2
Short-term debt and current portion of long-term debt	0.2	0.8	15.6	—	16.6
Total current liabilities	2,186.6	2,022.7	434.8	(3,913.5)	730.6
Long-term debt	1,277.5	152.0	105.8	—	1,535.3
Intercompany notes payable	—	200.0	—	(200.0)	—
Accrued postretirement benefits	—	243.8	57.3	—	301.1
Pension liabilities	602.0	3.9	46.8	—	652.7
Deferred income taxes	12.1	—	—	—	12.1
Long-term contract liabilities	—	—	7.3	—	7.3
Other long-term liabilities	21.1	17.5	28.1	—	66.7
Total liabilities	4,099.3	2,639.9	680.1	(4,113.5)	3,305.8
Total stockholders' equity (deficit)	2,083.2	(569.9)	6,739.5	(6,169.6)	2,083.2
Total liabilities and stockholders' equity	\$ 6,182.5	\$ 2,070.0	\$ 7,419.6	\$(10,283.1)	\$ 5,389.0

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Allegheny Technologies Incorporated
 Financial Information for Subsidiary and Guarantor Parent
 Statements of Operations and Comprehensive Income
 For the three months ended September 30, 2018

(In millions)	Guarantor Parent	Subsidiary	Non-guarantor Subsidiaries	Eliminations	Consolidated
Sales	\$ —	\$ 357.4	\$ 662.8	\$ —	\$ 1,020.2
Cost of sales	3.7	316.3	539.8	—	859.8
Gross profit (loss)	(3.7)	41.1	123.0	—	160.4
Selling and administrative expenses	24.9	7.3	33.3	—	65.5
Operating income (loss)	(28.6)	33.8	89.7	—	94.9
Nonoperating retirement benefit expense	(3.1)	(4.9)	(0.4)	—	(8.4)
Interest income (expense), net	(34.9)	(29.5)	39.6	—	(24.8)
Other income (loss) including equity in income of unconsolidated subsidiaries	129.1	0.4	(0.1)	(128.6)	0.8
Income (loss) before income tax provision (benefit)	62.5	(0.2)	128.8	(128.6)	62.5
Income tax provision (benefit)	6.9	1.4	21.2	(22.6)	6.9
Net income (loss)	55.6	(1.6)	107.6	(106.0)	55.6
Less: Net income attributable to noncontrolling interests	—	—	5.1	—	5.1
Net income (loss) attributable to ATI	\$ 55.6	\$ (1.6)	\$ 102.5	\$ (106.0)	\$ 50.5
Comprehensive income (loss) attributable to ATI	\$ 46.9	\$ 0.9	\$ 97.9	\$ (94.9)	\$ 50.8

Allegheny Technologies Incorporated
 Financial Information for Subsidiary and Guarantor Parent
 Statements of Operations and Comprehensive Income
 For the nine months ended September 30, 2018

(In millions)	Guarantor Parent	Subsidiary	Non-guarantor Subsidiaries	Eliminations	Consolidated
Sales	\$ —	\$ 1,047.0	\$ 1,961.7	\$ —	\$ 3,008.7
Cost of sales	11.7	962.8	1,551.5	—	2,526.0
Gross profit (loss)	(11.7)	84.2	410.2	—	482.7
Selling and administrative expenses	73.0	25.2	97.1	—	195.3
Operating income (loss)	(84.7)	59.0	313.1	—	287.4
Nonoperating retirement benefit expense	(9.7)	(14.6)	(1.2)	—	(25.5)
Interest income (expense), net	(102.1)	(83.3)	109.6	—	(75.8)
Other income (loss) including equity in income of unconsolidated subsidiaries	405.0	19.5	0.6	(402.7)	22.4
Income (loss) before income tax provision (benefit)	208.5	(19.4)	422.1	(402.7)	208.5
Income tax provision (benefit)	16.8	(2.9)	66.3	(63.4)	16.8
Net income (loss)	191.7	(16.5)	355.8	(339.3)	191.7
Less: Net income attributable to noncontrolling interests	—	—	10.4	—	10.4
Net income (loss) attributable to ATI	\$ 191.7	\$ (16.5)	\$ 345.4	\$ (339.3)	\$ 181.3
Comprehensive income (loss) attributable to ATI	\$ 223.0	\$ (9.3)	\$ 334.7	\$ (330.6)	\$ 217.8

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Condensed Statements of Cash Flows

For the nine months ended September 30, 2018

(In millions)

	Guarantor Parent	Subsidiary	Non-guarantor Subsidiaries	Eliminations	Consolidated
Cash flows provided by (used in) operating activities	\$ (102.9)	\$ (126.7)	\$ 361.2	\$ (15.0)	\$ 116.6
Investing Activities:					
Purchases of property, plant and equipment	(1.4)	(19.2)	(80.7)	—	(101.3)
Net receipts/(payments) on intercompany activity	—	—	(236.0)	236.0	—
Purchases of businesses	—	—	(10.0)	—	(10.0)
Asset disposals and other	0.8	1.3	0.1	—	2.2
Cash flows provided by (used in) investing activities	(0.6)	(17.9)	(326.6)	236.0	(109.1)
Financing Activities:					
Borrowings on long-term debt	—	—	7.1	—	7.1
Payments on long-term debt and capital leases	(0.2)	(0.6)	(3.8)	—	(4.6)
Net borrowings under credit facilities	—	—	4.0	—	4.0
Net receipts/(payments) on intercompany activity	109.2	126.8	—	(236.0)	—
Dividends paid to stockholders	—	—	(15.0)	15.0	—
Dividends paid to noncontrolling interests	—	—	(10.0)	—	(10.0)
Sales to noncontrolling interests	—	11.7	2.7	—	14.4
Shares repurchased for income tax withholding on share-based compensation and other	(6.5)	—	—	—	(6.5)
Cash flows provided by (used in) financing activities	102.5	137.9	(15.0)	(221.0)	4.4
Increase (decrease) in cash and cash equivalents	\$ (1.0)	\$ (6.7)	\$ 19.6	\$ —	\$ 11.9

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Allegheny Technologies Incorporated
 Financial Information for Subsidiary and Guarantor Parent
 Balance Sheets
 December 31, 2017

(In millions)	Guarantor Parent	Subsidiary	Non-guarantor Subsidiaries	Eliminations	Consolidated
Assets:					
Cash and cash equivalents	\$ 2.1	\$ 13.5	\$ 126.0	\$ —	\$ 141.6
Accounts receivable, net	0.2	141.6	403.5	—	545.3
Intercompany notes receivable	—	—	3,505.6	(3,505.6)	—
Inventories, net	—	207.9	968.2	—	1,176.1
Prepaid expenses and other current assets	6.6	4.5	41.6	—	52.7
Total current assets	8.9	367.5	5,044.9	(3,505.6)	1,915.7
Property, plant and equipment, net	0.9	1,581.6	913.2	—	2,495.7
Goodwill	—	—	531.4	—	531.4
Intercompany notes receivable	—	—	200.0	(200.0)	—
Investment in subsidiaries	5,645.6	37.7	—	(5,683.3)	—
Other assets	25.4	18.0	199.2	—	242.6
Total assets	\$ 5,680.8	\$ 2,004.8	\$ 6,888.7	\$ (9,388.9)	\$ 5,185.4
Liabilities and stockholders' equity:					
Accounts payable	\$ 3.0	\$ 180.3	\$ 236.8	\$ —	\$ 420.1
Accrued liabilities	54.1	88.5	139.8	—	282.4
Intercompany notes payable	1,836.5	1,669.1	—	(3,505.6)	—
Short-term debt and current portion of long-term debt	0.3	0.6	9.2	—	10.1
Total current liabilities	1,893.9	1,938.5	385.8	(3,505.6)	712.6
Long-term debt	1,275.7	150.7	104.2	—	1,530.6
Intercompany notes payable	—	200.0	—	(200.0)	—
Accrued postretirement benefits	—	250.2	67.6	—	317.8
Pension liabilities	644.3	4.4	48.3	—	697.0
Deferred income taxes	9.7	—	—	—	9.7
Other long-term liabilities	12.7	17.2	43.3	—	73.2
Total liabilities	3,836.3	2,561.0	649.2	(3,705.6)	3,340.9
Total stockholders' equity (deficit)	1,844.5	(556.2)	6,239.5	(5,683.3)	1,844.5
Total liabilities and stockholders' equity	\$ 5,680.8	\$ 2,004.8	\$ 6,888.7	\$ (9,388.9)	\$ 5,185.4

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Allegheny Technologies Incorporated
 Financial Information for Subsidiary and Guarantor Parent
 Statements of Operations and Comprehensive Income
 For the three months ended September 30, 2017

(In millions)	Guarantor Parent	Subsidiary	Non-guarantor Subsidiaries	Eliminations	Consolidated
Sales	\$—	\$ 287.9	\$ 581.2	\$ —	\$ 869.1
Cost of sales	3.4	279.3	481.1	—	763.8
Gross profit (loss)	(3.4)	8.6	100.1	—	105.3
Selling and administrative expenses	24.8	8.4	31.4	—	64.6
Impairment of goodwill	—	—	114.4	—	114.4
Operating income (loss)	(28.2)	0.2	(45.7)	—	(73.7)
Nonoperating retirement benefit expense	(8.0)	(4.7)	(0.9)	—	(13.6)
Interest income (expense), net	(40.1)	(22.9)	28.8	—	(34.2)
Other income (loss) including equity in income of unconsolidated subsidiaries	(45.0)	0.3	(0.1)	45.0	0.2
Income (loss) before income tax provision (benefit)	(121.3)	(27.1)	(17.9)	45.0	(121.3)
Income tax provision (benefit)	(1.9)	(8.6)	28.3	(19.7)	(1.9)
Net income (loss)	(119.4)	(18.5)	(46.2)	64.7	(119.4)
Less: Net income attributable to noncontrolling interests	—	—	1.8	—	1.8
Net income (loss) attributable to ATI	\$(119.4)	\$(18.5)	\$(48.0)	\$ 64.7	\$(121.2)
Comprehensive income (loss) attributable to ATI	\$(63.5)	\$(15.5)	\$(28.5)	\$ 37.2	\$(70.3)

Allegheny Technologies Incorporated
 Financial Information for Subsidiary and Guarantor Parent
 Statements of Operations and Comprehensive Income
 For the nine months ended September 30, 2017

(In millions)	Guarantor Parent	Subsidiary	Non-guarantor Subsidiaries	Eliminations	Consolidated
Sales	\$—	\$ 866.3	\$ 1,748.9	\$ —	\$ 2,615.2
Cost of sales	12.5	809.0	1,439.3	—	2,260.8
Gross profit (loss)	(12.5)	57.3	309.6	—	354.4
Selling and administrative expenses	66.8	26.5	94.2	—	187.5
Impairment of goodwill	—	—	114.4	—	114.4
Operating income (loss)	(79.3)	30.8	101.0	—	52.5
Nonoperating retirement benefit expense	(24.2)	(14.0)	(2.7)	—	(40.9)
Interest income (expense), net	(118.4)	(66.6)	82.8	—	(102.2)
Other income (loss) including equity in income of unconsolidated subsidiaries	135.0	1.1	2.6	(135.0)	3.7
Income (loss) before income tax provision (benefit)	(86.9)	(48.7)	183.7	(135.0)	(86.9)
Income tax provision (benefit)	(2.0)	(16.3)	97.4	(81.1)	(2.0)
Net income (loss)	(84.9)	(32.4)	86.3	(53.9)	(84.9)
Less: Net income attributable to noncontrolling interests	—	—	8.7	—	8.7
Net income (loss) attributable to ATI	\$(84.9)	\$(32.4)	\$ 77.6	\$ (53.9)	\$(93.6)
Comprehensive income (loss) attributable to ATI	\$(0.3)	\$(27.1)	\$ 109.9	\$ (98.7)	\$(16.2)

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Condensed Statements of Cash Flows

For the nine months ended September 30, 2017

(In millions)	Guarantor Parent	Subsidiary	Non-guarantor Subsidiaries	Eliminations	Consolidated
Cash flows provided by (used in) operating activities	\$ (84.2)	\$ (83.1)	\$ 113.5	\$ —	\$ (53.8)
Investing Activities:					
Purchases of property, plant and equipment	(0.5)	(27.4)	(57.4)	—	(85.3)
Net receipts/(payments) on intercompany activity	—	—	(205.1)	205.1	—
Asset disposals and other	—	0.1	3.1	—	3.2
Cash flows provided by (used in) investing activities	(0.5)	(27.3)	(259.4)	205.1	(82.1)
Financing Activities:					
Borrowings on long-term debt	—	—	8.5	—	8.5
Payments on long-term debt and capital leases	(0.3)	(0.2)	(1.4)	—	(1.9)
Net borrowings under credit facilities	—	—	28.0	—	28.0
Debt issuance costs	—	—	(0.8)	—	(0.8)
Net receipts/(payments) on intercompany activity	89.6	115.5	—	(205.1)	—
Sale to noncontrolling interests	—	—	2.2	—	2.2
Shares repurchased for income tax withholding on share-based compensation	(4.8)	—	—	—	(4.8)
Cash flows provided by (used in) financing activities	84.5	115.3	36.5	(205.1)	31.2
Increase (decrease) in cash and cash equivalents	\$ (0.2)	\$ 4.9	\$ (109.4)	\$ —	\$ (104.7)

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Note 14. Accumulated Other Comprehensive Income (Loss)

The changes in accumulated other comprehensive income (loss) (AOCI) by component, net of tax, for the three month period ended September 30, 2018 were as follows (in millions):

	Post- retirement benefit plans	Currency translation adjustment	Unrealized holding gains on securities	Derivatives	Deferred Tax Asset Valuation Allowance	Total
Attributable to ATI:						
Balance, June 30, 2018	\$ (926.2)	\$ (59.9)	\$ —	\$ 13.2	\$ (18.7)	\$(991.6)
OCI before reclassifications	—	(4.8)	—	(8.1)	—	(12.9)
Amounts reclassified from AOCI	(a) 14.0	(b) —	(b)	—(c) (2.0)	(d) 1.2	13.2
Net current-period OCI	14.0	(4.8)	—	(10.1)	1.2	0.3
Balance, September 30, 2018	\$ (912.2)	\$ (64.7)	\$ —	\$ 3.1	\$ (17.5)	\$(991.3)
Attributable to noncontrolling interests:						
Balance, June 30, 2018	\$ —	\$ 21.1	\$ —	\$ —	\$ —	\$21.1
OCI before reclassifications	—	(9.0)	—	—	—	(9.0)
Amounts reclassified from AOCI	—	(b) —	—	—	—	—
Net current-period OCI	—	(9.0)	—	—	—	(9.0)
Balance, September 30, 2018	\$ —	\$ 12.1	\$ —	\$ —	\$ —	\$12.1

The changes in AOCI by component, net of tax, for the nine month period ended September 30, 2018 were as follows (in millions):

	Post- retirement benefit plans	Currency translation adjustment	Unrealized holding gains on securities	Derivatives	Deferred Tax Asset Valuation Allowance	Total
Attributable to ATI:						
Balance, December 31, 2017	\$ (954.5)	\$ (53.5)	\$ —	\$ 9.0	\$ (28.8)	\$(1,027.8)
OCI before reclassifications	—	(11.2)	—	1.9	—	(9.3)
Amounts reclassified from AOCI	(a) 42.3	(b) —	(b)	—(c) (7.8)	(d) 11.3	45.8
Net current-period OCI	42.3	(11.2)	—	(5.9)	11.3	36.5
Balance, September 30, 2018	\$ (912.2)	\$ (64.7)	\$ —	\$ 3.1	\$ (17.5)	\$(991.3)
Attributable to noncontrolling interests:						
Balance, December 31, 2017	\$ —	\$ 17.3	\$ —	\$ —	\$ —	\$17.3
OCI before reclassifications	—	(5.2)	—	—	—	(5.2)
Amounts reclassified from AOCI	—	(b) —	—	—	—	—
Net current-period OCI	—	(5.2)	—	—	—	(5.2)
Balance, September 30, 2018	\$ —	\$ 12.1	\$ —	\$ —	\$ —	\$12.1

(a) Amounts were included in net periodic benefit cost for pension and other postretirement benefit plans (see Note 9).

(b) No amounts were reclassified to earnings.

(c) Amounts related to derivatives are included in cost of goods sold or interest expense in the period or periods the hedged item affects earnings (see Note 7).

(d) Represents the net change in deferred tax asset valuation allowances on changes in AOCI balances between the balance sheet dates.

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The changes in AOCI by component, net of tax, for the three month period ended September 30, 2017 were as follows (in millions):

	Post- retirement benefit plans	Currency translation adjustment	Unrealized holding gains on securities	Derivatives	Deferred Tax Asset Valuation Allowance	Total
Attributable to ATI:						
Balance, June 30, 2017	\$ (943.5)	\$ (72.4)	\$	—\$ (5.7)	\$ (45.6)	\$(1,067.2)
OCI before reclassifications	—	19.2		— 5.7	—	24.9
Amounts reclassified from AOCI	(a) 10.5	(b) —	(b)	—(c) (0.8)	16.3	26.0
Net current-period OCI	10.5	19.2		— 4.9	16.3	50.9
Balance, September 30, 2017	\$ (933.0)	\$ (53.2)	\$	—\$ (0.8)	\$ (29.3)	\$(1,016.3)
Attributable to noncontrolling interests:						
Balance, June 30, 2017	\$ —	\$ 11.9	\$	—\$ —	\$ —	\$11.9
OCI before reclassifications	—	5.0		— —	—	5.0
Amounts reclassified from AOCI	—	(b) —		— —	—	—
Net current-period OCI	—	5.0		— —	—	\$5.0
Balance, September 30, 2017	\$ —	\$ 16.9	\$	—\$ —	\$ —	\$16.9

The changes in AOCI by component, net of tax, for the nine month period ended September 30, 2017 were as follows (in millions):

	Post- retirement benefit plans	Currency translation adjustment	Unrealized holding gains on securities	Derivatives	Deferred Tax Asset Valuation Allowance	Total
Attributable to ATI:						
Balance, December 31, 2016	\$ (965.5)	\$ (85.0)	\$	—\$ 2.4	\$ (45.6)	\$(1,093.7)
OCI before reclassifications	—	31.8		— (1.0)	—	30.8
Amounts reclassified from AOCI	(a) 32.5	(b) —	(b)	—(c) (2.2)	16.3	46.6
Net current-period OCI	32.5	31.8		— (3.2)	16.3	77.4
Balance, September 30, 2017	\$ (933.0)	\$ (53.2)	\$	—\$ (0.8)	\$ (29.3)	\$(1,016.3)
Attributable to noncontrolling interests:						
Balance, December 31, 2016	\$ —	\$ 9.7	\$	—\$ —	\$ —	\$9.7
OCI before reclassifications	—	7.2		— —	—	7.2
Amounts reclassified from AOCI	—	(b) —		— —	—	—
Net current-period OCI	—	7.2		— —	—	\$7.2
Balance, September 30, 2017	\$ —	\$ 16.9	\$	—\$ —	\$ —	\$16.9

(a) Amounts were included in net periodic benefit cost for pension and other postretirement benefit plans (see Note 9).

(b) No amounts were reclassified to earnings.

(c) Amounts related to the effective portion of the derivatives are included in cost of goods sold in the period or periods the hedged item affects earnings (see Note 7).

Other comprehensive income (loss) amounts (OCI) reported above by category are net of applicable income tax expense (benefit) for each year presented. Income tax expense (benefit) on OCI items is recorded as a change in a deferred tax asset or liability. Amounts recognized in OCI include the impact of any deferred tax asset valuation allowances, when applicable, resulting from the Company's three year cumulative loss position. Foreign currency translation adjustments, including those pertaining to noncontrolling interests, are generally not adjusted for income taxes as they relate to indefinite investments in non-U.S. subsidiaries.

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Reclassifications out of AOCI for the three and nine month periods ended September 30, 2018 and 2017 were as follows:

Details about AOCI Components (In millions)	Amount reclassified from AOCI				Affected line item in the statements of operations
	Three months ended September 30, 2018	Three months ended September 30, 2017	Nine months ended September 30, 2018	Nine months ended September 30, 2017	
Postretirement benefit plans					
Prior service credit	\$0.7	\$ 0.4	\$ 1.9	\$ 1.2	(a)
Actuarial losses	(19.2)	(17.8)	(57.5)	(53.6)	(a)
	(18.5)	(17.4)	(55.6)	(52.4)	(c) Total before tax
	(4.5)	(6.9)	(13.3)	(19.9)	Tax provision (benefit) (d)
	\$(14.0)	\$ (10.5)	\$ (42.3)	\$ (32.5)	Net of tax
Derivatives					
Nickel and other raw material contracts	\$2.2	\$ (1.5)	\$ 10.4	\$ (4.0)	(b)
Natural gas contracts	—	(1.1)	(0.5)	(4.5)	(b)
Foreign exchange contracts	0.5	3.8	0.5	12.0	(b)
Interest rate swap	(0.1)	—	(0.1)	—	(b)
	2.6	1.2	10.3	3.5	(c) Total before tax
	0.6	0.4	2.5	1.3	Tax provision (benefit) (d)
	\$2.0	\$ 0.8	\$ 7.8	\$ 2.2	Net of tax

(a) Amounts are reported in nonoperating retirement benefit expense (see Note 9).

(b) Amounts related to derivatives, with the exception of the interest rate swap are included in cost of goods sold in the period or periods the hedged item affects earnings. Amounts related to the interest rate swap are included in interest expense in the same period as the interest expense on the Term Loan is recognized in earnings (see Note 7).

(c) For pretax items, positive amounts are income and negative amounts are expense in terms of the impact to net income. Tax effects are presented in conformity with ATI's presentation in the consolidated statements of operations.

(d) These amounts exclude the impact of any deferred tax asset valuation allowance, when applicable. Note 15. Commitments and Contingencies

The Company is subject to various domestic and international environmental laws and regulations that govern the discharge of pollutants and disposal of wastes, and which may require that it investigate and remediate the effects of the release or disposal of materials at sites associated with past and present operations. The Company could incur substantial cleanup costs, fines, and civil or criminal sanctions, third party property damage or personal injury claims as a result of violations or liabilities under these laws or noncompliance with environmental permits required at its facilities. The Company is currently involved in the investigation and remediation of a number of its current and former sites, as well as third party sites.

Environmental liabilities are recorded when the Company's liability is probable and the costs are reasonably estimable. In many cases, however, the Company is not able to determine whether it is liable or, if liability is probable, to reasonably estimate the loss or range of loss. Estimates of the Company's liability remain subject to additional uncertainties, including the nature and extent of site contamination, available remediation alternatives, the extent of corrective actions that may be required, and the number, participation, and financial condition of other potentially responsible parties (PRPs). The Company adjusts its accruals to reflect new information as appropriate. Future

adjustments could have a material adverse effect on the Company's consolidated results of operations in a given period, but the Company cannot reliably predict the amounts of such future adjustments.

At September 30, 2018, the Company's reserves for environmental remediation obligations totaled approximately \$15 million, of which \$9 million was included in other current liabilities. The reserve includes estimated probable future costs of \$3 million for federal Superfund and comparable state-managed sites; \$11 million for formerly owned or operated sites for which the Company has remediation or indemnification obligations; and \$1 million for owned or controlled sites at which Company operations have been discontinued. The timing of expenditures depends on a number of factors that vary by site. The Company expects that it will expend present accruals over many years and that remediation of all sites with which it has been

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identified will be completed within thirty years. The Company continues to evaluate whether it may be able to recover a portion of past and future costs for environmental liabilities from third parties and to pursue such recoveries where appropriate.

Based on currently available information, it is reasonably possible that costs for recorded matters may exceed the Company's recorded reserves by as much as \$16 million. Future investigation or remediation activities may result in the discovery of additional hazardous materials, potentially higher levels of contamination than discovered during prior investigation, and may impact costs of the success or lack thereof in remedial solutions. Therefore, future developments, administrative actions or liabilities relating to environmental matters could have a material adverse effect on the Company's consolidated financial condition or results of operations.

See Note 20. Commitments and Contingencies to the Company's consolidated financial statements in the Company's Annual Report on Form 10-K for its fiscal year ended December 31, 2017 for a discussion of legal proceedings affecting the Company.

A number of other lawsuits, claims and proceedings have been or may be asserted against the Company relating to the conduct of its currently and formerly owned businesses, including those pertaining to product liability, environmental, health and safety matters and occupational disease (including as each relates to alleged asbestos exposure), as well as patent infringement, commercial, government contracting, construction, employment, employee and retiree benefits, taxes, environmental, and stockholder and corporate governance matters. While the outcome of litigation cannot be predicted with certainty, and some of these lawsuits, claims or proceedings may be determined adversely to the Company, management does not believe that the disposition of any such pending matters is likely to have a material adverse effect on the Company's financial condition or liquidity, although the resolution in any reporting period of one or more of these matters could have a material adverse effect on the Company's consolidated results of operations for that period.

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

Overview

ATI is a global manufacturer of technically advanced specialty materials and complex components. Our largest markets are aerospace & defense, which together represent approximately 50% of total sales, led by products for jet engines. Additionally, we have a strong presence in the oil & gas, electrical energy, medical, and automotive markets. In aggregate, these key markets represent about 80% of our revenue. ATI is a market leader in manufacturing differentiated products that require our unique manufacturing and precision machining capabilities as well as our innovative new product development competence. Our capabilities range from alloy development to final production of highly engineered finished components. We are a leader in producing powders for use in next-generation jet engine forgings and 3D-printed aerospace products.

ATI reported third quarter 2018 sales of \$1.02 billion and income before tax of \$62.5 million, compared to sales of \$869.1 million and a loss before tax of \$121.3 million for the third quarter 2017. Our gross profit was \$160.4 million, or 15.7% of sales, a \$55.1 million improvement compared to the third quarter 2017, reflecting the benefits of our growing position on next-generation commercial aerospace programs. Results for the third quarter 2017 include a pre-tax non-cash goodwill impairment charge of \$114.4 million (\$113.6 million after-tax, or \$1.05 per share) for ATI Cast Products, our titanium investment casting business in the High Performance Materials & Components (HPMC) segment. Gross profit and operating profit now reflect required accounting changes to classify the non-service cost components of retirement benefit expense as nonoperating expenses. Prior period results were restated for this required reporting change, which did not affect pre-tax or net-of-tax results, or how ATI calculates business segment operating profit. Net income attributable to ATI was \$50.5 million, or \$0.37 per share, in the third quarter 2018 compared to a net loss attributable to ATI of \$121.2 million, or \$(1.12) per share, for the third quarter 2017. Results in both 2018 and 2017 include impacts from income taxes that differ from applicable standard tax rates, primarily related to the income tax valuation allowance.

We operate in two business segments, HPMC and Flat Rolled Products (FRP). Compared to the third quarter 2017, sales increased 14% in the HPMC segment and 22% in the FRP segment. Sales to the commercial aerospace market, which represented 65% of third quarter 2018 HPMC sales, were 18% higher than the third quarter 2017, including a 21% increase in commercial airframe product sales and a 16% increase in sales to the commercial jet engine market.

In addition, HPMC third quarter sales included higher demand in the construction and mining and medical markets, which improved 36% and 6%, respectively, versus the prior year period. The increase in sales in the FRP segment was due to 26% higher sales of high-value products, primarily nickel-based and specialty alloys, and 13% higher sales of standard products.

Results for the first nine months of 2018 included sales of \$3.01 billion and income before tax of \$208.5 million, compared to sales of \$2.62 billion and a loss before tax of \$86.9 million for the first nine months of 2017. Our gross profit for the first nine months of 2018 was \$482.7 million, or 16.0% of sales, a \$128.3 million improvement compared to the first nine months of

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2017. Results for 2018 include a \$15.9 million pre-tax gain on the sale of a 50% noncontrolling interest and subsequent deconsolidation of the Allegheny & Tsingshan Stainless (A&T Stainless) joint venture in March 2018. ATI's 2017 results include the third quarter's \$114.4 million pre-tax goodwill impairment charge. Net income attributable to ATI was \$181.3 million, or \$1.31 per share, in the first nine months of 2018, compared to a net loss attributable to ATI of \$93.6 million, or \$(0.87) per share, for the first nine months of 2017.

Compared to the first nine months of 2017, sales for the first nine months of 2018 increased 12% in the HPMC business segment and 19% in the FRP business segment. HPMC sales reflect stronger demand for forged components and nickel-based and specialty alloys mill products. FRP's sales compared to the prior year period include stronger shipments of high-value products, primarily for nickel-based and specialty alloys.

ATI's sales to the aerospace & defense markets increased 17%, to \$499.2 million in the third quarter 2018, compared to the third quarter 2017. HPMC sales of next-generation jet engine products, which represented 48% of total third quarter 2018 HPMC jet engine product sales, increased 42% compared to the third quarter 2017. The HPMC segment typically experiences modest seasonal weakness in the third quarter of each fiscal year due to many European customers, particularly in the aerospace supply chain, taking plant outages during this summer period. ATI also typically performs corresponding annual preventative maintenance outages at several facilities during this same period.

Demand from the global aerospace & defense, oil & gas, electrical energy, automotive and medical markets represented 81% of our sales for the three months ended September 30, 2018 and 78% for the three months ended September 30, 2017. Comparative information for our overall revenues (in millions) by market and their respective percentages of total revenues for the three and nine month periods ended September 30, 2018 and 2017 were as follows:

Markets	Three months ended		Three months ended	
	September 30, 2018		September 30, 2017	
Aerospace & Defense	\$499.2	49 %	\$427.7	49 %
Oil & Gas	128.2	13 %	98.4	11 %
Automotive	85.0	8 %	61.7	7 %
Electrical Energy	59.9	6 %	48.5	6 %
Medical	47.9	5 %	44.5	5 %
Subtotal - Key Markets	820.2	81 %	680.8	78 %
Food Equipment & Appliances	58.8	6 %	54.5	6 %
Construction/Mining	58.4	6 %	48.3	6 %
Electronics/Computers/Communication	41.3	3 %	42.3	5 %
Other	41.5	4 %	43.2	5 %
Total	\$1,020.2	100 %	\$869.1	100 %
Markets	Nine months ended		Nine months ended	
	September 30, 2018		September 30, 2017	
Aerospace & Defense	\$1,443.6	48 %	\$1,280.5	49 %
Oil & Gas	413.5	14 %	289.7	11 %
Automotive	244.5	8 %	206.4	8 %
Electrical Energy	180.3	6 %	144.2	6 %
Medical	142.8	5 %	142.7	5 %
Subtotal - Key Markets	2,424.7	81 %	2,063.5	79 %
Food Equipment & Appliances	181.3	6 %	168.9	6 %
Construction/Mining	169.9	6 %	144.6	6 %
Electronics/Computers/Communication	109.7	3 %	108.2	4 %

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Other	123.1	4 %	130.0	5 %
Total	\$3,008.7	100%	\$2,615.2	100%

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For the third quarter 2018, international sales increased 14% to \$413 million and represented 40% of total sales, compared to \$363 million, or 42% of total sales, for the third quarter 2017. For the first nine months of 2018, international sales increased 20% to \$1.27 billion and represented 42% of total sales, compared to \$1.06 billion, or 41% of total sales, for the first nine months of 2017. ATI's international sales are mostly to the aerospace, oil & gas, electrical energy, automotive and medical markets.

Sales of our high-value products represented 84% of total sales, the majority of which were consumed by our aerospace & defense customers, for the three and nine months ended September 30, 2018. Comparative information for our major high-value and standard products based on their percentages of our total sales is as follows:

	Three months ended September 30, 2018		2017		Nine months ended September 30, 2018		2017	
High-Value Products								
Nickel-based alloys and specialty alloys	30	%	28	%	30	%	27	%
Precision forgings, castings and components	18	%	19	%	20	%	19	%
Titanium and titanium-based alloys	16	%	17	%	15	%	17	%
Precision and engineered strip	14	%	14	%	14	%	14	%
Zirconium and related alloys	6	%	6	%	5	%	6	%
Total High-Value Products	84	%	84	%	84	%	83	%
Standard Products								
Stainless steel sheet	9	%	9	%	9	%	9	%
Specialty stainless sheet	4	%	4	%	4	%	4	%
Stainless steel plate and other	3	%	3	%	3	%	4	%
Total Standard Products	16	%	16	%	16	%	17	%
Grand Total	100%		100%		100%		100%	

Segment operating profit for the third quarter 2018 was \$105.5 million, or 10.3% of sales, compared to the third quarter 2017 segment operating profit of \$54.4 million, or 6.3% of sales. For the first nine months of 2018, segment operating profit was \$325.9 million, or 10.8% of sales, compared to segment operating profit of \$195.2 million, or 7.5% of sales, for the first nine months of 2017. Segment operating profit as a percentage of sales by business segment for the three and nine month periods ended September 30, 2018 and 2017 was:

	Three months ended September 30, 2018		2017		Nine months ended September 30, 2018		2017	
High Performance Materials & Components	13.0%		12.0	%	14.9%		11.7%	
Flat Rolled Products	6.8	%	(2.0)	%	5.2	%	1.4	%

On March 1, 2018, we announced the formation of the A&T Stainless joint venture with an affiliate company of Tsingshan Group (Tsingshan) to produce 60-inch wide stainless sheet products for sale in North America. The A&T Stainless operations include ATI's previously-idled direct roll and pickle (DRAP) facility in Midland, PA. ATI provides hot-rolling conversion services to A&T Stainless using the FRP segment's Hot-Rolling and Processing Facility (HRPF). Tsingshan purchased its 50% joint venture interest for \$17.5 million, of which \$12.0 million was received in the first nine months of 2018. As a result of this sale of a 50% non-controlling interest and the subsequent deconsolidation of the A&T Stainless entity, we recognized a \$15.9 million pre-tax gain in the first quarter of 2018, which is reported in other income, net, on the consolidated statement of operations for the nine months ended September 30, 2018 and excluded from FRP segment results.

In the HPMC segment, we expect continued year-over-year revenue and operating profit growth in the fourth quarter 2018 resulting from ongoing aerospace market demand growth and improved asset utilization. We reiterate our guidance for a full year 2018 segment operating profit margin improvement of approximately 300 basis points compared to 2017. We remain confident in our customers' elevated order patterns due to increasing jet engine build rates over the next several years. Our focus is on strong operational execution and on meeting our aerospace customer's production requirements regardless of aircraft build rate.

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In the FRP segment, significant price declines in several key raw materials are expected to result in weaker fourth quarter 2018 results due to the short-term mismatch between input costs and the surcharge index pricing mechanism. We anticipate our U.S. Operations to remain profitable in the fourth quarter despite these higher input costs. Even with these short-term headwinds, we continue to expect a 2018 year-over-year operating margin improvement of 150 to 300 basis points driven by continued strong end-market demand, ongoing growth of our differentiated product sales, and the benefits from improved HRPF utilization.

Year-over-year cost inflation in many raw materials used to manufacture our products is likely to represent a moderate LIFO expense headwind in the fourth quarter of 2018 which would be greater than, and not fully offset by, our remaining net realizable value (NRV) inventory reserves.

Cash generation from operations remains a key focus, and we intend to carefully balance our working capital and other cash needs with the pace of our capital expenditures. We expect strong fourth quarter 2018 cash generation, and expect to end 2018 with zero borrowings under our ABL revolving credit facility.

Business Segment Results**High Performance Materials & Components Segment**

Third quarter 2018 sales increased 14.2% to \$585.5 million compared to the third quarter 2017, primarily due to stronger demand for nickel-based and specialty alloy products, forgings and components. Demand in the aerospace & defense markets continues to drive HPMC results as sales to these markets represented 76% of third quarter segment sales: 46% commercial jet engine, 19% commercial airframe, and 11% government aero/defense. Sales to the commercial aerospace market, which represented 65% of third quarter 2018 sales, were 18% higher than the prior year, including a 21% increase in commercial airframe product sales and a 16% increase in sales to the commercial jet engine market. Next-generation jet engine products, which represent 48% of HPMC jet engine product sales, increased 42% compared to the prior year. Construction and mining market sales were 36% higher, and medical market sales were 6% higher from prior year.

Comparative information for our HPMC segment revenues (in millions) by market and their respective percentages of the segment's overall revenues for the three month periods ended September 30, 2018 and 2017 is as follows:

Markets	Three months ended September 30, 2018	Three months ended September 30, 2017
Aerospace & Defense:		
Commercial Jet Engines	\$270.1 46 %	\$232.4 45 %
Commercial Airframes	112.1 19 %	93.0 18 %
Government Aerospace & Defense	64.3 11 %	64.1 13 %
Total Aerospace & Defense	446.5 76 %	389.5 76 %
Medical	44.3 8 %	41.8 8 %
Electrical Energy	30.9 5 %	30.4 6 %
Construction/Mining	18.5 3 %	13.5 3 %
Oil & Gas	17.9 3 %	14.3 3 %
Other	27.4 5 %	23.4 4 %
Total	\$585.5 100%	\$512.9 100%

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International sales represented 46% of total segment sales for the third quarter 2018. Third quarter 2018 reflects higher sales of specialty alloy products and components. Comparative information for the HPMC segment's major product categories, based on their percentages of sales for the three months ended September 30, 2018 and 2017, is as follows:

	Three months ended September 30, 2018		2017	
High-Value Products				
Precision forgings, castings and components	33	%	33	%
Nickel-based alloys and specialty alloys	32	%	30	%
Titanium and titanium-based alloys	25	%	26	%
Zirconium and related alloys	10	%	11	%
Total High-Value Products	100	%	100	%

Segment operating profit in the third quarter 2018 increased to \$76.0 million, or 13.0% of total sales, compared to \$61.7 million, or 12.0% of total sales, for the third quarter 2017. This operating profit improvement reflects higher productivity from increasing aerospace and defense sales, and an improved product mix of next-generation nickel alloys and forgings for the aero engine market. Prior year results included \$2 million of start-up costs for our nickel-based powder alloys facility in North Carolina.

For the nine months ended September 30, 2018, segment sales increased 12.2% to \$1.74 billion, compared to the first nine months of 2017, primarily due to 22% higher sales of forged and cast components and 15% higher sales of nickel-based and specialty alloy products. Demand in the aerospace & defense markets continues to drive HPMC results as sales to the commercial aerospace market were 15% higher than the first nine months of 2017. Construction and mining market sales were 46% higher, and electrical energy market sales were 21% higher both from a low prior-year base, while sales to the medical market were 2% lower primarily due to increased competition in MRI end uses.

Comparative information for our HPMC segment revenues (in millions) by market and their respective percentages of the segment's overall revenues for the nine month periods ended September 30, 2018 and 2017 is as follows:

Markets	Nine months ended September 30, 2018		Nine months ended September 30, 2017	
Aerospace & Defense:				
Commercial Jet Engines	\$813.0	47 %	\$686.1	44 %
Commercial Airframes	307.4	17 %	290.4	19 %
Government Aerospace & Defense	191.3	11 %	193.2	13 %
Total Aerospace & Defense	1,311.7	75 %	1,169.7	76 %
Medical	131.5	8 %	134.2	9 %
Electrical Energy	101.9	6 %	84.1	5 %
Construction/Mining	55.1	3 %	37.6	2 %
Oil & Gas	51.4	3 %	49.7	3 %
Other	86.5	5 %	74.4	5 %
Total	\$1,738.1	100 %	\$1,549.7	100 %

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International sales represented 48% of total segment sales for the first nine months of 2018. Comparative information for the HPMC segment's major product categories, based on their percentages of sales for the nine months ended September 30, 2018 and 2017, is as follows:

	Nine months ended September 30, 2018		2017	
High-Value Products				
Precision forgings, castings and components	35	%	32	%
Nickel-based alloys and specialty alloys	31	%	30	%
Titanium and titanium-based alloys	24	%	27	%
Zirconium and related alloys	10	%	11	%
Total High-Value Products	100	%	100	%

Segment operating profit in the first nine months of 2018 increased to \$259.4 million, or 14.9% of total sales, compared to \$180.6 million, or 11.7% of total sales, for the first nine months of 2017. This operating profit improvement reflects higher productivity from increasing aerospace and defense sales, and an improved product mix of next-generation nickel alloys and forgings for the aero engine market. Prior year results included \$6 million of start-up costs for our nickel-based powder alloys facility in North Carolina.

Flat Rolled Products Segment

Third quarter 2018 sales increased 22% compared to the third quarter 2017, to \$434.7 million, due to 26% higher sales of high-value products, primarily nickel-based and specialty alloys and Precision Rolled strip products. Sales of standard products were 13% higher, compared to the third quarter 2017. Sales to the oil & gas and automotive markets increased 31% and 40%, respectively, versus the prior year period. Third quarter 2018 FRP segment titanium shipments, including Uniti joint venture conversion, were 1.6 million pounds, a 43% increase compared to the third quarter 2017, reflecting stronger project-based demand from industrial titanium markets.

Comparative information for our FRP segment revenues (in millions) by market and their respective percentages of the segment's overall revenues for the three month periods ended September 30, 2018 and 2017 is as follows:

Markets	Three months ended September 30, 2018		Three months ended September 30, 2017	
Oil & Gas	\$110.3	25 %	\$84.1	23 %
Automotive	83.0	19 %	59.3	17 %
Food Equipment & Appliances	58.6	14 %	54.3	15 %
Aerospace & Defense	52.7	12 %	38.2	11 %
Electronics/Computers/Communication	40.3	9 %	41.2	12 %
Construction/Mining	39.9	9 %	34.8	10 %
Electrical Energy	29.0	7 %	18.1	5 %
Other	20.9	5 %	26.2	7 %
Total	\$434.7	100%	\$356.2	100%

International sales represented 33% of total segment sales for the third quarter 2018. Third quarter 2018 reflects higher sales of high-value products largely due to demand for nickel-based and specialty alloys for large oil & gas projects, as well as higher selling prices including both raw material surcharges and improved base pricing.

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Comparative information for the FRP products segment's major product categories, based on their percentages of sales for the three months ended September 30, 2018 and 2017, is as follows:

	Three months ended September 30, 2018		2017	
High-Value Products				
Precision and engineered strip	34	%	34	%
Nickel-based alloys and specialty alloys	29	%	27	%
Titanium and titanium-based alloys	3	%	3	%
Total High-Value Products	66	%	64	%
Standard Products				
Stainless steel sheet	20	%	20	%
Specialty stainless sheet	9	%	11	%
Stainless steel plate	5	%	5	%
Total Standard Products	34	%	36	%
Grand Total	100	%	100	%

Segment operating profit was \$29.5 million, or 6.8% of sales, for the third quarter 2018, compared to a segment operating loss of \$7.3 million, or (2.0)% of sales, for the third quarter 2017. Compared to 2017, results in 2018 included a better matching of raw material surcharges with changes in prices for nickel, ferrochrome and other metallics, and improved cost absorption through higher operating rates. Results also benefited from continued strong market demand and ongoing improvements in asset utilization.

We continue to make progress toward our FRP segment goal of capital efficient asset utilization improvements as evidenced by our recently announced agreement to provide carbon steel hot-rolling conversion services for NLMK USA at our world-class HRPF. Slab shipments to ATI will begin in October 2018 and increase to anticipated levels in first quarter 2019.

In late March 2018, ATI filed for an exclusion from the recently enacted Section 232 tariffs on behalf of the A&T Stainless JV, which imports semi-finished stainless slab products from Indonesia. In the absence of an exclusion, these slabs will be subject to the 25% tariff recently levied on all stainless steel products imported into the United States.

We continue to work within the U.S. Commerce Department's Section 232 tariff exclusion request process to secure an exclusion on behalf of the A&T Stainless joint venture. Third quarter 2018 results of A&T Stainless were negatively impacted by these tariffs.

Comparative shipment volume and average selling price information of the segment's products for the three months ended September 30, 2018 and 2017 is provided in the following table:

	Three months ended September 30, 2018		2017		Change
Volume (000's pounds):					
High-Value	87,994	83,637	5	%	
Standard	96,211	115,907	(17)	%	
Total	184,205	199,544	(8)	%	
Average prices (per lb.):					
High-Value	\$3.22	\$2.69	20	%	
Standard	\$1.53	\$1.13	35	%	
Combined Average	\$2.34	\$1.78	31	%	

For the first nine months of 2018, sales increased 19.2% compared to the first nine months of 2017, to \$1.27 billion, due to higher sales of high-value products, primarily nickel-based and specialty alloys and Precision Rolled strip products. Sales to the oil & gas market increased 51% versus the prior year period, which was primarily due to large international pipeline projects. The first nine months of 2018 FRP segment titanium shipments, including Uniti joint venture conversion, were 5.0 million pounds, a 24% increase compared to the first nine months of 2017, reflecting stronger project-based demand from industrial titanium markets.

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Comparative information for our FRP segment revenues (in millions) by market and their respective percentages of the segment's overall revenues for the nine month periods ended September 30, 2018 and 2017 is as follows:

Markets	Nine months ended September 30, 2018		Nine months ended September 30, 2017	
	Oil & Gas	\$362.1	29 %	\$240.0
Automotive	237.1	19 %	200.0	19 %
Food Equipment & Appliances	181.0	14 %	167.9	16 %
Aerospace & Defense	131.9	10 %	110.8	10 %
Construction/Mining	114.8	9 %	107.0	10 %
Electronics/Computers/Communication	105.0	8 %	104.7	10 %
Electrical Energy	78.4	6 %	60.1	6 %
Other	60.3	5 %	75.0	7 %
Total	\$1,270.6	100%	\$1,065.5	100%

International sales represented 34% of total segment sales for the first nine months of 2018. Comparative information for the FRP products segment's major product categories, based on their percentages of sales for the nine months ended September 30, 2018 and 2017, is as follows:

	Nine months ended September 30, 2018		2017	
	High-Value Products			
Precision and engineered strip	32 %	34 %		
Nickel-based alloys and specialty alloys	29 %	23 %		
Titanium and titanium-based alloys	5 %	4 %		
Total High-Value Products	66 %	61 %		
Standard Products				
Stainless steel sheet	20 %	22 %		
Specialty stainless sheet	10 %	12 %		
Stainless steel plate	4 %	5 %		
Total Standard Products	34 %	39 %		
Grand Total	100 %	100 %		

Segment operating profit was \$66.5 million, or 5.2% of sales, for the first nine months of 2018, compared to a segment operating profit of \$14.6 million, or 1.4% of sales, for the first nine months of 2017. Compared to 2017, results in 2018 included a better matching of raw material surcharges with changes in prices for nickel, ferrochrome and other metallics and improved cost absorption through higher operating rates. Results also benefited from continued strong market demand and ongoing improvements in asset utilization. FRP results for 2018 included approximately \$8 million of negative impacts from required accounting changes on retirement benefit cost capitalization in inventory, as well as reduced benefits of foreign currency hedges. Prior year results also reflect \$6 million of higher raw material surcharge benefits related primarily to a change in the ferrochrome surcharge calculation.

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Comparative shipment volume and average selling price information of the segment's products for the nine months ended September 30, 2018 and 2017 is provided in the following table:

	Nine months ended		%	Change
	2018	2017		
Volume (000's pounds):				
High-Value	256,602	233,059	10	%
Standard	310,466	45,569	(10)	%
Total	567,068	278,628	(2)	%
Average prices (per lb.):				
High-Value	\$3.22	\$ 2.76	17	%
Standard	\$1.40	\$ 1.20	17	%
Combined Average	\$2.22	\$ 1.83	21	%
Corporate Items				

There was no net effect of changes in last-in, first-out (LIFO) and net realizable value (NRV) inventory reserves for the third quarter and nine months ended September 30, 2018. For the third quarter and first nine months of 2018, LIFO inventory valuation reserve charges of \$2.0 million and \$29.5 million, respectively, were offset by reductions of the same magnitude in NRV inventory reserves, which are required to offset the Company's aggregate net debit LIFO inventory balance that exceeds current inventory replacement cost. For the third quarter and first nine months of 2017, LIFO inventory valuation reserve charges of \$33.3 million and \$51.5 million, respectively, were offset by \$33.2 million and \$51.3 million, respectively in reductions in NRV inventory reserves.

Corporate expenses for the third quarters of both 2018 and 2017 were \$14.8 million. For the nine months ended September 30, 2018, corporate expenses were \$40.9 million, increasing from \$36.9 million for the nine months ended September 30, 2017. This increase was primarily due to higher incentive compensation expense based on estimates of attaining performance measures. In addition, higher start-up research and development costs of our meltless titanium alloy powder joint venture with GE Aviation in 2018 were partially offset by higher benefits in 2018 related to company-owned life insurance policies.

Closed operations and other expenses for the third quarter 2018 decreased to \$3.4 million, compared to \$12.2 million for the third quarter 2017, primarily due to lower carrying costs for closed facilities, mainly related to property taxes and insurance expense for Rowley, UT and Midland, PA locations. For the nine months ended September 30, 2018, closed company and other expenses decreased to \$16.6 million, compared to \$28.4 million for the comparable period, largely due to foreign currency remeasurement gains in 2018 compared to remeasurement losses in 2017 from the Company's European Treasury Center operation, partially offset by higher environmental expenses at closed and formerly-owned operations. The year-to-date 2018 period also benefited from lower carrying costs from closed facilities.

On March 1, 2018, we announced the formation of A&T Stainless, in which ATI has a 50% ownership interest. Our joint venture partner purchased its 50% joint venture interest during the first quarter of 2018, and as a result of this sale and the subsequent deconsolidation of the A&T Stainless entity, we recognized a \$15.9 million gain in the first quarter of 2018. This gain is reported in other income, net, on the consolidated statement of operations for the nine months ended September 30, 2018 and excluded from FRP segment results.

During the third quarter of 2017, we recorded a \$114.4 million goodwill impairment charge to write-off all the goodwill

assigned to ATI Cast Products, our titanium investment casting business in the HPMC segment. This goodwill impairment charge was excluded from 2017 HPMC business segment results.

Interest expense, net of interest income, in the third quarter 2018 was \$24.8 million, compared to net interest expense of \$34.2 million in the third quarter 2017. On a year-to-date basis, net interest expense was \$75.8 million for the first

nine months of 2018 compared to \$102.2 million for the first nine months of 2017. These decreases are primarily due to the redemption of our 9.375% Senior Notes due 2019 in the fourth quarter of 2017. Capitalized interest reduced interest expense by \$1.4 million in the third quarter 2018 and \$0.4 million in the third quarter 2017. For the nine months ended September 30, 2018 and 2017, capitalized interest was \$3.5 million and \$1.9 million, respectively.

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Income Taxes

ATI maintains income tax valuation allowances on its U.S. Federal and state deferred tax assets due to a three year cumulative loss condition, which limits the ability to consider other positive subjective evidence, such as projections of future results, to assess the realizability of deferred tax assets. Results in both 2018 and 2017 include impacts from income taxes that differ from applicable standard tax rates, primarily related to income tax valuation allowances. Third quarter 2018 results included a provision for income taxes of \$6.9 million, or 11.0% of income before income taxes, primarily related to income taxes on non-U.S. operations. The overall income tax provision for the third quarter 2018 includes discrete adjustments of \$0.9 million of tax expense resulting from tax expense related to uncertain tax positions, impact of change in tax rates and tax calculations for entities excluded from the annual effective tax rate. The third quarter 2017 benefit for income taxes was \$1.9 million, which included \$0.3 million of discrete tax benefits. We continue to account for impacts of the Tax Cuts and Jobs Act (Tax Act) as estimated amounts, pending further information and analysis, which includes final tax return filings, analysis of foreign earnings and profits, and interpretive Internal Revenue Service (IRS) guidance. We estimated the impact of the Tax Act as part of the 2017 year-end financial statements. Additional IRS guidance and Internal Revenue Code (IRC) elections have been published, which have aided in refining the initial estimate related to the tax on the mandatory repatriation of foreign earnings, otherwise known as the “transition tax”. As of December 31, 2017, our initial estimate was approximately \$100 million of federal taxable income on the mandatory repatriation of foreign earnings (foreign earnings inclusion), for which we planned to utilize a portion of our federal net operating loss (NOL) deferred tax asset to fully offset the estimated transition tax liability of \$35 million. As of September 30, 2018, our updated foreign earnings inclusion estimate is \$97.5 million, resulting in a transition tax liability of \$34.1 million. We currently expect to opt out of utilizing NOLs to offset the transition tax liability, and instead utilize available tax credits of \$28.2 million. The remaining transition tax liability of \$5.9 million was recognized as a discrete charge in the income tax provision in the second quarter of 2018 based on updated IRS guidance, our evaluation of various tax assets, and the expected IRC election to utilize tax credits to meet a portion of the transition tax. The transition tax liability is payable over eight years under the IRC, and the first installment payment of \$0.5 million was paid in April 2018. The adoption of this strategy would preserve \$97.5 million federal NOL tax attributes that we expect to be able to utilize to offset future taxable income, while using tax credits that would potentially expire due to utilization limitations. The overall impact on our deferred tax assets as of December 31, 2017 is zero due to the net valuation allowance position. Due to final regulations not being issued, the accounting for this item is not yet complete. We expect to complete the accounting within the prescribed one-year measurement period from the Tax Act enactment date.

Discrete tax benefits of \$5.8 million were recognized in the first nine months of 2018 relating to valuation allowance releases resulting from the acceptance of net operating loss carryback claims and amendments of historical tax returns due to changes in estimated tax credit utilization resulting from recently-issued IRS guidance.

For the nine months of 2018, the provision for income taxes was \$16.8 million, or 8.1%, compared to a benefit for income taxes of \$2.0 million, for the comparable 2017 period. The first nine months of 2018 included discrete tax expense of \$0.9 million, while the comparable 2017 period included discrete tax benefits of \$7.0 million, largely for the effects of amending tax returns for prior periods in certain domestic jurisdictions.

Financial Condition and Liquidity

We have a \$500 million Asset Based Lending (ABL) Credit Facility, which is collateralized by the accounts receivable and inventory of our domestic operations. The ABL facility, which matures in February 2022, includes a \$400 million revolving credit facility, a letter of credit sub-facility of up to \$200 million, and a \$100 million term loan (Term Loan). The Term Loan has an interest rate of 3.0% plus a LIBOR spread and can be prepaid in increments of \$50 million if certain minimum liquidity conditions are satisfied. In July 2018, the ABL facility was amended to reduce the Term Loan base interest rate to 2.5% plus a LIBOR spread. In conjunction with this amendment, we entered into a \$50 million floating-for-fixed interest rate swap which converts half of the Term Loan to a 5.44% fixed interest rate. The swap matures in January 2021.

The applicable interest rate for revolving credit borrowings under the ABL facility includes interest rate spreads based on available borrowing capacity that range between 1.75% and 2.25% for LIBOR-based borrowings and between

1.0% and 1.5% for base rate borrowings. The ABL facility contains a financial covenant whereby we must maintain a fixed charge coverage ratio of not less than 1.00:1.00 after an event of default has occurred and is continuing or if the undrawn availability under the ABL revolving credit portion of the facility is less than the greater of (i) 10% of the then applicable maximum borrowing amount under the revolving credit portion of the ABL and any outstanding Term Loan balance, or (ii) \$40.0 million. We were in compliance with the fixed charge coverage ratio covenant at September 30, 2018. Additionally, we must demonstrate liquidity, as calculated in accordance with the terms of the ABL facility, of at least \$700 million on the date that is 91 days prior

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to January 15, 2021, the maturity date of the 5.95% Senior Notes due 2021, and that such liquidity is available at all times thereafter until the 5.95% Senior Notes due 2021 are paid in full or refinanced. As of September 30, 2018, there were no of outstanding borrowings under the revolving portion of the ABL facility, and \$35.1 million was utilized to support the issuance of letters of credit. Average revolving credit borrowings under the ABL facility for the first nine months of 2018 and 2017 were \$56 million and \$46 million, respectively, bearing an average annual interest rate of 3.65% and 3.276%, respectively.

At September 30, 2018, we had \$154 million of cash and cash equivalents, and available additional liquidity under the ABL facility of approximately \$360 million. We do not expect to pay any significant U.S. federal or state income taxes in the next few years due to net operating loss carryforwards.

Our fiscal year 2018 funding requirements to the ATI Pension Plan, our U.S. qualified defined benefit pension plan, are approximately \$40 million, of which \$15 million was contributed through September 30, 2018, and we currently expect to have average annual funding requirements of approximately \$100 million to the ATI Pension Plan for the next few fiscal years thereafter. However, these funding estimates are subject to significant uncertainty including the actual pension trust assets' fair value, and the discount rates used to measure pension liabilities.

We believe that internally generated funds, current cash on hand and available borrowings under the ABL facility will be adequate to meet our liquidity needs, including currently projected required contributions to the ATI Pension Plan. If we needed to obtain additional financing using the credit markets, the cost and the terms and conditions of such borrowings may be influenced by our credit rating. In addition, we regularly review our capital structure, various financing alternatives and conditions in the debt and equity markets in order to opportunistically enhance our capital structure. In connection therewith, we may seek to refinance or retire existing indebtedness, incur new or additional indebtedness or issue equity or equity-linked securities, in each case, depending on market and other conditions.

We have no off-balance sheet arrangements as defined in Item 303(a)(4) of SEC Regulation S-K.

Cash Flow and Working Capital

For the nine months ended September 30, 2018, cash provided by operations was \$116.6 million, despite a \$99.4 million use from higher managed working capital balances to support higher demand. In addition, cash used in operations in the first nine months of 2018 includes \$22.1 million in short-term advances for our funding of the A&T Stainless joint venture during its production ramp-up and a \$15.3 million cash contribution to the ATI Pension Plan made in July 2018. The cash used in operations of \$53.8 million for the nine months ended September 30, 2017 included a \$135.0 million contribution to the ATI Pension Plan in March 2017.

As part of managing the liquidity of our business, we focus on controlling managed working capital, which is defined as gross accounts receivable, short-term contract assets and gross inventories, less accounts payable and short-term contract liabilities. With the adoption of the new revenue recognition accounting standard in 2018, we now include short-term contract assets and liabilities in the calculation of managed working capital. In 2017 and prior periods, portions of contract assets and liabilities were included in managed working capital. Prior managed working capital calculations were not revised for this accounting change. In measuring performance in controlling managed working capital, we exclude the effects of LIFO and other inventory valuation reserves, and reserves for uncollectible accounts receivable which, due to their nature, are managed separately. We measure managed working capital as a percentage of the prior three months annualized sales to evaluate our performance based on recent levels of business volume. At September 30, 2018, managed working capital decreased to 36.4% of annualized total ATI sales compared to 38.1% of annualized sales at December 31, 2017, as revenue growth continued. The \$99.4 million increase in managed working capital at September 30, 2018 from December 31, 2017 resulted from a \$43.3 million increase in accounts receivable, \$51.6 million in short-term contract assets, a \$69.7 million increase in inventory, and a \$4.0 million decrease in accounts payable, partially offset by \$69.2 million in short-term contract liabilities. Days sales outstanding, which measures actual collection timing for accounts receivable, improved by 11% as of September 30, 2018 compared to year end 2017. Gross inventory turns, which exclude the effect of LIFO and any applicable offsetting NRV inventory valuation reserves, remained fairly consistent at September 30, 2018 compared to year end 2017.

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The components of managed working capital at September 30, 2018 and December 31, 2017 were as follows:

(In millions)	September 30, 2018	December 31, 2017
Accounts receivable	\$588.3	\$ 545.3
Short-term contract assets	51.6	—
Inventory	1,239.8	1,176.1
Accounts payable	(416.1)	(420.1)
Short-term contract liabilities	(69.2)	—
Subtotal	1,394.4	1,301.3
Allowance for doubtful accounts	6.2	5.9
Adjustment from current cost to LIFO cost basis	(1.7)	(43.1)
Inventory valuation reserves	86.1	121.5
Managed working capital	\$1,485.0	\$ 1,385.6
Annualized prior 3 months sales	\$4,080.8	\$ 3,639.5
Managed working capital as a % of annualized sales	36.4 %	38.1 %

Change in managed working capital from December 31, 2017 \$99.4

Cash used in investing activities was \$109.1 million in the first nine months of 2017, with \$101.3 million for capital expenditures and \$10.0 million for the Addaero acquisition. The 2018 capital expenditures include initial down payments for the previously announced HPMC iso-thermal press and heat-treating expansions, as well as significant expenditures on our STAL joint venture's expansion in China, which was placed in service in the third quarter 2018. The STAL joint venture expansion has been funded entirely through joint venture cash and operations. We expect to fund our capital expenditures with cash on hand and cash flow generated from our operations and, if needed, by using a portion of the ABL facility.

Cash provided by financing activities was \$4.4 million and consisted primarily of \$2.7 million for the sale of noncontrolling interest related to Next Gen Alloys, and \$12.0 million for the first two installments from our joint venture partner of the \$17.5 million purchase price for its 50% joint venture interest in A&T Stainless. These were partially offset by \$10.0 million in dividend payments to the 40% noncontrolling interest in our STAL joint venture. At September 30, 2018, cash and cash equivalents on hand totaled \$153.5 million, an increase of \$11.9 million from year end 2017. Cash and cash equivalents held by our foreign subsidiaries was \$61.0 million at September 30, 2018, of which \$30.0 million was held by STAL.

Debt

Total debt outstanding increased \$9.2 million to \$1,563.0 million at September 30, 2018 compared to December 31, 2017.

In managing our overall capital structure, some of the measures on which we focus are net debt to total capitalization, which is the percentage of our debt, net of cash that may be available to reduce borrowings, to our total invested and borrowed capital, and total debt to total capitalization, which excludes cash balances. Net debt as a percentage of total capitalization was 41.6% at September 30, 2018, compared to 44.8% at December 31, 2017. The net debt to total capitalization was determined as follows:

(In millions)	September 30, 2018	December 31, 2017
Total debt (a)	\$1,563.0	\$1,553.8
Less: Cash	(153.5)	(141.6)
Net debt	\$1,409.5	\$1,412.2
Total ATI stockholders' equity	1,980.2	1,739.4
Net ATI total capital	\$3,389.7	\$3,151.6
Net debt to ATI total capital	41.6 %	44.8 %

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Total debt to total capitalization of 44.1% at September 30, 2018 decreased from 47.2% at December 31, 2017.

Total debt to total capitalization was determined as follows:

(In millions)	September 30, 2018	December 31, 2017
Total debt (a)	\$1,563.0	\$1,553.8
Total ATI stockholders' equity	1,980.2	1,739.4
Total ATI capital	\$3,543.2	\$3,293.2
Total debt to total ATI capital	44.1	47.2

(a) Excludes debt issuance costs.

Dividends

Effective with the fourth quarter of 2016, our Board of Directors decided to suspend the quarterly dividend. The payment of dividends and the amount of such dividends depends upon matters deemed relevant by our Board of Directors on a quarterly basis, such as our results of operations, financial condition, cash requirements, future prospects, any limitations imposed by law, credit agreements or senior securities, and other factors deemed relevant and appropriate. Under the ABL facility, there is no limit on dividend declarations or payments provided that the undrawn availability, after giving effect to a particular dividend payment, is at least the greater of \$100 million and 25% of the maximum revolving credit availability, and no event of default under the ABL facility has occurred and is continuing or would result from paying the dividend. In addition, there is no limit on dividend declarations or payments if the undrawn availability is less than the greater of \$100 million and 25% of the maximum revolving credit advance amount but more than the greater of \$60 million and 15% of the maximum revolving credit advance amount, if (i) no event of default has occurred and is continuing or would result from paying the dividend, (ii) we demonstrate to the administrative agent that, prior to and after giving effect to the payment of the dividend (A) the undrawn availability, as measured both at the time of the dividend payment and as an average for the 60 consecutive day period immediately preceding the dividend payment, is at least the greater of \$60 million and 15% of the maximum revolving credit availability, and (B) we maintain a fixed charge coverage ratio of at least 1.00:1.00, as calculated in accordance with the terms of the ABL facility.

Critical Accounting Policies**Inventory**

At September 30, 2018, we had net inventory of \$1,239.8 million. Inventories are stated at the lower of cost (LIFO, first-in, first-out (FIFO) and average cost methods) or market. Costs include direct material, direct labor and applicable manufacturing and engineering overhead, and other direct costs. Most of our inventory is valued utilizing the LIFO costing methodology. Inventory of our non-U.S. operations is valued using average cost or FIFO methods. Under the LIFO inventory valuation method, changes in the cost of raw materials and production activities are recognized in cost of sales in the current period even though these material and other costs may have been incurred at significantly different values due to the length of time of our production cycle. In a period of rising prices, cost of sales expense recognized under LIFO is generally higher than the cash costs incurred to acquire the inventory sold. Conversely, in a period of declining raw material prices, cost of sales recognized under LIFO is generally lower than cash costs incurred to acquire the inventory sold. Generally, over time based on overall inflationary trends in raw materials, labor and overhead costs, the use of the LIFO inventory valuation method will result in a LIFO inventory valuation reserve, as the higher current period costs are included in cost of sales and the balance sheet carrying value of inventory is reduced.

Since the LIFO inventory valuation methodology is designed for annual determination, interim estimates of the annual LIFO valuation are required. We recognize the effects of the LIFO inventory valuation method on an interim basis by projecting the expected annual LIFO cost and allocating that projection to the interim quarters equally. These projections of annual LIFO inventory valuation reserve changes are updated quarterly and are evaluated based upon material, labor and overhead costs and projections for such costs at the end of the year plus projections regarding year end inventory levels.

The prices for many of the raw materials we use have been extremely volatile during the past several years, while labor and overhead costs have been generally stable, with a modest inflationary trend. Raw material cost changes typically have the largest impact on the LIFO inventory costing methodology based on the overall proportion of raw material costs to other inventoriable costs. Since we value most of our inventory utilizing the LIFO inventory costing methodology, a fall in material costs generally results in a benefit to operating results by reducing cost of sales and increasing the inventory carrying value, while conversely, a rise in raw material costs generally has a negative effect on our operating results by increasing cost of sales

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while lowering the carrying value of inventory. For example, for the nine months ended September 30, 2018 and 2017, the LIFO inventory valuation method resulted in cost of sales that were \$29.5 million and \$51.5 million higher, respectively, than would have been recognized under the FIFO methodology to value our inventory.

Due primarily to persistent raw material deflation in prior years, we are in the unusual situation of having a LIFO inventory balance that exceeds replacement cost. In cases where inventory at FIFO cost is lower than the LIFO carrying value, a write-down of the inventory to market may be required, subject to a lower of cost or market evaluation. In applying the lower of cost or market principle, market means current replacement cost, subject to a ceiling (market value shall not exceed net realizable value) and a floor (market shall not be less than net realizable value reduced by an allowance for a normal profit margin). We evaluate product lines on a quarterly basis to identify inventory values that exceed estimated net realizable value. The calculation of a resulting NRV inventory reserve, if any, is recognized in the period that the need for the reserve is identified. Our NRV reserves were \$47.5 million at December 31, 2017 and \$6.2 million at September 30, 2018. If our third quarter 2018 projection of the annual LIFO inventory valuation remains unchanged, we would recognize another \$9.8 million of LIFO expense in the fourth quarter of 2018, which would be partially offset by the reversal of the remaining \$6.2 million of NRV reserves. The impact to our cost of sales for changes in the LIFO costing methodology and associated NRV inventory reserves were as follows (in millions):

	Nine months ended September 30, 2018 2017	
LIFO benefit (charge)	\$(29.5)	\$(51.5)
NRV benefit (charge)	29.5	51.3
Net cost of sales impact	\$—	\$(0.2)

It is our general policy to write-down to scrap value any inventory that is identified as obsolete and any inventory that has aged or has not moved in more than twelve months. In some instances this criterion is up to twenty-four months due to the longer manufacturing and distribution process for such products.

The LIFO inventory valuation methodology is not utilized by many of the companies with which we compete, including foreign competitors. As such, our results of operations may not be comparable to those of our competitors during periods of volatile material costs due, in part, to the differences between the LIFO inventory valuation method and other acceptable inventory valuation methods.

Asset Impairment

We monitor the recoverability of the carrying value of our long-lived assets. An impairment charge is recognized when the expected net undiscounted future cash flows from an asset's use (including any proceeds from disposition) are less than the asset's carrying value, and the asset's carrying value exceeds its fair value. Changes in the expected use of a long-lived asset group, and the financial performance of the long-lived asset group and its operating segment, are evaluated as indicators of possible impairment. Future cash flow value may include appraisals for property, plant and equipment, land and improvements, future cash flow estimates from operating the long-lived assets, and other operating considerations. In the fourth quarter of each year in conjunction with the annual business planning cycle, or more frequently if new material information is available, we evaluate the recoverability of idled facilities.

Goodwill is reviewed annually in the fourth quarter of each year for impairment or more frequently if impairment indicators arise. Other events and changes in circumstances may also require goodwill to be tested for impairment between annual measurement dates. At September 30, 2018, we had \$536.4 million of goodwill on our consolidated balance sheet, an increase of \$5.0 million from December 31, 2017 due to \$6.0 from the Addaero acquisition partially offset by foreign currency translation on goodwill denominated in functional currencies other than the U.S. dollar. All goodwill relates to reporting units in the HPMC segment.

Management concluded that none of ATI's reporting units or long-lived assets experienced any triggering event that would have required an interim impairment analysis at September 30, 2018.

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Income Taxes

The provision for, or benefit from, income taxes includes deferred taxes resulting from temporary differences in income for financial and tax purposes using the liability method. Such temporary differences result primarily from differences in the carrying value of assets and liabilities. Future realization of deferred income tax assets requires sufficient taxable income within the carryback and/or carryforward period available under tax law. On a quarterly basis, we evaluate the realizability of our deferred tax assets.

The evaluation includes the consideration of all available evidence, both positive and negative, regarding historical operating results including recent years with reported losses, the estimated timing of future reversals of existing taxable temporary differences, estimated future taxable income exclusive of reversing temporary differences and carryforwards, and potential tax planning strategies which may be employed to prevent an operating loss or tax credit carryforward from expiring unused. In situations where a three year cumulative loss condition exists, accounting standards limit the ability to consider projections of future results as positive evidence to assess the realizability of deferred tax assets. Valuation allowances are established when it is estimated that it is more likely than not that the tax benefit of the deferred tax asset will not be realized.

Since 2015, our results reflected a three year cumulative loss from U.S. operations. As a result, we established deferred tax asset valuation allowances in 2015 and 2016 for certain U.S. Federal and state deferred tax assets. In 2017 and 2018, ATI continued to maintain income tax valuation allowances on its U.S. Federal and state deferred tax assets. In addition, we have \$17.5 million of valuation allowances on amounts recorded in other comprehensive income as of September 30, 2018.

While we remain in a cumulative loss condition, our ability to evaluate the realizability of deferred tax assets is generally limited to the ability to offset timing differences on taxable income associated with deferred tax liabilities. Therefore, a change in estimate of deferred tax asset valuation allowances for federal, state, or foreign jurisdictions during this cumulative loss condition period will primarily be affected by changes in estimates of the time periods that deferred tax assets and liabilities will be realized, or on a limited basis to tax planning strategies that may result in a change in the amount of taxable income realized.

On December 22, 2017, the U.S. government enacted the Tax Act. We estimated the impact of the Tax Act as part of the 2017 year-end financial statements. We continue to account for impacts of Tax Act as estimated amounts, pending further information and analysis, which includes final tax return filings, analysis of foreign earnings and profits, and interpretive IRS guidance. Additional IRS guidance and IRC elections have been published, which have aided in refining the initial estimate related to the tax on the mandatory repatriation of foreign earnings, otherwise known as the "transition tax". As of December 31, 2017, our initial estimate was approximately \$100 million of federal taxable income on the mandatory repatriation of foreign earnings (foreign earnings inclusion), for which we planned to utilize a portion of our federal net operating loss (NOL) deferred tax asset to fully offset the estimated transition tax liability of \$35 million. As of September 30, 2018, our updated foreign earnings inclusion estimate is \$97.5 million, resulting in a transition tax liability of \$34.1 million. We currently expect to opt out of utilizing NOLs to offset the transition tax liability, and instead utilize available tax credits of \$28.2 million. The remaining transition tax liability of \$5.9 million was recognized as a discrete charge in the income tax provision for the second quarter of 2018 based on updated IRS guidance, our evaluation of various tax assets, and the expected IRC election to utilize tax credits to meet a portion of the transition tax. The transition tax liability is payable over eight years under the IRC, and the first installment payment of \$0.5 million was paid in April 2018. The overall impact on our deferred tax assets as of December 31, 2017 is zero due to the net valuation allowance position. Due to final regulations not being issued, the accounting for this item is not yet complete. We expect to complete the accounting within the prescribed one-year measurement period from the Tax Act enactment date.

Retirement Benefits

In accordance with accounting standards, we determine the discount rate used to value pension plan liabilities as of the last day of each year. The discount rate reflects the current rate at which the pension liabilities could be effectively settled. In

estimating this rate, we receive input from our actuaries regarding the rate of return on high quality, fixed income investments with maturities matched to the expected future retirement benefit payments. Based on current market conditions, discount rates are above the rates in effect at the year-end 2017 remeasurement date, when a 3.85% discount rate was used for valuing pension liabilities. The estimated effect at the year-end 2017 valuation date of an increase in the discount rate by 0.50% would decrease pension liabilities by approximately \$150 million. The effect on pension liabilities for changes to the discount rate, the difference between expected and actual plan asset returns, and the net effect of other changes in actuarial assumptions and experience are deferred and amortized over future periods in accordance with accounting standards.

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For ERISA (Employee Retirement Income Security Act of 1974, as amended) funding purposes, discount rates used to measure pension liabilities for U.S. qualified defined benefit plans are calculated on a different basis using an IRS-determined segmented yield curve, which currently results in a higher discount rate than the discount rate methodology required by accounting standards. Funding requirements are also affected by IRS-determined mortality assumptions, which may differ from those used under accounting standards. Our fiscal year 2018 funding requirements to the ATI Pension are approximately \$40 million, of which \$15 million was contributed through September 30, 2018, and we currently expect have annual average funding requirements of approximately \$100 million to the ATI Pension Plan for the next few fiscal years thereafter. However, these funding estimates are subject to significant uncertainty including the actual pension trust assets' fair value, and the discount rates used to measure pension liabilities.

We currently use a long-term expected rate of return on plan assets of 7.75%. The effect of increasing or lowering the expected return on pension plan investments by 0.25% would result in additional pre-tax income or expense, respectively, of approximately \$5 million annually, as a component of net periodic pension cost in the period subsequent to the change in estimate.

Other Critical Accounting Policies

A summary of other significant accounting policies is discussed in Management's Discussion and Analysis of Financial Condition and Results of Operations and in Note 1 to the consolidated financial statements contained in our Annual Report on Form 10-K for the year ended December 31, 2017.

The preparation of the financial statements in accordance with U.S. generally accepted accounting principles requires us to make judgments, estimates and assumptions regarding uncertainties that affect the reported amounts of assets and liabilities. Significant areas of uncertainty that require judgments, estimates and assumptions include the accounting for derivatives, retirement plans, income taxes, environmental and other contingencies as well as asset impairment, inventory valuation and collectability of accounts receivable. We use historical and other information that we consider to be relevant to make these judgments and estimates. However, actual results may differ from those estimates and assumptions that are used to prepare our financial statements.

Pending Accounting Pronouncements

See Note 1 of the Notes to Consolidated Financial Statements for information on pending accounting pronouncements.

Forward-Looking and Other Statements

From time to time, we have made and may continue to make "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Certain statements in this report relate to future events and expectations and, as such, constitute forward-looking statements. Forward-looking statements include those containing such words as "anticipates," "believes," "estimates," "expects," "would," "should," "will," "will likely result," "forecast," "outlook," "projects," and similar expressions. Forward-looking statements are based on management's current expectations and include known and unknown risks, uncertainties and other factors, many of which we are unable to predict or control, that may cause our actual results, performance or achievements to differ materially from those expressed or implied in the forward-looking statements. Important factors that could cause actual results to differ materially from those in the forward-looking statements include: (a) material adverse changes in economic or industry conditions generally, including global supply and demand conditions and prices for our specialty metals and changes in international trade duties and other aspects of international trade policy; (b) material adverse changes in the markets we serve; (c) our inability to achieve the level of cost savings, productivity improvements, synergies, growth or other benefits anticipated by management, from strategic investments and the integration of acquired businesses; (d) volatility in the price and availability of the raw materials that are critical to the manufacture of our products; (e) declines in the value of our defined benefit pension plan assets or unfavorable changes in laws or regulations that govern pension plan funding; (f) labor disputes or work stoppages; (g) equipment outages; and (h) other risk factors

summarized in our Annual Report on Form 10-K for the year ended December 31, 2017, and in other reports filed with the Securities and Exchange Commission. We assume no duty to update our forward-looking statements.

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Item 3. Quantitative and Qualitative Disclosures About Market Risk

As part of our risk management strategy, we utilize derivative financial instruments, from time to time, to hedge our exposure to changes in energy and raw material prices, foreign currencies, and interest rates. We monitor the third-party financial institutions which are our counterparties to these financial instruments on a daily basis and diversify our transactions among counterparties to minimize exposure to any one of these entities. Fair values for derivatives were measured using exchange-traded prices for the hedged items including consideration of counterparty risk and the Company's credit risk. Our exposure to volatility in interest rates is presently not material, as nearly all of our debt is at fixed interest rates.

Volatility of Interest Rates. We may enter into derivative interest rate contracts to maintain a reasonable balance between fixed- and floating-rate debt. In July 2018, we entered into a \$50 million floating-for-fixed interest rate swap which converts half of the Term Loan to a 5.44% fixed interest rate. The Company designated the interest rate swap as a cash flow hedge of the Company's exposure to the variability of the payment of interest on a portion of its Term Loan borrowings. The swap matures in January 2021. Any gain or loss associated with this hedging arrangement is included in interest expense. At September 30, 2018, the net mark-to-market valuation of the outstanding interest rate swap was an unrealized pre-tax loss of \$0.1 million, comprised of \$0.1 million in other long-term assets and \$0.2 million in accrued liabilities.

Volatility of Energy Prices. Energy resources markets are subject to conditions that create uncertainty in the prices and availability of energy resources. The prices for and availability of electricity, natural gas, oil and other energy resources are subject to volatile market conditions. These market conditions often are affected by political and economic factors beyond our control. Increases in energy costs, or changes in costs relative to energy costs paid by competitors, have and may continue to adversely affect our profitability. To the extent that these uncertainties cause suppliers and customers to be more cost sensitive, increased energy prices may have an adverse effect on our results of operations and financial condition. We use approximately 8 to 10 million MMBtu's of natural gas annually, depending upon business conditions, in the manufacture of our products. These purchases of natural gas expose us to risk of higher gas prices. For example, a hypothetical \$1.00 per MMBtu increase in the price of natural gas would result in increased annual energy costs of approximately \$8 to \$10 million. We use several approaches to minimize any material adverse effect on our results of operations or financial condition from volatile energy prices. These approaches include incorporating an energy surcharge on many of our products and using financial derivatives to reduce exposure to energy price volatility.

At September 30, 2018, the outstanding financial derivatives used to hedge our exposure to energy cost volatility included natural gas hedges. Approximately 35% of our forecasted domestic requirements for natural gas for the remainder of 2018, approximately 35% for 2019 and approximately 30% for 2020 are hedged. The net mark-to-market valuation of these outstanding natural gas hedges at September 30, 2018 was an unrealized pre-tax loss of \$0.2 million, comprised of \$0.3 million in prepaid expense and other current assets, \$0.1 million in other long-term assets, \$0.2 million in accrued liabilities and \$0.4 million in other long-term liabilities. For the three months ended September 30, 2018, natural gas hedging activity had no impact on cost of sales.

Volatility of Raw Material Prices. We use raw materials surcharge and index mechanisms to offset the impact of increased raw material costs; however, competitive factors in the marketplace can limit our ability to institute such mechanisms, and there can be a delay between the increase in the price of raw materials and the realization of the benefit of such mechanisms. For example, in 2017, we used approximately 100 million pounds of nickel; therefore, a hypothetical change of \$1.00 per pound in nickel prices would result in increased costs of approximately \$100 million. In addition, in 2017, we also used approximately 400 million pounds of ferrous scrap in the production of our flat-rolled products; a hypothetical change of \$0.01 per pound would result in increased costs of approximately \$4 million. While we enter into raw materials futures contracts from time-to-time to hedge exposure to price fluctuations, such as for nickel, we cannot be certain that our hedge position adequately reduces exposure. We believe that we have adequate controls to monitor these contracts, but we may not be able to accurately assess exposure to price volatility in the markets for critical raw materials.

The majority of our products are sold utilizing raw material surcharges and index mechanisms. However, as of September 30, 2018, we had entered into financial hedging arrangements, primarily at the request of our customers, related to firm orders for an aggregate notional amount of approximately 12 million pounds of nickel with hedge dates through 2021. The aggregate notional amount hedged is approximately 12% of a single year's estimated nickel raw material purchase requirements. Any gain or loss associated with these hedging arrangements is included in cost of sales. At September 30, 2018, the net mark-to-market valuation of our outstanding raw material hedges was an unrealized pre-tax gain of \$3.1 million, comprised of \$4.3 million in prepaid expense and other current assets, \$2.7 million in other long-term assets, \$2.9 million in accrued liabilities and \$1.0 million in other long-term liabilities on the balance sheet.

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Foreign Currency Risk. Foreign currency exchange contracts are used, from time-to-time, to limit transactional exposure to changes in currency exchange rates. We sometimes purchase foreign currency forward contracts that permit us to sell specified amounts of foreign currencies expected to be received from our export sales for pre-established U.S. dollar amounts at specified dates. The forward contracts are denominated in the same foreign currencies in which export sales are denominated. These contracts are designated as hedges of the variability in cash flows of a portion of the forecasted future export sales transactions which otherwise would expose the Company to foreign currency risk, primarily euros. At September 30, 2018, we held euro forward sales contracts designated as cash flow hedges with a notional value of approximately 16 million euros with maturity dates through May 2019. In addition, we may also designate cash balances held in foreign currencies as hedges of forecasted foreign currency transactions.

We may also enter into foreign currency forward contracts that are not designated as hedges, which are denominated in the same foreign currency in which export sales are denominated. We have 10 million euro notional value outstanding as of September 30, 2018 of foreign currency forward contracts not designated as hedges, with maturity dates into the second quarter of 2019.

At September 30, 2018, the net mark-to-market valuation of the outstanding foreign currency forward contracts was an unrealized pre-tax gain of \$0.6 million, all of which was in prepaid expense and other current assets on the balance sheet.

Item 4. Controls and Procedures

(a) Evaluation of Disclosure Controls and Procedures

Our Chief Executive Officer and Chief Financial Officer have evaluated the Company's disclosure controls and procedures (as defined in Rule 13a-15(e) or rule 15d-15(e) under the Securities Exchange Act of 1934, as amended) as of September 30, 2018, and they concluded that these disclosure controls and procedures are effective.

(b) Changes in Internal Controls

There was no change in our internal controls over financial reporting identified in connection with the evaluation of the Company's disclosure controls and procedures (as defined in Rule 13a-15(e) or Rule 15d-15(e) under the Securities Exchange Act of 1934, as amended) as of September 30, 2018 conducted by our Chief Executive Officer and Chief Financial Officer, that occurred during the quarter ended September 30, 2018 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

A number of lawsuits, claims and proceedings have been or may be asserted against the Company relating to the conduct of its currently or formerly owned businesses, including those pertaining to product liability, environmental, health and safety matters and occupational disease (including as each relates to alleged asbestos exposure), as well as patent infringement, commercial, government contracting, construction, employment, employee and retiree benefits, taxes, environmental, and stockholder and corporate governance matters. Certain of such lawsuits, claims and proceedings are described in our Annual Report on Form 10-K for the year ended December 31, 2017, and addressed in Note 15 to the unaudited interim financial statements included herein. While the outcome of litigation cannot be predicted with certainty, and some of these lawsuits, claims or proceedings may be determined adversely to the Company, management does not believe that the disposition of any such pending matters is likely to have a material adverse effect on the Company's financial condition or liquidity, although the resolution in any reporting period of one or more of these matters could have a material adverse effect on the Company's results of operations for that period.

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Item 1A. Risk Factors

The following is an update to, and should be read in conjunction with Item 1A. Risk Factors contained in the Company's Annual Report on Form 10-K for the year ended December 31, 2017. In addition to the other information set forth in this report, you should carefully consider the factors discussed in Part I, "Item 1A. Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2017, which could materially affect our business, financial condition or future results. The risks described in our Annual Report on Form 10-K are not the only risks facing our Company. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial also may materially adversely affect our business, financial condition and/or operating results.

Export Sales and International Trade Matters. We believe that export sales will continue to account for a significant percentage of our future revenues. We also import certain raw materials, and recently formed, together with an affiliate company of Tsingshan Group, our A&T Stainless joint venture, which will import semi-finished stainless steel slab products from Indonesia to support its U.S. production of finished 60-inch wide stainless steel sheet products for sale in North America. Risks associated with such international trade include, among others: political and economic instability, including weak conditions in the world's economies; accounts receivable collection; export controls; trade sanctions, changes in legal and regulatory requirements; policy changes affecting the markets for our products; changes in tax laws; and exchange rate fluctuations (which may affect sales to international customers and the value of profits earned on export sales when converted into dollars). Any of these factors could materially adversely affect our results for the period in which they occur.

Additionally, changes in international trade duties and other aspects of international trade policy, both in the U.S. and abroad, could materially impact our business. For example, in March 2018, the U.S. imposed an additional 25% tariff under Section 232 of the Trade Expansion Act of 1962, as amended, on steel products, including stainless steel, imported into the U.S. Currently, the semi-finished stainless steel slabs that our A&T Stainless joint venture imports from Indonesia are subject to the additional tariff. The A&T Stainless joint venture has filed for exclusions from the 232 tariff based on the nature of the imported product, its country of origin, and its lack of availability in the U.S. However, there can be no assurance that the joint venture will be successful in obtaining an exclusion for the products that it intends to import, and to the extent that no exclusion is obtained, the joint venture's operations would be impacted.

Moreover, these new tariffs, or other changes in U.S. trade policy, have resulted in, and may continue to trigger, retaliatory actions by affected countries. Certain foreign governments have instituted or are considering imposing trade sanctions on certain U.S. goods. Others are considering the imposition of sanctions that will deny U.S. companies access to critical raw materials. A "trade war" of this nature or other governmental action related to tariffs or international trade agreements or policies has the potential to adversely impact demand for our products, our costs, customers, suppliers and/or the U.S. economy or certain sectors thereof and, thus, to adversely impact our businesses.

Item 6. Exhibits

(a) Exhibits

- 12.1 Computation of the Ratio of Earnings to Fixed Charges (filed herewith).
- 31.1 Certification of Chief Executive Officer required by Securities and Exchange Commission Rule 13a – 14(a) or 15d – 14(a) (filed herewith).
- 31.2 Certification of Chief Financial Officer required by Securities and Exchange Commission Rule 13a – 14(a) or 15d – 14(a) (filed herewith).
- 32.1 Certification pursuant to 18 U.S.C. Section 1350 (furnished herewith).

101.INS XBRL Instance Document

101.SCH XBRL Taxonomy Extension Schema Document

101.CAL XBRL Taxonomy Extension Calculation Linkbase Document

101.DEF XBRL Taxonomy Extension Definition Linkbase Document

101.LAB XBRL Taxonomy Extension Label Linkbase Document

101.PRE XBRL Taxonomy Extension Presentation Linkbase Document

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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.

ALLEGHENY TECHNOLOGIES INCORPORATED

(Registrant)

Date: October 31, 2018 By /s/ Patrick J. DeCourcy

Patrick J. DeCourcy

Senior Vice President, Finance and Chief Financial Officer

(Principal Financial Officer)

Date: October 31, 2018 By /s/ Karl D. Schwartz

Karl D. Schwartz

Vice President, Controller and Chief Accounting Officer

(Principal Accounting Officer)