ARMSTRONG WORLD INDUSTRIES INC
Form 10-Q
October 31, 2016

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

(Mark One)

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended September 30, 2016

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 1-2116

ARMSTRONG WORLD INDUSTRIES, INC.

(Exact name of registrant as specified in its charter)

Pennsylvania (State or other jurisdiction of incorporation or organization)	23-0366390 (I.R.S. Employer Identification No.)
2500 Columbia Avenue, Lancaster, Pennsylvania (Address of principal executive offices)	17603 (Zip Code)

Registrant’s telephone number, including area code (717) 397-0611

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter time 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 the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act:

Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company

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

Number of shares of Armstrong World Industries, Inc.'s common stock outstanding as of October 24, 2016 – 55,186,093.

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When we refer to "AWI," the "Company," "we," "our" and "us," we are referring to Armstrong World Industries, Inc. and its subsidiaries.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

Certain statements in this Quarterly Report on Form 10-Q and the documents incorporated by reference may constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Those forward-looking statements are subject to various risks and uncertainties and include all statements that are not historical statements of fact and those regarding our intent, belief or expectations, including, but not limited to, our expectations concerning our residential and commercial markets and their effect on our operating results; our expectations regarding the payment of dividends, and our ability to increase revenues, earnings and EBITDA (as such terms are defined by documents incorporated by reference herein). Words such as "anticipate," "expect," "intend," "plan," "target," "project," "predict," "believe," "may," "will," "would," "could," "should," "seek," "estimate" and similar expressions identify such forward-looking statements. These statements are based on management's current expectations and beliefs and are subject to a number of factors that could lead to actual results materially different from those described in the forward-looking statements. Although we believe that the assumptions underlying the forward-looking statements are reasonable, we can give no assurance that our expectations will be attained. Factors that could have a material adverse effect on our financial condition, liquidity, results of operations or future prospects or which could cause actual results to differ materially from our expectations include, but are not limited to:

- global economic conditions;
- construction activity;
- the separation of the flooring business;
- competition;
- key customers;
- availability and costs of raw materials and energy;
- international operations;
- covenants in our debt agreements;
- our indebtedness;
- our liquidity;
- our WAVE joint venture;
- environmental matters;
- strategic transactions;
- plant construction projects;
- negative tax consequences;
- defined benefit plan obligations;
- claims and litigation;
- labor;
- our intellectual property rights;
- costs savings and productivity initiatives; and
- other risks detailed from time to time in our filings with the Securities and Exchange Commission (the "SEC"), press releases and other communications, including those set forth under "Risk Factors" included in our Annual Report on Form 10-K and in the documents incorporated by reference.

Such forward-looking statements speak only as of the date they are made. We expressly disclaim any obligation to release publicly any updates or revisions to any forward-looking statements to reflect any change in our expectations with regard thereto or change in events, conditions or circumstances on which any statement is based.

PART I - FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

Armstrong World Industries, Inc., and Subsidiaries

Condensed Consolidated Statements of Earnings and Comprehensive Income

(amounts in millions, except per share data)

Unaudited

	Three Months Ended September 30, 2016	Three Months Ended September 30, 2015	Nine Months Ended September 30, 2016	Nine Months Ended September 30, 2015
Net sales	$ 334.9	$ 335.9	$ 936.6	$ 934.0
Cost of goods sold	225.2	224.8	651.1	642.3
Gross profit	109.7	111.1	285.5	291.7
Selling, general and administrative expenses	55.7	64.0	165.2	189.9
Separation costs	2.0	7.4	33.0	16.8
Equity earnings from joint venture	(19.0)	(19.6)	(57.0)	(49.6)
Operating income	71.0	59.3	144.3	134.6
Interest expense	9.0	11.3	43.4	33.9
Other non-operating expense	-	10.8	-	13.5
Other non-operating (income)	(1.6)	-	(8.9)	(5.4)
Earnings from continuing operations before income taxes	63.6	37.2	109.8	92.6
Income tax expense	7.7	17.5	44.4	52.1
Earnings from continuing operations	55.9	19.7	65.4	40.5
Net earnings (loss) from discontinued operations, net of tax expense of $-, $7.4, $0.1 and $18.1	-	10.6	(4.5)	23.5
Gain from disposal of discontinued business, net of tax (benefit) of ($14.7), ($0.7), ($16.6) and ($44.1)	14.7	1.5	16.7	44.0
Net earnings from discontinued operations	14.7	12.1	12.2	67.5
Net earnings	$ 70.6	$ 31.8	$ 77.6	$ 108.0
Other comprehensive income (loss), net of tax:				
Foreign currency translation adjustments	(2.0)	(13.4)	(13.8)	(21.3)
Derivative gain (loss)	1.7	0.9	1.2	(0.2)
Pension and postretirement adjustments	6.9	11.1	23.9	32.2
Total other comprehensive income (loss)	6.6	(1.4)	11.3	10.7
Total comprehensive income	$ 77.2	$ 30.4	$ 88.9	$ 118.7
Earnings per share of common stock, continuing operations:				
Basic	$ 1.00	$ 0.35	$ 1.17	$ 0.72

Diluted	$ 0.99	$ 0.35	$ 1.16	$ 0.72
Earnings per share of common stock, discontinued operations:				
Basic	$ 0.26	$ 0.22	$ 0.22	$ 1.21
Diluted	$ 0.26	$ 0.21	$ 0.22	$ 1.20
Net earnings per share of common stock:				
Basic	$ 1.27	$ 0.57	$ 1.39	$ 1.93
Diluted	$ 1.26	$ 0.56	$ 1.38	$ 1.92
Average number of common shares outstanding:				
Basic	55.5	55.5	55.6	55.4
Diluted	56.0	55.9	56.0	55.8

See accompanying notes to Condensed Consolidated Financial Statements beginning on page 8.

Armstrong World Industries, Inc., and Subsidiaries

Condensed Consolidated Balance Sheets

(amounts in millions, except share data)

	Unaudited September 30, 2016	December 31, 2015
Assets		
Current assets:		
Cash and cash equivalents	$ 142.5	$ 209.3
Accounts and notes receivable, net	128.3	114.3
Inventories, net	109.5	101.4
Current assets of discontinued operations	-	381.3
Deferred income taxes	26.2	29.7
Income tax receivable	4.9	11.1
Other current assets	17.2	33.7
Total current assets	428.6	880.8
Property, plant, and equipment, less accumulated depreciation and amortization of $444.7 and $403.8, respectively	664.8	648.1
Prepaid pension costs	8.3	8.3
Investment in joint venture	119.3	130.8
Intangible assets, net	437.3	447.2
Non-current assets of discontinued operations	-	499.3
Deferred income taxes	9.0	19.7
Income taxes receivable	4.9	2.4
Other non-current assets	60.5	57.0
Total assets	$ 1,732.7	$ 2,693.6
Liabilities and Shareholders' Equity		
Current liabilities:		
Current installments of long-term debt	$ 17.5	$ 52.1
Accounts payable and accrued expenses	201.3	231.1
Current liabilities of discontinued operations	-	149.6
Income tax payable	11.1	3.2
Deferred income taxes	0.6	0.3
Total current liabilities	230.5	436.3
Long-term debt, less current installments	856.2	936.2
Postretirement benefit liabilities	91.3	87.2
Pension benefit liabilities	79.6	62.1
Other long-term liabilities	34.7	43.3
Non-current liabilities of discontinued operations	-	149.1
Income taxes payable	55.9	92.3
Deferred income taxes	125.4	118.3
Total non-current liabilities	1,243.1	1,488.5

Shareholders' equity:		
Common stock, $0.01 par value per share, 200 million shares authorized, 60,563,934 shares issued, and 55,319,221 shares outstanding as of September 30, 2016 and 60,416,446 shares issued and 55,359,064 shares outstanding as of December 31, 2015	0.6	0.6
Additional paid-in capital	504.2	1,151.8
Retained earnings	442.8	365.2
Treasury stock, at cost, 5,244,713 shares as of September 30, 2016 and 5,057,382 as of December 31, 2015	(269.2)	(261.4)
Accumulated other comprehensive (loss)	(419.3)	(487.4)
Total shareholders' equity	259.1	768.8
Total liabilities and shareholders' equity	$ 1,732.7	$ 2,693.6

See accompanying notes to Condensed Consolidated Financial Statements beginning on page 8.

Armstrong World Industries, Inc., and Subsidiaries

Condensed Consolidated Statements of Shareholders' Equity

(amounts in millions, except share data)

Unaudited

	Nine Months Ended September 30, 2016							
	Common Stock				Treasury Stock			
	Shares	Amount	Additional Paid-In Capital	Retained Earnings	Shares	Amount	Accumulated Other Comprehensive (Loss)	Total
Balance at beginning of period	55,359,064	$ 0.6	$ 1,151.8	$ 365.2	5,057,382	$ (261.4)	$ (487.4)	$ 768.8
Stock issuance	147,488							
Share-based employee compensation			13.1					13.1
Net earnings				77.6				77.6
Other comprehensive income							11.3	11.3
Separation of Armstrong Flooring, Inc.			(660.7)				56.8	(603.9)
Acquisition of treasury stock	(187,331)				187,331	(7.8)		(7.8)
Balance at end of period	55,319,221	$ 0.6	$ 504.2	$ 442.8	5,244,713	$ (269.2)	$ (419.3)	$ 259.1

	Nine Months Ended September 30, 2015							
	Common Stock				Treasury Stock			
	Shares	Amount	Additional Paid-In Capital	Retained Earnings	Shares	Amount	Accumulated Other Comprehensive (Loss)	Total
Balance at beginning of period	55,126,153	$ 0.6	$ 1,134.4	$ 271.0	5,057,382	$ (261.4)	$ (495.5)	$ 649.1
Stock issuance	228,859							
Share-based employee compensation			15.4					15.4
Net earnings				108.0				108.0
							10.7	10.7

Other comprehensive income								
Balance at end of period	55,355,012	$ 0.6	$ 1,149.8	$ 379.0	5,057,382	$ (261.4)	$ (484.8)	$ 783.2

See accompanying notes to Condensed Consolidated Financial Statements beginning on page 8.

Armstrong World Industries, Inc., and Subsidiaries

Condensed Consolidated Statements of Cash Flows

(amounts in millions)

Unaudited

	Nine Months Ended September 30,	
	2016	2015
Cash flows from operating activities:		
Net earnings	$77.6	$108.0
Adjustments to reconcile net earnings to net cash (used for) provided by operating activities:		
Depreciation and amortization	70.1	86.9
Write off of debt financing costs	1.1	-
Deferred income taxes	28.0	(38.7)
Share-based compensation	9.6	11.2
Excess tax benefit from share-based awards	(5.8)	(0.2)
Equity earnings from joint venture	(57.0)	(49.6)
Separation costs	33.0	16.8
Loss on interest rate swap	10.7	-
U.S. pension expense	11.8	18.9
Non-cash foreign currency translation on intercompany loans	(5.8)	12.5
Other non-cash adjustments, net	1.6	-
Changes in operating assets and liabilities:		
Receivables	(41.3)	(19.0)
Inventories	(4.4)	(10.4)
Other current assets	11.5	(12.0)
Other non-current assets	(7.0)	(5.8)
Accounts payable and accrued expenses	(88.2)	7.1
Income taxes payable	(24.1)	26.9
Other long-term liabilities	(19.4)	(12.0)
Other, net	(4.6)	3.4
Net cash (used for) provided by operating activities	(2.6)	144.0
Cash flows from investing activities:		
Purchases of property, plant and equipment	(75.7)	(96.7)
Return of investment from joint venture	68.5	47.6
Other investing activities	0.3	3.8
Net cash (used for) investing activities	(6.9)	(45.3)
Cash flows from financing activities:		
Proceeds from revolving credit facility and other short-term debt	90.0	-
Payments of revolving credit facility and other short-term debt	(90.0)	-
Proceeds from long-term debt	363.5	-
Payments of long-term debt	(432.8)	(28.8)
Financing costs	(8.1)	-
Special dividends paid	-	(1.2)
Proceeds from exercised stock options	0.3	6.3

Cash transferred to Armstrong Flooring, Inc.	(9.1)	-
Excess tax benefit from share-based awards	5.8	0.2
Payment for treasury stock acquired	(7.8)	-
Payment of company owned life insurance loans, net	-	(0.1)
Net cash (used for) financing activities	(88.2)	(23.6)
Effect of exchange rate changes on cash and cash equivalents	(4.6)	(10.4)
Net (decrease) increase in cash and cash equivalents	(102.3)	64.7
Cash and cash equivalents at beginning of year	244.8	185.3
Cash and cash equivalents at end of period	142.5	250.0
Cash and cash equivalents at end of period of discontinued operations	-	29.9
Cash and cash equivalents at end of period of continuing operations	$142.5	$220.1
Supplemental Cash Flow Disclosures:		
Interest paid	$25.2	$29.8
Income taxes paid, net	23.9	37.9
Amounts in accounts payable for capital expenditures	4.7	21.2

See accompanying notes to Condensed Consolidated Financial Statements beginning on page 8.

Armstrong World Industries, Inc., and Subsidiaries

Notes to Condensed Consolidated Financial Statements (unaudited)

(dollar amounts in millions, except share data)

NOTE 1. BUSINESS AND BASIS OF PRESENTATION

Armstrong World Industries, Inc. (“AWI”) is a Pennsylvania corporation incorporated in 1891. When we refer to “AWI,” the “Company,” “we,” “our” and “us” in these notes, we are referring to AWI and its subsidiaries.

On April 1, 2016, we completed our previously announced separation of Armstrong Flooring, Inc. (“AFI”) by allocating the assets and liabilities related primarily to the Resilient Flooring and Wood Flooring segments to AFI and then distributing the common stock of AFI to our shareholders at a ratio of one share of AFI common stock for every two shares of AWI common stock. Subsequent to the separation and distribution, AWI and AFI operate as two independent, publicly-traded companies, with AFI owning and operating the Resilient Flooring and Wood Flooring segments and AWI continuing to own and operate the Building Products (Ceilings) segment. AFI’s historical financial results have been reflected in AWI’s Consolidated Financial Statements as a discontinued operation for all periods presented. Separation costs for the three and nine months ended September 30, 2016 were $2.0 million and $33.0 million, respectively. Separation costs for the three and nine months ended September 30, 2015 were $7.4 million and $16.8 million, respectively. Separation costs for all periods primarily related to outside professional services and employee compensation and retention and severance accruals which were recorded within the Unallocated Corporate segment in conjunction with this initiative. Beginning in the second quarter of 2016, AFI’s historical financial results for periods prior to April 1, 2016 are reflected in our Condensed Consolidated Financial Statements as a discontinued operation. See Note 3 for additional information.

The accounting policies used in preparing the Condensed Consolidated Financial Statements in this Form 10-Q are the same as those used in preparing the Consolidated Financial Statements for the year ended December 31, 2015. These statements should therefore be read in conjunction with the Consolidated Financial Statements and notes that are included in the Form 10-K for the fiscal year ended December 31, 2015. In the opinion of management, all adjustments of a normal recurring nature have been included to provide a fair statement of the results for the reporting periods presented. Operating results for the third quarter and first nine months of 2016 and 2015 included in this report are unaudited. Quarterly results are not necessarily indicative of annual earnings, primarily due to the different level of sales in each quarter of the year and the possibility of changes in general economic conditions.

These Condensed Consolidated Financial Statements are prepared in accordance with U.S. generally accepted accounting principles (“U.S. GAAP”). The statements include management estimates and judgments, where appropriate. Management utilizes estimates to record many items including certain asset values, allowances for bad debts, inventory obsolescence and lower of cost or market charges, warranty reserves, workers’ compensation, general liability and environmental claims and income taxes. When preparing an estimate, management determines the amount based upon the consideration of relevant information. Management may confer with outside parties, including outside counsel. Actual results may differ from these estimates.

Certain amounts in the prior year’s Condensed Consolidated Financial Statements have been recast to conform to the 2016 presentation.

Recently Adopted Accounting Standards

In June 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2014-12 "Accounting for Share-Based Payments When the Terms of an Award Provide That a Performance Target Could Be Achieved after the Requisite Service Period," which amends Accounting Standards Codification ("ASC") Topic 718: Compensation-Stock Compensation. This new guidance requires that a performance target that affects vesting and that could be achieved after the requisite service period be treated as a performance condition and should not be reflected in the estimate of the grant-date fair value of the award. The guidance was effective for annual periods beginning after December 15, 2015. There was no impact on our financial condition, results of operations or cash flows as a result of the adoption of this guidance.

In April 2015, the FASB issued ASU 2015-03, "Simplifying the Presentation of Debt Issuance Costs." This standards update amends existing guidance to require the presentation of debt issuance costs in the balance sheet as a deduction from the carrying amount of the related debt liability instead of a deferred charge. In August 2015, the FASB issued ASU 2015-15, "Presentation and Subsequent Measurement of Debt Issuance Costs Associated with Line-of-Credit Arrangements," which was issued to address the presentation and subsequent measurement of debt issuance costs related to line-of-credit arrangements. ASU 2015-03 and 2015-15 were effective for annual reporting periods beginning after December 15, 2015. We adopted ASU 2015-03 and 2015-15 retrospectively, resulting in a $4.1 million reduction to other non-current assets and a corresponding decrease to long-term debt as of March 31, 2016. As of December 31, 2015, our adoption of these ASC updates resulted in a $4.7 million reduction to other non-current assets and a corresponding decrease to long-term debt. There was no impact on results of operations as a result of the adoption of this guidance.

In April 2015, the FASB issued ASU 2015-05, “Customer's Accounting for Fees Paid in a Cloud Computing Arrangement,” which provides guidance to determine when a customer's fees paid in a cloud computing arrangement include a software license. If a cloud computing arrangement includes a software license, the customer should account for the software license element of the arrangement consistent with the acquisition of other software licenses. If the arrangement does not include a software license, the customer should account for a cloud computing arrangement as a service contract. This new guidance was effective for annual reporting periods beginning after December 15, 2015. There was no impact on our financial condition, results of operations or cash flows as a result of the adoption of this guidance.

Recently Issued Accounting Standards

In May 2014, the FASB issued ASU 2014-09, “Revenue from Contracts with Customers.” The guidance requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to a customer. The ASU will replace most existing revenue recognition guidance in U.S. GAAP when it becomes effective. In August 2015, the FASB issued ASU 2015-14, “Revenue from Contracts with Customers: Deferral of the Effective Date,” which defers the effective date for ASU 2014-09 by one year. In March 2016, the FASB issued ASU 2016-08, “Principal versus Agent Considerations (Reporting Gross versus Net),” which clarifies the implementation guidance in ASU 2014-09 relating to principle versus agent considerations. In April 2016, the FASB issued ASU 2016-10, “Identifying Performance Obligations and Licensing,” which clarifies the implementation guidance in ASU 2014-09 relating to the identification of performance obligations in a contract, including how entities should account for shipping and handling services it provides after control of goods transfers to a customer. ASU 2016-10 also clarifies guidance on the timing and pattern of revenue recognition for intellectual property licenses. These ASC updates are effective for annual reporting periods beginning after December 15, 2017, but early adoption is permitted. We have not selected a transition method and are currently evaluating the impact these ASC updates would have on our financial condition, results of operations and cash flows.

In July 2015, the FASB issued ASU 2015-11, “Simplifying the Measurement of Inventory,” which requires inventory that is measured on a first-in, first-out or average cost basis to be measured at lower of cost and net realizable value, as opposed to the lower of cost or market. For inventory that is measured under the last-in, first-out (“LIFO”) basis or the retail recovery method, there is no change to current measurement requirements. This new guidance must be applied prospectively and is effective for annual reporting periods beginning after December 15, 2016, but early adoption is permitted. Based on our preliminary evaluation, we do not believe the adoption of this standard will have a material impact on our financial condition, results of operations and cash flows.

In November 2015, the FASB issued ASU 2015-17, “Balance Sheet Classification of Deferred Taxes,” which requires entities with a classified balance sheet to present all deferred tax assets and liabilities as non-current. This new guidance is effective for annual reporting periods beginning after December 15, 2016. Upon adoption, this standard will result in decreases to current assets and liabilities and corresponding increases to non-current assets and liabilities, but will have no impact on our results of operations or cash flows.

In January 2016, the FASB issued ASU 2016-01, “Recognition and Measurement of Financial Assets and Financial Liabilities,” which addresses certain aspects of recognition, measurement, presentation, and disclosure of financial instruments. Most notably, this new guidance requires equity investments (except those accounted for under the equity method of accounting or those that result in consolidation of the investee) to be measured at fair value with changes in fair value recognized in net income. This new guidance is effective for annual reporting periods beginning after December 15, 2017. We are currently evaluating the impact the adoption of this standard would have on our financial condition, results of operations and cash flows.

In February 2016, the FASB issued ASU 2016-02, “Leases,” which amends accounting for leases, most notably by requiring a lessee to recognize the assets and liabilities that arise from a lease agreement. Specifically, this new guidance will require lessees to recognize a liability to make lease payments and a right-of-use asset representing its right to use the underlying asset for the lease term, with limited exceptions. The accounting applied by a lessor is largely unchanged from that applied under existing U.S. GAAP. This new guidance is effective for annual reporting periods beginning after December 15, 2018 and must be adopted under a modified retrospective basis. We are currently evaluating the impact the adoption of this standard would have on our financial condition, results of operations and cash flows.

In March 2016, the FASB issued ASU 2016-05, “Effect of Derivative Contract Novations on Existing Hedge Accounting Relationships,” which amends ASC Topic 815: Derivatives and Hedging. This new guidance clarifies that a novation, or a change in the counterparty to a derivative instrument, by itself would not cause a hedge accounting relationship to be discontinued. This new guidance is effective for annual reporting periods beginning after December 15, 2016 and may be adopted prospectively or

Armstrong World Industries, Inc., and Subsidiaries

Notes to Condensed Consolidated Financial Statements (unaudited)

(dollar amounts in millions, except share data)

retroactively. Based on our preliminary evaluation, we do not believe the adoption of this standard will have an impact on our financial condition, results of operations and cash flows.

In March 2016, the FASB issued ASU 2016-09, "Improvements to Employee Share-Based Payment Accounting," which amends ASC Topic 718: Compensation-Stock Compensation. This new guidance simplifies accounting for share-based payments, most notably by requiring all excess tax benefits and tax deficiencies to be recorded as income tax benefits or expense in the income statement and by allowing entities to recognize forfeitures of awards when they occur. This new guidance is effective for annual reporting periods beginning after December 15, 2016 and may be adopted prospectively or retroactively. We are currently evaluating the impact the adoption of this standard would have on our financial condition, results of operations and cash flows.

In August 2016, the FASB issued ASU 2016-15, "Classification of Certain Cash Receipts and Cash Payments," which amends the guidance in ASC 230: Statement of Cash Flows. This guidance clarifies how entities should classify certain cash receipts and cash payments on the statement of cash flows. This new guidance is effective for annual periods beginning after December 15, 2017. We are currently evaluating the impact the adoption of this standard would have on our cash flows.

NOTE 2. SEGMENT RESULTS

Effective April 1, 2016 and in connection with our separation of AFI, our former Resilient Flooring and Wood Flooring segments have been excluded from our results of continuing operations. In addition, effective April 1, 2016, we disaggregated our former Building Products operating segment into the following three distinct geographical segments: Americas; Europe, Middle East and Africa ("EMEA"); and Pacific Rim.

Each of our geographical segments produces suspended fiber and metal ceilings for use in commercial and institutional settings in addition to sourcing complimentary ceiling products. Commercial ceiling materials and accessories are sold to resale distributors and to ceiling systems contractors. Residential ceiling products are sold in the Americas primarily to wholesalers and retailers (including large home centers). Each segment also includes the results of our Worthington Armstrong Venture ("WAVE") joint venture with Worthington Industries, Inc., which manufactures suspension system (grid) products that are invoiced by both us and WAVE. Segment results relating to WAVE consist primarily of equity earnings and reflect our 50% equity interest in the joint venture. In each of our segments, WAVE primarily sells its suspension system products directly to customers, for which we provide sales and administrative support. To a lesser extent, however, in some markets, WAVE sells its suspension systems products to us for resale to customers. Our segment results reflect those sales transactions, which are not typically material.

Effective April 1, 2016, we reclassified the majority of the assets and liabilities formally reported in our Unallocated Corporate segment to our Americas segment. The assets and liabilities reclassified to our Americas segment most notably included the Armstrong trade name intangible asset, property, plant and equipment comprised primarily of Corporate campus facilities, the cash surrender value of life insurance supporting deferred compensation liabilities, income tax assets and liabilities, and pension and postretirement assets and liabilities.

Balance sheet items classified as Unallocated Corporate for all periods presented primarily include cash and cash equivalents and outstanding borrowings under our senior credit facilities.

Segment results below have been restated for all periods presented as a result of the disaggregation of our former Building Products segment and the reclassification of Unallocated Corporate assets. These revisions did not impact any previously reported consolidated revenues, gross profit, results of continuing operations, or asset or liability balances.

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Net sales to external customers				
Americas	$226.0	$221.5	$640.9	$615.5
EMEA	74.2	78.2	199.4	217.3
Pacific Rim	34.7	36.2	96.3	101.2
Total net sales to external customers	$334.9	$335.9	$936.6	$934.0

Armstrong World Industries, Inc., and Subsidiaries

Notes to Condensed Consolidated Financial Statements (unaudited)

(dollar amounts in millions, except share data)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Segment operating income (loss)				
Americas	$68.6	$88.7	$189.0	$225.0
EMEA	4.1	1.3	(5.2)	(7.0)
Pacific Rim	1.0	(0.2)	(2.4)	(4.2)
Unallocated Corporate	(2.7)	(30.5)	(37.1)	(79.2)
Total consolidated operating income	$71.0	$59.3	$144.3	$134.6

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Total consolidated operating income	$71.0	$59.3	$144.3	$134.6
Interest expense	9.0	11.3	43.4	33.9
Other non-operating expense	-	10.8	-	13.5
Other non-operating (income)	(1.6)	-	(8.9)	(5.4)
Earnings from continuing operations before income taxes	$63.6	$37.2	$109.8	$92.6

	September 30, 2016	December 31, 2015
Segment assets		
Americas	$ 1,144.4	$ 1,137.4
EMEA	296.1	283.3
Pacific Rim	146.6	154.5
Unallocated Corporate	145.6	237.8
Total consolidated assets	$ 1,732.7	$ 1,813.0

Impairment testing of our tangible assets occurs whenever events or changes in circumstances indicate that the carrying amount of the assets may not be recoverable.

Effective January 1, 2016, in anticipation of the April 1, 2016 AFI separation, the majority of our historical corporate support functions, representing costs of approximately $22.0 million and $58.0 million for the three and nine months ended September 30, 2016, respectively, were incorporated into our Americas segment. As a result, Unallocated

Corporate support expenses have decreased significantly during the three and nine months ended September 30, 2016 in comparison to the same periods in 2015.

For the three and nine months ended September 30, 2016 and 2015, Unallocated Corporate segment operating (loss) was comprised of the following:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Corporate expenses	$(0.7)	$(23.1)	$(4.1)	$(62.4)
Separation costs	(2.0)	(7.4)	(33.0)	(16.8)
Total Unallocated Corporate segment operating (loss)	$(2.7)	$(30.5)	$(37.1)	$(79.2)

NOTE 3. DISCONTINUED OPERATIONS

Separation and Distribution of AFI

On April 1, 2016, in connection with the separation and distribution of AFI, we entered into several agreements with AFI that, together with a plan of division, provide for the separation and allocation between AWI and AFI of the flooring assets, employees, liabilities and obligations of AWI and its subsidiaries attributable to periods prior to, at and after AFI's separation from AWI, and govern the relationship between AWI and AFI subsequent to the completion of the separation and distribution.

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These agreements include a Transition Services Agreement, a Tax Matters Agreement, an Employee Matters Agreement, a Trademark License Agreement, a Transition Trademark License Agreement and a Campus Lease Agreement.

Under the Transition Services Agreement, AWI and AFI will provide various services to each other during a transition period expiring no later than December 31, 2017, including information technology, accounts payable, payroll, and other financial functions and administrative services. We do not anticipate the Transition Services Agreement will need to be extended beyond December 31, 2017.

The Tax Matters Agreement generally governs AWI's and AFI's respective rights, responsibilities and obligations after the separation and distribution with respect to tax liabilities and benefits, tax attributes, the preparation and filing of tax returns, the control of audits and other tax proceedings, and other matters regarding taxes for any tax period ending on or before the distribution date, as well as tax periods beginning after the distribution date. In addition, the Tax Matters Agreement provides that AFI is liable for taxes incurred by AWI that may arise if AFI takes, or fails to take, certain actions that may result in the separation, the distribution or certain related transactions failing to qualify as tax-free for U.S. federal income tax purposes. Upon distribution, AWI received an opinion from its tax counsel that the separation and distribution qualified as a tax-free transaction for AWI and its shareholders.

The Employee Matters Agreement governs certain compensation and employee benefit obligations with respect to the current and former employees and non-employee directors of AWI and AFI. Pursuant to this agreement and in connection with the distribution, AWI transferred assets and liabilities from the AWI defined benefit pension and postretirement plans to AFI that relate to active AFI employees and certain former AFI employees to mirror plans established by AFI. Based on preliminary analyses provided by our actuaries, approximately $28.0 million and approximately $90.0 million of U.S. defined benefit pension and U.S. postretirement benefit plan net liabilities under AWI's plans as of April 1, 2016, respectively, were transferred to mirror plans established by AFI during the second quarter of 2016. During the third quarter of 2016, we reduced the total U.S. defined benefit pension and U.S. postretirement benefit plan net liabilities transferred to AFI by approximately $26.0 million and $4.0 million, respectively, based on updated actuarial analyses. The reduction was due to an increase in estimated plan assets transferred to AFI in comparison to our original estimate. The total net U.S. defined benefit plan liability transferred to AFI of $2.0 million consisted of an approximately $364.0 million projected benefit obligation, partially offset by the fair value of approximately $362.0 million of plan assets.

Pursuant to the Trademark License Agreement, AWI provided AFI with a perpetual, royalty-free license to utilize the "Armstrong" trade name and logo. Pursuant to the Transition Trademark License Agreement, AFI provided us with a five-year royalty-free license to utilize the "Inspiring Great Spaces" tagline, logo and related color scheme.

Under the Campus Lease Agreement, certain portions of the AWI headquarters are being leased to AFI to use as its corporate headquarters for an initial term of five years, subject to certain renewal rights.

The following is a summary of the results of operations related to AFI, our former Resilient Flooring and Wood Flooring segments, which are presented as discontinued operations.

	Three Months Ended September 30,	Nine Months Ended September 30,	
	2015	2016	2015
Net sales	$ 322.6	$284.4	$908.6
Cost of goods sold	255.8	237.2	735.0
Gross profit	66.8	47.2	173.6
Selling, general and administrative expenses	46.4	50.5	129.6
Operating income (loss)	20.4	(3.3)	44.0
Other non-operating expense	2.4	1.1	2.4
Earnings (loss) from discontinued operations before income taxes	18.0	(4.4)	41.6
Income tax expense	7.4	0.1	18.1
Earnings (loss) from discontinued operations	$ 10.6	$(4.5)	$23.5

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The following is a summary of the carrying amount of the major classes of assets and liabilities classified as assets and liabilities of discontinued operations as of December 31, 2015 related to AFI.

	December 31, 2015
Assets	
Current assets:	
Cash and cash equivalents	$ 35.5
Accounts and notes receivable, net	70.0
Inventories, net	242.8
Deferred income taxes	5.8
Other current assets	27.2
Total current assets discontinued operations	381.3
Property, plant, and equipment, less accumulated depreciation and amortization	448.2
Intangible assets, net	42.5
Deferred income taxes	1.3
Other non-current assets	7.3
Total non-current assets of discontinued operations	499.3
Total assets of discontinued operations	$ 880.6
Liabilities	
Current liabilities:	
Accounts payable and accrued expenses	$ 149.3
Deferred income taxes	0.3
Total current liabilities	149.6
Long-term debt, less current installments	14.7
Postretirement benefit liabilities	85.2
Pension benefit liabilities	45.5
Other long-term liabilities	3.7
Total non-current liabilities of discontinued operations	149.1
Total liabilities of discontinued operations	$ 298.7

In connection with the separation and distribution of AFI, on April 1, 2016 we received a $50.0 million dividend from AFI. In addition, $56.8 million of accumulated other comprehensive losses, net of tax, were transferred to AFI, consisting of amounts related to transferred pension and postretirement liabilities, net derivatives assets and a cumulative translation adjustment. The impact of these items, in addition to the net effect of all assets and liabilities transferred to AFI upon separation resulted in a $660.7 million reduction to additional paid-in capital as of September 30, 2016.

The following is a summary of total depreciation and amortization and capital expenditures related to AFI which are presented as discontinued operations and included as components of operating and investing cash flows on our consolidated statements of cash flows:

	Nine Months Ended September 30,	
	2016	2015
Depreciation and amortization	$11.4	$29.0
Purchases of property, plant and equipment	(8.4)	(37.5)

European Resilient Flooring

On December 4, 2014, our Board of Directors approved the cessation of funding to our DLW subsidiary, which at that time was our European flooring business. As a result, DLW management filed for insolvency in Germany on December 11, 2014.

The DLW insolvency filing in December 2014 resulted in our disposal and presentation of DLW for all historical periods as a discontinued operation. However, the insolvency filing did not meet the U.S. tax criteria to be considered disposed of until the first quarter of 2015. In determining the U.S. tax impact of the disposition, the liabilities, including an unfunded pension liability of approximately $115.0 million, were considered proceeds. However, pension deductions for tax purposes result only when the benefit

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payments are made. Accordingly, a deferred tax asset and non-cash income tax benefit of $43.4 million were recorded in the first quarter of 2015 within discontinued operations for the tax benefit of the future pension deductions.

At deconsolidation, DLW had a net liability of $12.9 million, representing assets of $151.9 million and liabilities of $164.8 million, which were removed from our balance sheet. This net liability was recognized as a contingent liability on our consolidated balance sheet pending the closure and results of the insolvency proceedings. Any shortfall will be recognized immediately when identified and any excess will be reflected when insolvency proceedings are finalized, all through discontinued operations. The amount of the net liability was $12.0 million as of September 30, 2016. DLW was previously shown within our Resilient Flooring reporting segment.

The following is a summary of the results related to the flooring businesses which are included in discontinued operations.

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Gain (loss) on disposal of discontinued business before income tax	$-	$0.2	$0.1	$(0.7)
Income tax (benefit)	(14.7)	(0.7)	(16.6)	(44.1)
Net gain on disposal of discontinued business	$14.7	$0.9	$16.7	$43.4

During the third quarter of 2016, a non-cash income tax benefit of $14.7 million was recorded within discontinued operations due to the reversal of reserves for uncertain tax positions as a result of an expiration of the federal statute of limitations to review previously filed income tax returns.

Cabinets

In September 2012, we entered into a definitive agreement to sell our cabinets business to American Industrial Partners. The sale was completed in October 2012. The following is a summary of the results related to the cabinets business, which are included in discontinued operations.

Three and Nine Months Ended

	September 30, 2015
Gain on disposal of discontinued business before income tax	$ 0.6
Income tax (benefit)	-
Net gain on disposal of discontinued business	$ 0.6

NOTE 4. ACCOUNTS AND NOTES RECEIVABLE

	September 30, 2016	December 31, 2015
Customer receivables	$ 129.1	$ 114.0
Customer notes	0.7	0.7
Miscellaneous receivables	5.9	6.4
Less allowance for warranties, discounts and losses	(7.4)	(6.8)
Accounts and notes receivable, net	$ 128.3	$ 114.3

Generally, we sell our products to select, pre-approved customers whose businesses are affected by changes in economic and market conditions. We consider these factors and the financial condition of each customer when establishing our allowance for losses from doubtful accounts.

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NOTE 5. INVENTORIES

	September 30, 2016	December 31, 2015
Finished goods	$ 81.3	$ 74.2
Goods in process	3.1	4.2
Raw materials and supplies	33.2	32.0
Less LIFO and other reserves	(8.1)	(9.0)
Total inventories, net	$ 109.5	$ 101.4

NOTE 6. OTHER CURRENT ASSETS

	September 30, 2016	December 31, 2015
Prepaid expenses	$ 13.9	$ 18.2
Fair value of derivative assets	0.6	3.4
Other	2.7	12.1
Total other current assets	$ 17.2	$ 33.7

NOTE 7. EQUITY INVESTMENT

Investment in joint venture as of September 30, 2016 reflected our 50% equity interest in WAVE. Condensed income statement data for WAVE is summarized below. Segment results relating to WAVE, however, consist primarily of equity earnings, as we do not consolidate the sales, profit or earnings of WAVE in our results.

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Net sales	$102.6	$103.5	$300.5	$284.2
Gross profit	54.0	53.4	160.9	140.9

Net earnings	41.8	42.3	124.0	108.4

NOTE 8. INTANGIBLE ASSETS

The following table details amounts related to our intangible assets as of September 30, 2016 and December 31, 2015.

		September 30, 2016		December 31, 2015	
	Estimated Useful Life	Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Amortizing intangible assets					
Customer relationships	20 years	$ 165.4	$ 82.9	$ 165.4	$ 76.7
Developed technology	15 years	82.7	54.0	82.2	49.9
Other	Various	13.8	2.0	14.8	1.9
Total		$ 261.9	$ 138.9	$ 262.4	$ 128.5
Non-amortizing intangible assets					
Trademarks and brand names	Indefinite	314.3		313.3	
Total intangible assets		$ 576.2		$ 575.7	

	Nine Months Ended September 30,	
	2016	2015
Amortization expense	$10.5	$10.6

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NOTE 9. OTHER NON-CURRENT ASSETS

	September 30, 2016	December 31, 2015
Cash surrender value of Company owned life insurance policies	$ 54.9	$ 51.6
Other	5.6	5.4
Total other non-current assets	$ 60.5	$ 57.0

NOTE 10. ACCOUNTS PAYABLE AND ACCRUED EXPENSES

	September 30, 2016	December 31, 2015
Payables, trade and other	$ 115.1	$ 127.5
Employment costs	25.1	41.8
Current portion of pension and postretirement liabilities	14.2	14.3
Contingent liability related to discontinued operations	12.0	12.1
Other	34.9	35.4
Total accounts payable and accrued expenses	$ 201.3	$ 231.1

NOTE 11. SEVERANCE AND RELATED COSTS

During the first quarter of 2016, we recorded $2.4 million in Unallocated Corporate for severance and related costs as a result of our initiative to separate our flooring business from our ceiling business. These costs, along with costs incurred in the fourth quarter of 2015, reflect approximately 30 position eliminations (including our former Chief Executive Officer) and are reflected within Separation costs on the statement of earnings.

In response to China market conditions, during the fourth quarter of 2015, we recorded $2.0 million in cost of goods sold and $0.9 million in selling, general and administrative (“SG&A”) for severance and related costs related to the idling one of our plants in China effective during the fourth quarter of 2016. During the second and third quarters of 2016, we recorded an additional $3.0 million and $0.5 million, respectively, in cost of goods sold for severance and related costs related to the plant idling.

NOTE 12. INCOME TAX EXPENSE

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Earnings from continuing operations before income taxes	$63.6	$37.2	$109.8	$92.6
Income tax expense	7.7	17.5	44.4	52.1
Effective tax rate	12.1%	47.0%	40.4 %	56.3%

The effective tax rate for the third quarter of 2016 and the first nine months of 2016 was lower than the comparable periods of 2015 primarily due to income tax benefits recorded during the third quarter of 2016 resulting from the reversal of reserves for uncertain tax positions as a result of an expiration of the federal statute of limitations to review previously filed income tax returns.

We do not expect to record any further material changes during 2016 to unrecognized tax benefits that were claimed on tax returns covering tax years ended on or before December 31, 2015.

As of September 30, 2016, we consider foreign unremitted earnings to be permanently reinvested.

NOTE 13. DEBT

On April 1, 2016, we refinanced our $1,275.0 million senior credit facility, utilizing a $50.0 million cash dividend from AFI and cash on hand to pay down a portion of the debt outstanding. The $1,050.0 million new credit facility is composed of a $200.0 million revolving credit facility (with a $150.0 million sublimit for letters of credit), a $600.0 million Term Loan A and a $250.0 million Term Loan B. The terms of the credit facility resulted in a lower interest rate spread for both the revolving credit facility and Term Loan A (2.00% vs. 2.50%) and a higher spread for Term Loan B (3.25% vs. 2.50%). In addition, we lowered the interest rate floor on the

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Term Loan B from 1.00% to 0.75%. We also extended the maturity of both the revolving credit facility and Term Loan A from March 2018 to April 2021 and of Term Loan B from November 2020 to April 2023. In connection with the refinancing, we paid $9.3 million of bank, legal and other fees, of which $8.1 million were capitalized and recorded as a component of long-term debt and are being amortized into interest expense over the lives of the underlying loans. Additionally, we wrote off $1.1 million of unamortized debt financing costs, included as a component of interest expense, during second quarter of 2016 related to our previous credit facility. Finally, in connection with the refinancing, we executed new interest rate swaps. See Note 16 for additional details.

In March 2016, we amended and decreased our $100.0 million Accounts Receivable Securitization Facility with the Bank of Nova Scotia to $40.0 million to reflect a lower anticipated receivables balance in connection with the separation of AFI, and we extended the maturity date to March 2019. As of September 30, 2016, there were no outstanding borrowings on the accounts receivable securitization facility.

NOTE 14. PENSIONS AND OTHER BENEFIT PROGRAMS

Following are the components of net periodic benefit costs:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
U.S. defined-benefit plans:				
Pension benefits				
Service cost of benefits earned during the period	$2.2	$2.5	$6.6	$7.5
Interest cost on projected benefit obligation	16.5	12.6	49.5	37.8
Expected return on plan assets	(26.2)	(21.6)	(78.6)	(64.9)
Amortization of prior service cost	0.4	0.4	1.2	0.9
Amortization of net actuarial loss	11.4	11.4	34.2	34.2
Net periodic pension cost	$4.3	$5.3	$12.9	$15.5
Retiree health and life insurance benefits				
Service cost of benefits earned during the period	$0.1	$(0.2)	$0.3	$(0.6)
Interest cost on projected benefit obligation	0.9	(1.4)	2.9	(4.2)
Amortization of prior service credit	(0.1)	0.1	(0.3)	0.3
Amortization of net actuarial gain	(1.1)	1.6	(3.7)	4.6
Net periodic postretirement (credit) cost	$(0.2)	$0.1	$(0.8)	$0.1
Non-U.S. defined-benefit pension plans:				

Service cost of benefits earned during the period	$0.5	$0.6	$1.6	$1.7
Interest cost on projected benefit obligation	1.6	2.0	5.1	5.7
Expected return on plan assets	(1.9)	(2.1)	(5.9)	(5.9)
Amortization of prior service cost	0.1	-	0.1	0.1
Amortization of net actuarial loss	0.3	0.7	0.9	1.9
Net periodic pension cost	$0.6	$1.2	$1.8	$3.5

Prior to our separation of AFI, we expected to contribute $17.9 million to our U.S. postretirement benefit plans in 2016. For the nine months ended September 30, 2016, we have contributed $9.7 million to our U.S. postretirement benefit plans and we expect to contribute an additional $2.9 million to our U.S. postretirement benefit plans during the remainder of 2016. The reduction in our expected 2016 U.S. postretirement benefit plans contributions was a result of the transfer of U.S. postretirement benefit plan liabilities to AFI. See Note 3 for additional details.

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NOTE 15. FINANCIAL INSTRUMENTS

We do not hold or issue financial instruments for trading purposes. The estimated fair values of our financial instruments are as follows:

	September 30, 2016		December 31, 2015	
	Carrying amount	Estimated fair value	Carrying amount	Estimated fair value
Assets (Liabilities), net:				
Total long-term debt, including current portion	$ (873.7)	$ (867.4)	$ (988.3)	$ (989.4)
Foreign currency contracts	0.3	0.3	3.3	3.3
Natural gas contracts	0.1	0.1	(0.8)	(0.8)
Interest rate swap contracts	(4.2)	(4.2)	(10.6)	(10.6)

The carrying amounts of cash and cash equivalents, receivables, accounts payable, accrued expenses, and short-term debt approximate fair value because of the short-term maturity of these instruments. The fair value estimates of long-term debt were based upon quotes from a major financial institution of recently observed trading levels of our Term Loan B debt. The fair value estimates of foreign currency contract obligations are estimated from market quotes provided by a well-recognized national market data provider. The fair value estimates of natural gas contracts are estimated using internal valuation models with verification by obtaining quotes from major financial institutions. For natural gas swap transactions, fair value is calculated using NYMEX market quotes provided by a well-recognized national market data provider. For natural gas option based strategies, fair value is calculated using an industry standard Black-Scholes model with market based inputs, including but not limited to, underlying asset price, strike price, implied volatility, discounted risk free rate and time to expiration, provided by a well-recognized national market data provider. The fair value estimates for interest rate swap contracts are estimated by obtaining quotes from major financial institutions with verification by internal valuation models.

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. Three levels of inputs may be used to measure fair value:

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 or liabilities. This includes certain pricing models, discounted cash flow methodologies and similar techniques that use significant unobservable inputs.

The fair value measurement of assets and liabilities measured at fair value on a recurring basis and reported on the consolidated balance sheets is summarized below:

	September 30, 2016 Fair value based on		December 31, 2015 Fair value based on	
	Quoted, active markets Level 1	Other observable inputs Level 2	Quoted, active markets Level 1	Other observable inputs Level 2
Assets (Liabilities), net:				
Foreign currency contracts	$ 0.3	-	$ 3.3	-
Natural gas contracts	-	$ 0.1	-	$ (0.8)
Interest rate swap contracts	-	(4.2)	-	(10.6)

We do not have any financial assets or liabilities that are valued using Level 3 (unobservable) inputs.

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NOTE 16. DERIVATIVE FINANCIAL INSTRUMENTS

We are exposed to market risk from changes in foreign exchange rates, interest rates and commodity prices that could impact our results of operations, cash flows and financial condition. We use forward swaps and option contracts to hedge these exposures. Exposure to individual counterparties is controlled and derivative financial instruments are entered into with a diversified group of major financial institutions. Forward swaps and option contracts are entered into for periods consistent with underlying exposure and do not constitute positions independent of those exposures. At inception, hedges that we designate as hedging instruments are formally documented as either (1) a hedge of a forecasted transaction or "cash flow" hedge, or (2) a hedge of the fair value of a recognized liability or asset or "fair value" hedge. We also formally assess both at inception and at least quarterly thereafter, whether the derivatives that are used in hedging transactions are highly effective in offsetting changes in either the fair value or cash flows of the hedged item. If it is determined that a derivative ceases to be a highly effective hedge, or if the anticipated transaction is no longer probable of occurring, we discontinue hedge accounting, and any future mark-to-market adjustments are recognized in earnings. We use derivative financial instruments as risk management tools and not for speculative trading purposes.

Counterparty Risk

We only enter into derivative transactions with established counterparties having a credit rating of BBB or better. We monitor counterparty credit default swap levels and credit ratings on a regular basis. All of our derivative transactions with counterparties are governed by master International Swap and Derivatives Association agreements ("ISDAs") with netting arrangements. These agreements can limit our exposure in situations where we have gain and loss positions outstanding with a single counterparty. We do not post nor do we receive cash collateral with any counterparty for our derivative transactions. These ISDAs do not have any credit contingent features; however, a default under our bank credit facility would trigger a default under these agreements. Exposure to individual counterparties is controlled, and thus we consider the risk of counterparty default to be negligible.

Commodity Price Risk

We purchase natural gas for use in the manufacturing process and to heat many of our facilities. As a result, we are exposed to fluctuations in the price of natural gas. We have a policy to reduce cost volatility for North American natural gas purchases by purchasing natural gas forward contracts and swaps, purchased call options, and zero-cost collars up to 24 months forward. The contracts are based on forecasted usage of natural gas measured in mmBtu's. There is a high correlation between the hedged item and the hedge instrument. The gains and losses on these instruments offset gains and losses on the transactions being hedged. These instruments are designated as cash flow hedges. As of September 30, 2016 and December 31, 2015, the notional amount of these hedges was $7.9 million and $9.2 million, respectively. The mark-to-market gain or loss on qualifying hedges is included in other comprehensive income to the extent effective, and reclassified into cost of goods sold in the period during which the underlying gas is consumed. The mark-to-market gains or losses on ineffective portions of hedges are recognized in cost of goods sold immediately. The earnings impact of the ineffective portion of these hedges was not material for the three and nine months ended September 30, 2016 and 2015.

Currency Rate Risk – Sales and Purchases

We manufacture and sell our products in a number of countries throughout the world and, as a result, we are exposed to movements in foreign currency exchange rates. To a large extent, our global manufacturing and sales provide a natural hedge of foreign currency exchange rate movement, as foreign currency expenses generally offset foreign currency revenues. We manage our cash flow exposures on a net basis and use derivatives to hedge the majority of our unmatched foreign currency cash inflows and outflows. Our major foreign currency exposures as of September 30, 2016, based on operating profits by currency, are to the Chinese renminbi, Russian ruble, Canadian dollar and the Euro.

We use foreign currency forward exchange contracts to reduce our exposure to the risk that the eventual net cash inflows and outflows resulting from the sale of products to foreign customers and purchases from foreign suppliers will be adversely affected by changes in exchange rates. These derivative instruments are used for forecasted transactions and are classified as cash flow hedges. Cash flow hedges are executed quarterly, generally up to 15 months forward, and allow us to further reduce our overall exposure to exchange rate movements, since gains and losses on these contracts offset gains and losses on the transactions being hedged. The notional amount of these hedges was $30.6 million and $38.4 million as of September 30, 2016 and December 31, 2015, respectively. Gains and losses on these instruments are recorded in other comprehensive income, to the extent effective, until the underlying transaction is recognized in earnings. The earnings impact of the ineffective portion of these hedges was not material for the three and nine months ended September 30, 2016 and 2015.

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Currency Rate Risk - Intercompany Loans and Dividends

Where efficient, reliable and liquid markets exist we may utilize foreign currency forward exchange contracts to hedge exposures created by cross-currency intercompany loans and dividends. The translation adjustments related to these loans and any offsetting gains or losses on the related derivative contracts are recorded in other non-operating income or expense. The notional amount of these hedges was $6.1 million as of December 31, 2015. We did not have any open hedges related to intercompany loans and dividends as of September 30, 2016.

Interest Rate Risk

We utilize interest rate swaps to minimize the fluctuations in earnings caused by interest rate volatility. Interest expense on variable-rate liabilities increases or decreases as a result of interest rate fluctuations. The following table summarizes our interest rate swaps as of September 30, 2016:

Trade Date	Notional Amount	Interest Rate Paid	Coverage Period	Risk Coverage
April 16, 2013	$ 250.0	1.398 %	November 2015 to March 2018	Term Loan A
April 1, 2016	$ 200.0	1.231 %	April 2016 to March 2021	Term Loan A
April 1, 2016	$ 100.0	1.756 %	April 2016 to March 2023	Term Loan B

In connection with the refinancing of our credit facilities, $450.0 million of notional amount Term Loan B swaps with a trade date of March 27, 2012 were settled and $10.7 million of losses recorded as a component of accumulated other comprehensive income were reclassified to interest expense during the three months ended March 31, 2016, with the cash payment for the settlement of this swap occurring during the second quarter of 2016. Under the terms of the Term Loan A swap with trade dates of April 16, 2013 and April 1, 2016 we receive 3-month LIBOR and pay a fixed rate over the hedged period. Under the terms of our Term Loan B swap with a trade date of April 1, 2016, we receive the greater of 3-month LIBOR or a 0.75% LIBOR Floor and pay a fixed rate over the hedged period. These swaps are designated as cash flow hedges against changes in LIBOR for a portion of our variable rate debt. Gains and losses on these instruments are recorded in other comprehensive income, to the extent effective, until the underlying transaction is recognized in earnings. The mark-to-market gains or losses on the ineffective portion of hedges are recognized in interest expense. There was no earnings impact of the ineffective portion of these hedges for the three and nine months ended September 30, 2016 and 2015.

See Note 13 for additional details related to our April 1, 2016 credit facility refinancing.

Financial Statement Impacts

The following tables detail amounts related to our derivatives as of September 30, 2016 and December 31, 2015. We had no derivative liabilities not designated as hedging instruments as of September 30, 2016 or December 31, 2015. The derivative asset and liability amounts below are shown in gross amounts; we have not netted assets with liabilities.

	Derivative Assets			Derivative Liabilities		
		Fair Value			Fair Value	
	Balance Sheet Location	September 30, 2016	December 31, 2015	Balance Sheet Location	September 30, 2016	December 31, 2015
Derivatives designated as hedging instruments						
Natural gas commodity contracts	Other current assets	$0.1	$ -	Accounts payable and accrued expenses	$-	$ 0.8
Foreign exchange contracts	Other current assets	0.5	3.4	Accounts payable and accrued expenses	0.2	0.1
Interest rate swap contracts	Other non-current assets	-	-	Other long-term liabilities	4.2	10.6
Total derivatives designated as hedging instruments		$0.6	$ 3.4		$4.4	$ 11.5

Armstrong World Industries, Inc., and Subsidiaries

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(dollar amounts in millions, except share data)

	Amount of Gain (Loss) Recognized in Accumulated Other Comprehensive Income ("AOCI") (Effective Portion)		Location of (Loss) Gain Reclassified from AOCI into Income (Effective Portion)	Gain (Loss) Reclassified from AOCI into Income (Effective Portion)			
	Nine Months Ended September 30,			Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015		2016	2015	2016	2015
Derivatives in cash flow hedging relationships							
Natural gas commodity contracts	$ 0.1	$ (1.2)	Cost of goods sold	$ 0.1	$ (0.9)	$ (1.2)	$ (3.5)
Foreign exchange contracts – purchases	(0.2)	2.6	Cost of goods sold	(0.2)	0.4	0.3	0.6
Foreign exchange contracts – sales	0.5	6.3	Net sales	0.1	2.5	2.2	6.5
Interest rate swap contracts	(4.2)	(15.0)	Interest expense	-	-	(10.7)	-
Total	$ (3.8)	$ (7.3)		$ -	$ 2.0	$ (9.4)	$ 3.6

As of September 30, 2016 the amount of existing gains in AOCI expected to be recognized in earnings over the next twelve months is $0.3 million.

There was no pre-tax gain or loss recognized in income for derivative instruments not designated as hedging instruments for the three and nine months ended September 30, 2016 or 2015.

NOTE 17. PRODUCT WARRANTIES

We provide limited warranties on certain products which may cover defects in materials or factory workmanship, sagging and warping, and certain manufacturing defects. Our product warranties place certain requirements on the purchaser, including installation and maintenance in accordance with our written instructions. Warranty claims are most commonly experienced in the periods immediately following purchase and decline with the passage of time. In addition to our warranty program, under certain limited circumstances, we will occasionally and at our sole discretion, provide a customer accommodation repair or replacement. Warranty repairs and replacements are most commonly made by professional installers employed by or affiliated with our independent distributors. Reimbursement for cost associated with warranty repairs are provided to our independent distributors through a credit against accounts receivable from the distributor to us.

The following table summarizes the activity for the accrual of product warranties for the nine months ended September 30, 2016 and 2015:

	2016	2015
Balance at January 1,	$0.4	$0.2
Reductions for payments	(7.4)	(1.2)
Current year warranty accruals	8.0	1.2
Balance at September 30,	$1.0	$0.2

NOTE 18. OTHER LONG-TERM LIABILITIES

	September 30, 2016	December 31, 2015
Long-term deferred compensation arrangements	$ 17.6	$ 18.7
Environmental liabilities	4.8	6.0
Long-term portion of derivative liabilities	4.2	10.6
Other	8.1	8.0
Total other long-term liabilities	$ 34.7	$ 43.3

Armstrong World Industries, Inc., and Subsidiaries

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(dollar amounts in millions, except share data)

NOTE 19. COMMON STOCK REPURCHASE PLAN

On July 29, 2016, the Company announced that its Board of Directors had approved a share repurchase program pursuant to which the Company is authorized to repurchase up to $150.0 million of its outstanding shares of common stock through July 31, 2018 (the "Program"). Repurchases under the Program may be made through open market, block and privately-negotiated transactions, including Rule 10b5-1 plans, at times and in such amounts as management deems appropriate, subject to market and business conditions, regulatory requirements and other factors. The Program does not obligate the Company to repurchase any particular amount of common stock and may be suspended or discontinued at any time without notice. During the third quarter of 2016, 187,331 shares were repurchased under the Program for a total cost of $7.8 million, or an average price of $41.78 per share.

NOTE 20. ACCUMULATED OTHER COMPREHENSIVE (LOSS)

	Foreign Currency Translation Adjustments (1)	Derivative (Loss) Gain (1)	Pension and Postretirement Adjustments (1)	Total Accumulated Other Comprehensive (Loss) (1)
Balance, December 31, 2015	$ (33.8)	$ (3.3)	$ (450.3)	$ (487.4)
Separation of AFI, net of tax (benefit) of $-, $-, ($37.8), and ($37.8)	(4.6)	(0.4)	61.8	56.8
Other comprehensive (loss) income before reclassifications, net of tax expense (benefit) of $ -, $2.5, ($1.5), and $1.0	(13.8)	(4.9)	2.8	(15.9)
Amounts reclassified from accumulated other comprehensive (loss)				