

ARMSTRONG WORLD INDUSTRIES INC  
Form 10-K  
February 24, 2014  
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**UNITED STATES**  
**SECURITIES AND EXCHANGE COMMISSION**  
**Washington, D.C. 20549**

**FORM 10-K**

(Mark One)

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

**For the fiscal year ended December 31, 2013**

**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**

**Securities registered pursuant to Section 12(b) of the Act: None**

**Securities registered pursuant to Section 12(g) of the Act:**

**Title of each class**

**Common Stock (\$0.01 par value)**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes  No

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, 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

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Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

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 (Check one):

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 Act).

Yes  No

The aggregate market value of the Common Stock of Armstrong World Industries, Inc. held by non-affiliates based on the closing price (\$47.79 per share) on the New York Stock Exchange (trading symbol AWI) on June 28, 2013 was approximately \$1,318 million. As of February 18, 2014, the number of shares outstanding of registrant's Common Stock was 54,681,907.

**Documents Incorporated by Reference**

Certain sections of Armstrong World Industries, Inc.'s definitive Proxy Statement for use in connection with its 2014 annual meeting of shareholders, to be filed no later than April 30, 2014 (120 days after the last day of our 2013 fiscal year), are incorporated by reference into Part III of this Form 10-K Report where indicated.

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**CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS**

Certain statements in this Annual Report on Form 10-K 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;

availability and costs of raw materials and energy;

our liquidity;

covenants in our debt agreements;

our indebtedness;

competition;

key customers;

labor;

plant construction projects;

our WAVE joint venture;

environmental matters;

availability of deferred tax assets;

strategic transactions;

negative tax consequences;

international operations;

our intellectual property rights;

outsourcing;

costs savings and productivity initiatives;

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claims and litigation;

concentration of share ownership and voting control;

anti-takeover provisions; 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 elsewhere in this 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.

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**PART I**

**ITEM 1. BUSINESS**

Armstrong World Industries, Inc. ( AWI or the Company ) is a Pennsylvania corporation incorporated in 1891. When we refer to we, our and us in this report, we are referring to AWI and its subsidiaries. We are a leading global producer of flooring products and ceiling systems for use primarily in the construction and renovation of residential, commercial and institutional buildings. We design, manufacture and sell flooring products (primarily resilient and wood) and ceiling systems (primarily mineral fiber, fiberglass and metal) around the world.

In August 2009, Armor TPG Holdings LLC ( TPG ) and the Asbestos Personal Injury Settlement Trust ( Asbestos PI Trust ) entered into agreements pursuant to which TPG purchased from the Asbestos PI Trust 7,000,000 shares of AWI common stock and acquired an economic interest in an additional 1,039,777 shares pursuant to a forward sales contract. During the fourth quarter of 2012, the Asbestos PI Trust and TPG together sold 5,980,000 shares in a secondary public offering. In the third quarter of 2013, the Asbestos PI Trust and TPG together sold 12,057,382 shares in another secondary public offering. Contemporaneously with this secondary public offering, we paid \$261.4 million, including associated fees, to buy back 5,057,382 shares, which we currently hold in treasury. The treasury share purchase was funded by existing cash and borrowings under our credit and securitization facilities. In November 2013, the Asbestos PI Trust physically settled the 2009 forward sales contract by delivering to TPG the 1,039,777 shares in which TPG previously held an economic interest. Additionally, during the fourth quarter of 2013, the Asbestos PI Trust and TPG together sold an additional 6,000,000 shares. We did not sell any shares and did not receive any proceeds from these offerings. As a result of these transactions, the Asbestos PI Trust and TPG together now hold approximately 25% of AWI s outstanding shares and maintain a shareholders agreement, pursuant to which they agree to vote their shares together on certain matters.

**Reportable Segments**

We operate four business segments Building Products, Resilient Flooring, Wood Flooring and Unallocated Corporate. See Note 3 to the Consolidated Financial Statements and Management s Discussion and Analysis of Financial Condition and Results of Operations in Item 7 of this Form 10-K for additional financial information on our reportable segments.

**Markets**

We are well positioned in the industry segments and markets in which we operate often holding a leadership or significant market share position. The major markets in which we compete are:

*North American Residential.* Our Building Products, Resilient Flooring and Wood Flooring segments sell products for use in the home. Our ceiling products compete against mineral fiber and fiberglass products from other manufacturers, as well as drywall. Homeowners can choose from our vinyl and wood flooring products, for which we are North America s largest provider, or from our laminate flooring products. We compete directly with other domestic and international suppliers of these products. Our flooring products also compete with carpet and ceramic products, which we do not offer.

Our products are used in new home construction and existing home renovation work. Industry analysts estimate that existing home renovation (also known as replacement / remodel) work represents approximately two-thirds of the total North American residential market opportunity. Key U.S. statistics that indicate market opportunity include existing home sales (a key indicator for renovation opportunity), housing starts, housing completions, home prices, interest



rates and consumer confidence. For our Resilient Flooring and Wood Flooring products, we believe there is some longer-term correlation between these statistics and our revenue after reflecting a lag period between change in construction activity and our operating results of several months. However, we believe that consumers' preferences for product type, style, color, availability and affordability also significantly affect our revenue. Further, changes in inventory levels and/or product focus at national home centers and building materials distributors can significantly affect our revenue. Sales of our ceiling products for residential use appear to follow the trend of existing home sales, with a several month lag period between the change in existing home sales and our related operating results.

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*North American Commercial.* Many of our products, primarily ceilings and resilient flooring, are used in commercial and institutional buildings. Our revenue opportunities come from new construction as well as renovation of existing buildings. Renovation work is estimated to represent approximately two-thirds of the total North American commercial market opportunity. Most of our revenue comes from four major segments of commercial building – office, education, retail and healthcare. We monitor U.S. construction starts and follow project activity. Our revenue from new construction can lag behind construction starts by as much as eighteen months. We also monitor office vacancy rates, gross domestic product ( GDP ) and general employment levels, which can indicate movement in renovation and new construction opportunities. We believe that these statistics, taking into account the time-lag effect, provide a reasonable indication of our future revenue opportunity from commercial renovation and new construction.

*Outside of North America.* About 70% of our revenues generated outside of North America are in Europe and almost all are commercial in nature. For the countries in which we have significant revenue, we monitor various national statistics (such as GDP) as well as project activity. Revenues come primarily from new construction and renovation work.

The following table provides an estimate of our segments' 2013 net sales, by major markets.

(Estimated

percentages of

individual

segment's sales)

	North American Residential		North American Commercial		Outside of North America		Total
	New	Renovation	New	Renovation	New	Renovation	
Building Products		5%	10%	45%	25%	15%	100%
Resilient Flooring	5%	30%	5%	30%	15%	15%	100%
Wood Flooring	35%	65%					100%

Management has used estimates in creating the table above because the end-use of our products is not easily determinable.

**Geographic Areas**

See Note 3 to the Consolidated Financial Statements and Management's Discussion and Analysis of Financial Condition and Results of Operations in Item 7 of this Form 10-K for additional financial information by geographic areas.

**Customers**

We use our reputation, capabilities, service and brand recognition to develop long-standing relationships with our customers. We principally sell products through building materials distributors, who re-sell our products to retailers, builders, contractors, installers and others. In the commercial sector, we also sell to several contractors and to subcontractors' alliances. In the North American retail channel, which sells to end-users in the residential and light commercial segments, we have important relationships with national home centers such as The Home Depot, Inc. and Lowe's Companies, Inc. In the North American residential sector, we have important relationships with major home builders and buying groups.

Approximately two-thirds of our consolidated net sales are to distributors. Sales to large home centers account for approximately 15% of our consolidated sales. Our remaining sales are to contractors and retailers.

No customer accounted for 10% or more of our total consolidated net sales during the last three years.

**Working Capital**

We produce goods for inventory and sell on credit to our customers. Generally, our distributors carry inventory as needed to meet local or rapid delivery requirements. We sell the vast majority of our products to select, pre-approved customers using customary trade terms that allow for payment in the future. These practices are typical within the industry.

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**Competition**

We face strong competition in all of our businesses. Principal attributes of competition include product performance, product styling, service and price. Competition in North America comes from both domestic and international manufacturers. Additionally, some of our products compete with alternative products or finishing solutions. Our resilient, laminate and wood flooring products compete with carpet and ceramic products, and our ceiling products compete with drywall and exposed structure (also known as open plenum). There is excess industry capacity for certain products in some geographies, which tends to increase price competition. The following companies are our primary competitors:

**Building Products** CertainTeed Corporation (a subsidiary of Saint-Gobain), Chicago Metallic Corporation (owned by Rockwool International), Georgia-Pacific Corporation, Knauf AMF GmbH & Co. KG, Lafarge SA, Odenwald Faserplattenwerk GmbH, Rockfon A/S (owned by Rockwool International), Saint-Gobain and USG Corporation.

**Flooring segments** Beaulieu International Group, N.V., Boa-Franc, Inc., Congoleum Corporation, Forbo Holding AG, Gerflor Group, Interface, Inc., IVC Group, Krono Holding AG, LG Floors, Mannington Mills, Inc., Metroflor Corporation, Mohawk Industries, Inc., Mullican Flooring, L.P., Nora Systems GmbH, Pfleiderer AG, Shaw Industries, Inc., Somerset Hardwood Flooring, and Tarkett AG.

**Raw Materials**

We purchase raw materials from numerous suppliers worldwide in the ordinary course of business. The principal raw materials used in each business include the following:

Business	Principal Raw Materials
Building Products	Mineral fiber, fiberglass, perlite, waste paper, pigments, clays, starches and steel, which is used in the production of metal ceilings and by WAVE, a joint venture that manufactures ceiling grid
Resilient Flooring	Polyvinylchloride ( PVC ) resins and films, plasticizers, backings, limestone, pigments, linseed oil, inks and stabilizers
Wood Flooring	Hardwood lumber, veneer, coatings and stains

We also purchase significant amounts of packaging materials and consume substantial amounts of energy, such as electricity and natural gas, and water.

In general, adequate supplies of raw materials are available to all of our businesses. However, availability can change for a number of reasons, including environmental conditions, laws and regulations, shifts in demand by other industries competing for the same materials, transportation disruptions and/or business decisions made by, or events that affect, our suppliers. There is no assurance that these raw materials will remain in adequate supply to us.

Prices for certain high usage raw materials can fluctuate dramatically. Cost increases for these materials can have a significant adverse impact on our manufacturing costs. Given the competitiveness of our markets, we may not be able to recover the increased manufacturing costs through increasing selling prices to our customers.

**Sourced Products**

Some of the products that we sell are sourced from third parties. Our primary sourced products include various flooring products (laminated, wood, vinyl sheet and tile), specialty ceiling products and installation-related products, as well as accessories for some of our manufactured products. We purchase some of our sourced products from suppliers that are located outside of the U.S., primarily from Asia and Europe. Sales of sourced products represented approximately 15% of our total consolidated revenue in each of 2013, 2012, and 2011.

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In general, we believe we have adequate supplies of sourced products. However, we cannot guarantee that the supply will remain adequate.

## **Seasonality**

Generally, our sales tend to be stronger in the second and third quarters of our fiscal year following the timing of renovation, home sales and new construction.

## **Patent and Intellectual Property Rights**

Patent protection is important to our business. Our competitive position has been enhanced by U.S. and foreign patents on products and processes developed or perfected within AWI or obtained through acquisitions and licenses. In addition, we benefit from our trade secrets for certain products and processes.

Patent protection extends for varying periods according to the date of patent filing or grant and the legal term of a patent in the various countries where patent protection is obtained. The actual protection afforded by a patent, which can vary from country to country, depends upon the type of patent, the scope of its coverage and the availability of legal remedies. Although we consider that, in the aggregate, our patents, licenses and trade secrets constitute a valuable asset of material importance to our business, we do not regard any of our businesses as being materially dependent upon any single patent or trade secret, or any group of related patents or trade secrets.

Certain of our trademarks, including without limitation, , Armstrong®, Alterna , American Scrape , BB, BioBased Tile®, Bruce®, Cirrus®, Cortega®, Dundee , DLW, Dune , Excelon®, Fine Fissured , FireGuard , Imperial Initiator , Laurel , Lock & Fold®, Luxe Plank®, Manchester®, Marmorette , Medintech®, Medintone®, Memories , MetalWorks , Natural Creations®, NaturCote , Optim®, Plano , Scala®, Stonetex®, Station Square , StrataMa®, Timberline®, ToughGuard®, Ultima®, and WoodWorks®, are important to our business because of their significant brand name recognition. Trademark protection continues in some countries as long as the mark is used, and continues in other countries as long as the mark is registered. Registrations are generally for fixed, but renewable, terms.

We review the carrying value of trademarks annually for potential impairment. See the Critical Accounting Estimates section of Management's Discussion and Analysis of Financial Condition and Results of Operations in Item 7 of this Form 10-K for further information.

## **Employees**

As of December 31, 2013, we had approximately 8,700 full-time and part-time employees worldwide. Approximately 55% of our 3,700 production and maintenance employees in the U.S. are represented by labor unions. Outside the U.S., most of our production employees are covered by either industry-sponsored and/or state-sponsored collective bargaining mechanisms. We believe that our relations with our employees are satisfactory.

## **Research & Development**

Research and development ( R&D ) activities are important and necessary in helping us improve our products competitiveness. Principal R&D functions include the development and improvement of products and manufacturing processes. We spent \$32.8 million in 2013, \$30.3 million in 2012 and \$29.2 million in 2011 on R&D activities worldwide.

## **Sustainability and Environmental Matters**

The adoption of environmentally responsible building codes and standards such as the Leadership in Energy and Environmental Design, or LEED, rating system established by the U.S. Green Building Council, has the potential to increase demand for products, systems and services that contribute to building sustainable spaces. Many of our products meet the requirements for the award of LEED credits, and we are continuing to develop new products, systems and services to address market demand for products that enable construction of buildings that require fewer natural resources to build, operate and maintain. Our competitors also have developed and introduced to the market more environmentally responsible products.

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We expect that there will be increased demand over time for products, systems and services that meet evolving regulatory and customer sustainability standards and preferences and decreased demand for products that produce significant greenhouse gas emissions. We also believe that our ability to continue to provide these products, systems and services to our customers will be necessary to maintain our competitive position in the marketplace.

We are committed to complying with all environmental laws and regulations that are applicable to our operations. Regulatory activities of particular importance to our operations include proceedings under the Comprehensive Environmental Response, Compensation and Liability Act ( CERCLA ), and state or international Superfund and similar type environmental laws governing several domestically- and internationally-owned, formerly owned and non-owned locations allegedly resulting from past industrial activity. In a few cases, we are one of several potentially responsible parties ( PRPs ) and have agreed to jointly fund the required investigation and remediation, while preserving our defenses to the liability. We may also have rights of contribution or reimbursement from other parties or coverage under applicable insurance policies. Most of our manufacturing and certain of our research facilities are affected by various federal, state and local environmental requirements relating to the discharge of materials or the protection of the environment. We make expenditures necessary for compliance with applicable environmental requirements at each of our operating facilities.

We have not experienced a material adverse effect upon our capital expenditures or competitive position as a result of environmental control legislation and regulations. Liabilities of \$8.3 million and \$10.7 million at December 31, 2013 and December 31, 2012, respectively, were recorded for potential environmental liabilities, on a global basis, that we consider probable and for which a reasonable estimate of the probable liability could be made. See Note 30 to the Consolidated Financial Statements and Risk Factors in Item 1A of this Form 10-K, for information regarding the possible effects that compliance with environmental laws and regulations may have on our businesses and operating results.

## **Website**

We maintain a website at <http://www.armstrong.com>. Information contained on our website is not incorporated into this document. Reference in this Form 10-K to our website is an inactive text reference only. Annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, all amendments to those reports and other information about us are available free of charge through this website as soon as reasonably practicable after the reports are electronically filed with the SEC. These materials are also available from the SEC's website at [www.sec.gov](http://www.sec.gov).



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**ITEM 1A. RISK FACTORS**

***Global economic conditions***

Our business is influenced by conditions in domestic and foreign economies, including inflation, deflation, interest rates, availability and cost of capital, consumer spending rates, energy availability and the effects of governmental initiatives to manage economic conditions. Volatility in financial markets and the continued softness or further deterioration of national and global economic conditions could have a material adverse effect on our financial condition, liquidity or results of operations, including as follows:

the financial stability of our customers or suppliers may be compromised, which could result in additional bad debts for us or non-performance by suppliers;

commercial and residential consumers of our products may postpone spending in response to tighter credit, negative financial news and/or stagnation or further declines in income or asset values, which could have a material adverse impact on the demand for our product;

the net asset value of the investment funds underlying our defined benefit pension plans may decline, which could result in negative plan investment performance and additional charges which may involve significant cash contributions to such plans, to meet obligations or regulatory requirements;

our asset impairment assessments and underlying valuation assumptions may change, which could result from changes to estimates of future sales and cash flows that may lead to substantial impairment charges. Continued or sustained deterioration of economic conditions would likely exacerbate and prolong these adverse effects.

***Construction activity***

Our businesses have greater sales opportunities when construction activity is strong and, conversely, have fewer opportunities when such activity declines. The cyclical nature of commercial and residential construction activity, including construction activity funded by the public sector, tends to be influenced by prevailing economic conditions, including the rate of growth in gross domestic product, prevailing interest rates, government spending patterns, business, investor and consumer confidence and other factors beyond our control. Prolonged downturns in construction activity could have a material adverse effect on our financial condition, liquidity or results of operations.

***Raw materials***

The availability and cost of raw materials, packaging materials, energy and sourced products are critical to our operations. For example, we use substantial quantities of natural gas, petroleum-based raw materials and hardwood lumber in our manufacturing operations. The cost of some of these items has been volatile in recent years and availability has been limited at times. We source some materials from a limited number of suppliers, which, among other things, increases the risk of unavailability. Limited availability could cause us to reformulate products or limit our production. Decreased access to raw materials and energy or significant increased cost to purchase these items and

any corresponding inability to pass along such costs through price increases could have a material adverse effect on our financial condition, liquidity or results of operations.

***Liquidity***

Our liquidity needs vary throughout the year. If our business experiences materially negative unforeseen events, we may be unable to generate sufficient cash flow from operations to fund our needs or maintain sufficient liquidity to operate and remain in compliance with our debt covenants, which could result in reduced or delayed planned capital expenditures and other investments and adversely affect our financial condition or results of operations.

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***Debt covenants***

The agreements that govern our indebtedness include covenants that, among other things, may impose significant operating and financial restrictions, including restrictions on our ability to engage in acts that may be in our best long-term interests. These covenants may restrict our ability to:

incur additional debt;

pay dividends on or make other distributions in respect of our capital stock or redeem, repurchase or retire our capital stock or subordinated debt or make certain other restricted payments;

make certain acquisitions;

sell certain assets;

consolidate, merge, sell or otherwise dispose of all or substantially all of our assets; and

create liens on certain assets to secure debt.

Under the terms of our senior secured credit facility, we are required to maintain specified leverage and interest coverage ratios. Our ability to meet these ratios could be affected by events beyond our control, and we cannot assure that we will meet them. A breach of any of the restrictive covenants or ratios would result in a default under the senior secured credit facility. If any such default occurs, the lenders under the senior secured credit facility may be able to elect to declare all outstanding borrowings under our facilities, together with accrued interest and other fees, to be immediately due and payable, or enforce their security interest. The lenders may also have the right in these circumstances to terminate commitments to provide further borrowings.

**Indebtedness**

Our level of indebtedness and degree of leverage could:

make it more difficult for us to satisfy our obligations with respect to our indebtedness;

make us more vulnerable to adverse changes in general economic, industry and competitive conditions and adverse changes in government regulation;

limit our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate;

place us at a competitive disadvantage compared to our competitors that are less leveraged and, therefore, more able to take advantage of opportunities that our leverage prevents us from exploiting;

limit our ability to refinance existing indebtedness or borrow additional amounts for working capital, capital expenditures, acquisitions, debt service requirements, execution of our business strategy or other purposes;

restrict our ability to pay dividends on our capital stock; and

adversely affect our credit ratings.

We may also incur additional indebtedness, which could exacerbate the risks described above. In addition, to the extent that our indebtedness bears interest at floating rates, our sensitivity to interest rate fluctuations will increase.

Any of the above listed factors could materially adversely affect our financial condition, liquidity or results of operations.

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### ***Competition***

Our markets are highly competitive. Competition can reduce demand for our products, negatively affect our product sales mix or cause us to lower prices. Failure to compete effectively by meeting consumer preferences and maintaining market share could have a material adverse effect on our financial condition, liquidity or results of operations. Our customers consider our products' performance, product styling, customer service and price when deciding whether to purchase our products. Shifting consumer preference in our highly competitive markets, from residential vinyl products to other flooring products, for example, whether for performance or styling preferences or our inability to develop and offer new competitive performance features could have an adverse effect on our sales. In addition, excess industry capacity exists for certain products in several geographic markets, which tends to increase price competition, as does competition from overseas competitors with lower cost structures.

### ***Key Customers***

Some of our business lines and markets are dependent on a few key customers. The loss, reduction, or fluctuation of sales to one of these major customers, or any adverse change in our business relationship with any one of them, could have a material adverse effect on our financial condition, liquidity or results of operations.

### ***Labor***

Increased costs of U.S. and international labor, including the costs of employee benefits plans, labor disputes, work stoppages or union organizing activity could delay or impede production and have a material adverse effect on our financial condition, liquidity or results of operations. As the majority of our manufacturing employees are represented by unions and covered by collective bargaining or similar agreements, we often incur costs attributable to periodic renegotiation of those agreements, which may be difficult to project. We are also subject to the risk that strikes or other conflicts with organized personnel may arise or that we may become the subject of union organizing activity at our facilities that do not currently have union representation. Prolonged negotiations, conflicts or related activities could also lead to costly work stoppages and loss of productivity.

### ***Plant construction projects***

We are building a new ceilings plant in Russia, adding capacity to our Lancaster, PA flooring plant to manufacture luxury vinyl tile in North America and increasing manufacturing capacity to produce metal ceilings in China. There can be no assurance that the actual cost of these projects will not exceed our projections. In addition, we may experience delays in these projects for many reasons, including unavailability of materials, labor or equipment, regulatory matters or inclement weather. Economic and competitive advantages expected from these projects and from other recently completed plant construction projects may not fully materialize as a result of delays, cost overruns or changes in market conditions.

### ***WAVE joint venture***

Our equity investment in our WAVE joint venture has been important to our financial results. We believe an important element in the success of this joint venture is the relationship with our partner, Worthington Industries. If there is a change in ownership, a change of control, a change in management or management philosophy, a change in business strategy or another event with respect to our partner that adversely impacts its relationship with us, WAVE S performance could be adversely impacted. In addition, our partner may have economic or business interests or goals that are different from or inconsistent with our interests or goals, which may impact our ability to influence or align WAVE S strategy and operations.

***Environmental matters***

We are involved with environmental investigation and remediation activities for which our ultimate liability may exceed the currently estimated and accrued amounts. It is possible that we could become subject to additional environmental matters and corresponding liabilities in the future. See Note 30 to the Consolidated Financial Statements for further information related to our environmental matters.

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The building materials industry has been subject to claims relating to raw materials such as silicates, PCBs, PVC, formaldehyde, fire-retardants and claims relating to other issues such as mold and toxic fumes, as well as claims for incidents of catastrophic loss, such as building fires. We have not received any significant claims involving our raw materials or our product performance, however, product liability insurance coverage may not be available or adequate in all circumstances to cover claims that may arise in the future.

In addition, our operations are subject to various domestic and foreign environmental, health, and safety laws and regulations. These laws and regulations not only govern our current operations and products, but also impose potential liability on us for our past operations. Our costs to comply with these laws and regulations may increase as these requirements become more stringent in the future, and these increased costs may materially adversely affect our financial condition, liquidity or results of operations.

### ***Deferred Tax Assets***

We have substantial deferred tax assets related to United States domestic foreign tax credits ( FTCs ) and state net operating losses ( NOLs ), which are available to reduce our U.S. income tax liability and to offset future state taxable income. However, our ability to utilize the current carrying value of these deferred tax assets may be impacted as a result of certain events, such as changes in tax legislation, insufficient future taxable income prior to expiration of the FTCs and NOLs, or annual limits imposed under Section 382 of the Internal Revenue Code, or by state law, as a result of an ownership change. The Internal Revenue Code and some states impose limitations on a corporation's ability to utilize tax attributes, including NOLs and FTCs if it experiences an ownership change. An ownership change may result from transactions increasing the ownership of certain shareholders by more than 50 percentage points over a three-year period.

Should we determine that it is likely that our recorded deferred tax assets are not realizable, we would be required to reduce the amounts reflected on our financial statements to the net realizable amount and recording a corresponding charge to current earnings. The corresponding charge to current earnings could have a material adverse effect on our financial condition, liquidity or results of operations in the period in which it is recorded.

### ***Strategic transactions***

We have evaluated, and expect to continue to evaluate, potential strategic transactions as opportunities arise. We routinely engage in discussions with third parties regarding potential transactions, including joint ventures, which could be significant. Any such strategic transaction involves a number of risks, including potential disruption of our ongoing business and distraction of management, difficulty with integrating or separating personnel and business operations and infrastructure, and increasing or decreasing the scope, geographic diversity and complexity of our operations. Strategic transactions could involve payment by us of a substantial amount of cash, assumption of liabilities and indemnification obligations, regulatory requirements, incurrence of a substantial amount of debt or issuance of a substantial amount of equity. Certain strategic opportunities may not result in the consummation of a transaction or may fail to realize the intended benefits and synergies. If we fail to consummate and integrate our strategic transactions in a timely and cost-effective manner, our financial condition, liquidity or results of operation could be materially and adversely affected.

### ***Negative tax consequences***

We are subject to the tax laws of the many jurisdictions in which we operate. The tax laws are complex, and the manner in which they apply to our operations and results is sometimes open to interpretation. Because our income tax expense for any period depends heavily on the mix of income derived from the various taxing jurisdictions, our

income tax expense and reported net income may fluctuate significantly, and may be materially different than forecasted or experienced in the past. Our financial condition, liquidity, results of operations or tax liability could be adversely affected by changes in the effective tax rate as a result of a change in the mix of earnings in countries with differing statutory tax rates, changes in our overall profitability, changes in tax legislation and rates, changes in the valuation of deferred tax assets and liabilities, changes in the amount of earnings permanently reinvested offshore, the results of examinations of previously filed tax returns, and ongoing assessments of our tax exposures.



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### ***International operations***

A significant portion of our products move in international trade, with approximately 30% of our revenues from operations outside the U.S. and Canada in 2013, see Note 3 to the Consolidated Financial Statements. Our international trade is subject to currency exchange fluctuations, trade regulations, import duties, logistics costs, delays and other related risks. Our international operations are also subject to various tax rates, credit risks in emerging markets, political risks, uncertain legal systems, high costs in repatriating profits to the U.S. from some countries, and loss of sales to local competitors following currency devaluations in countries where we import products for sale. In addition, our international growth strategy depends in part on our ability to expand our operations in certain emerging markets. However, some emerging markets have greater political and economic volatility and greater vulnerability to infrastructure and labor disruptions than established markets.

In addition, in many countries outside of the U.S., particularly in those with developing economies, it may be common for others to engage in business practices prohibited by laws and regulations applicable to us, such as the Foreign Corrupt Practices Act or similar local anti-corruption or anti-bribery laws. These laws generally prohibit companies and their employees, contractors or agents from making improper payments to government officials for the purpose of obtaining or retaining business. Failure to comply with these laws, as well as U.S. and foreign export and trading laws, could subject us to civil and criminal penalties. As we continue to expand our business globally, including in emerging markets, we may have difficulty anticipating and effectively managing these and other risks that our international operations may face, which may adversely affect our business outside the United States and our financial condition, liquidity or results of operations.

### ***Intellectual property rights***

We rely on our proprietary intellectual property, including numerous patents and registered trademarks, as well as our licensed intellectual property to market, promote and sell our products. We monitor and protect against activities that might infringe, dilute, or otherwise harm our patents, trademarks and other intellectual property and rely on the patent, trademark and other laws of the United States and other countries. However, we may be unable to prevent third parties from using our intellectual property without our authorization. In addition, the laws of some non-United States jurisdictions, particularly those of certain emerging markets, provide less protection for our proprietary rights than the laws of the United States and present greater risks of counterfeiting and other infringement. To the extent we cannot protect our intellectual property, unauthorized use and misuse of our intellectual property could harm our competitive position and have a material adverse effect on our financial condition, liquidity or results of operations.

### ***Outsourcing***

In an effort to make our finance, accounting and information technology, ( IT ), functions more efficient, increase related capabilities, as well as generate cost savings, we outsource certain finance and accounting functions and a significant portion of our IT infrastructure to separate third party service providers. As a result, we rely on third parties to ensure that our related needs are sufficiently met. This reliance subjects us to risks arising from the loss of control over certain processes, changes in pricing that may affect our operating results, and potentially, termination of provisions of these services by our suppliers. A failure of our service providers to perform may have a material adverse effect on our financial condition, liquidity or results of operation.

### ***Costs savings and productivity initiatives***

We aggressively look for ways to make our operations more efficient and effective. We reduce, move and expand our plants and operations as needed. Such actions involve substantial planning, often require capital investments and may

result in charges for fixed asset impairments or obsolescence and substantial severance costs. Our ability to achieve cost savings and other benefits within expected time frames is subject to many estimates and assumptions. These estimates and assumptions are subject to significant economic, competitive and other uncertainties, some of which are beyond our control. If these estimates and assumptions are incorrect, if we experience delays, or if other unforeseen events occur, our financial condition, liquidity or results of operations could be materially and adversely affected.

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### ***Claims and litigation***

In the ordinary course of business, we are subject to various claims and litigation. Any such claims, whether with or without merit, could be time consuming and expensive to defend and could divert management's attention and resources. While we strive to ensure that our products comply with applicable government regulatory standards and internal requirements, and that our products perform effectively and safely, customers from time to time could claim that our products do not meet warranty or contractual requirements, and users could claim to be harmed by use or misuse of our products. These claims could give rise to breach of contract, warranty or recall claims, or claims for negligence, product liability, strict liability, personal injury or property damage. They could also result in negative publicity.

In addition, claims and investigations may arise related to patent infringement, distributor relationships, commercial contracts, antitrust or competition law requirements, employment matters, employee benefits issues, and other compliance and regulatory matters, including anti-corruption and anti-bribery matters. While we have processes and policies designed to mitigate these risks and to investigate and address such claims as they arise, we cannot predict or, in some cases, control the costs to defend or resolve such claims.

We currently maintain insurance against some, but not all, of these potential claims. In the future, we may not be able to maintain insurance at commercially acceptable premium levels. In addition, the levels of insurance we maintain may not be adequate to fully cover any and all losses or liabilities. If any significant judgment or claim is not fully insured or indemnified against, it could have a material adverse impact. We cannot assure that the outcome of all current or future litigation will not have a material adverse affect on our financial condition, liquidity or results of operations.

### ***Concentration of ownership and voting control***

Concentration of ownership and a voting agreement among two of our large shareholders may prevent new investors from influencing significant corporate decisions. The Asbestos PI Trust and TPG together own a significant amount of our common shares. Pursuant to a shareholders' agreement entered into by the Asbestos PI Trust and TPG, as amended effective as of November 5, 2012, the Asbestos PI Trust and TPG have agreed to vote their shares together on certain matters, including the nomination and election of directors to our board of directors. Also, pursuant to the terms of the shareholders' agreement, each of the Asbestos PI Trust and TPG has the right to designate two directors. The provisions of the shareholders' agreement may be amended, modified or waived by the Asbestos PI Trust and TPG without our consent.

Furthermore, the Asbestos PI Trust and TPG together are able to exercise influence over all matters requiring shareholder approval, including approval of significant corporate transactions and amendment of our amended and restated articles of incorporation, or the Articles, and amended bylaws, or the Bylaws, and have significant influence over our management and policies. The interests of these shareholders may not be consistent with the interests of other shareholders. The existence of significant shareholders may also have the effect of deterring hostile takeovers, delaying or preventing changes in control or changes in management or limiting the ability of our other shareholders to approve transactions that they may deem to be in the best interests of our company. In addition, our Articles provide that Subchapter 25F of the Business Corporation Law of 1998 of the Commonwealth of Pennsylvania, or PBCL, which relate to business combinations with interested shareholders, does not apply to us.

### ***Anti-takeover provisions***

Certain provisions of our Articles and Bylaws may have the effect of discouraging, delaying or preventing a change in control of our company. A change of control could be proposed in the form of a tender offer or takeover proposal that might result in a premium over the market price for our common shares. In addition, these provisions could make it more difficult to bring about a change in the composition of our board of directors, which could result in entrenchment of current management. For example, our Articles and Bylaws:

permit special meetings of shareholders to be called only by shareholders holding at least 20% of voting shares;

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establish advance notice procedures with respect to shareholder proposals and the nomination of candidates for election of directors, other than nominations made by, or at the direction of, our board of directors or by Asbestos PI Trust;

do not provide for cumulative voting in the election of directors;

require affirmative vote or written consent of the holders of at least 80% of our common shares to amend, alter or repeal certain provisions of our Articles regarding the number, terms of office and removal of directors, special meetings of shareholders, shareholder action by written consent and the rights of Asbestos PI Trust under the Articles;

until no shareholder beneficially owns at least 20% of our common shares, require the affirmative vote of at least 80% of shareholders for changes to certain provisions of the Bylaws, including provisions concerning director independence, shareholder voting at special meetings and action by written consent, board size and appointments to our nominating and governance committee; and

authorize the issuance of undesignated preferred shares, or blank check preferred shares, by our board of directors without shareholder approval.

The existence of these provisions and other provisions of our organizational documents could limit the price that investors might be willing to pay in the future for our common shares. They could also deter potential acquirers of our company, thereby reducing the likelihood that shareholders could receive a premium for their common shares in any acquisition.

**ITEM 1B. UNRESOLVED STAFF COMMENTS**

None.

**Table of Contents****ITEM 2. PROPERTIES**

Our world headquarters is in Lancaster, Pennsylvania. We own a 100-acre, multi-building campus comprising the site of our corporate headquarters, most of our operational headquarters, our U.S. R&D operations and marketing, and customer service headquarters.

We produce and market Armstrong products and services throughout the world, operating 35 manufacturing plants in eight countries as of December 31, 2013. Four of our plants are leased and the remaining 31 are owned. We operate 20 plants located throughout the United States. In addition, our WAVE joint venture operates eight additional plants in five countries.

Business Segment	Number of Plants	Location of Principal Facilities
Building Products	14	U.S. (Florida, Georgia, Ohio, Oregon, Pennsylvania, and West Virginia), Austria, Canada, China, France, Germany and the U.K.
Resilient Flooring	12	U.S. (California, Illinois, Mississippi, Oklahoma, and Pennsylvania), Australia, China and Germany
Wood Flooring	9	U.S. (Arkansas, Kentucky, Mississippi, Missouri, Pennsylvania, Tennessee, and West Virginia) and China

Sales and administrative offices are leased and/or owned worldwide, and leased facilities are utilized to supplement our owned warehousing facilities.

Production capacity and the extent of utilization of our facilities are difficult to quantify with certainty. In any one facility, utilization of our capacity varies periodically depending upon demand for the product that is being manufactured. We believe our facilities are adequate and suitable to support the business. Additional incremental investments in plant facilities are made as appropriate to balance capacity with anticipated demand, improve quality and service, and reduce costs.

**ITEM 3. LEGAL PROCEEDINGS**

See the Specific Material Events section of the Environmental Matters section of Note 30 to the Consolidated Financial Statements, which is incorporated herein by reference, for a description of our significant legal proceedings.

**ITEM 4. MINE SAFETY DISCLOSURES**

Not applicable.

Table of ContentsPART II**ITEM 5. MARKET FOR THE REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES**

AWI's common shares trade on the New York Stock Exchange under the ticker symbol AWI. As of February 24, 2014, there were approximately 375 holders of record of AWI's common stock.

	First	Second	Third	Fourth	Total Year
<u>2013</u>					
Price range of common stock - high	\$ 58.48	\$ 55.94	\$ 57.14	\$ 57.83	\$ 58.48
Price range of common stock - low	\$ 49.84	\$ 44.93	\$ 45.81	\$ 49.55	\$ 44.93
<u>2012</u>					
Price range of common stock - high	\$ 59.78	\$ 49.97	\$ 50.00	\$ 54.98	\$ 59.78
Price range of common stock - low	\$ 44.60	\$ 42.57	\$ 38.08	\$ 45.83	\$ 38.08

The above figures represent the high and low intra-day sale prices for our common stock as reported by the New York Stock Exchange.

There were no dividends declared during 2013. On March 23, 2012, our Board of Directors declared a special cash dividend in the amount of \$8.55 per share, or \$508 million in the aggregate, of which \$502.9 million was paid on April 10, 2012 to the shareholders of record as of April 3, 2012.

Dividends are paid as and when declared by our Board of Directors and in accordance with restrictions set forth in our debt agreements. In general, our debt agreements allow us to make restricted payments, which include dividends and stock repurchases, subject to certain limitations and other restrictions and provided that we are in compliance with the financial and other covenants of our debt agreements and meet certain liquidity requirements after giving effect to the restricted payment. For further discussion of the debt agreements, see the financial condition and liquidity section of Management's Discussion and Analysis of Financial Condition and Results of Operations in Item 7 and Risk Factors in Item 1A in this Form 10-K.

Issuer Purchases of Equity Securities

Period	Total Number of Shares Purchased <sup>1</sup>	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs <sup>2</sup>	Maximum Number of Shares that may yet be Purchased under the Plans or Programs
October 1-31, 2013	166	\$ 53.66		
November 1-30, 2013	91	\$ 53.68		
December 1-31, 2013	9,375	\$ 57.54		

Total	9,632	N/A	N/A
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<sup>1</sup> Shares reacquired through the withholding of shares to pay employee tax obligations upon the exercise of options or vesting of restricted shares previously granted under the 2011 Long Term Incentive Plan.

<sup>2</sup> The Company does not presently have a share buy-back program.

For more information regarding securities authorized for issuance under our equity compensation plans, see Note 24 to the Consolidated Financial Statements included in this Form 10-K.



**Table of Contents****ITEM 6. SELECTED FINANCIAL DATA**

The following selected historical consolidated financial data should be read in conjunction with our audited consolidated financial statements, the accompanying notes and Management's Discussion and Analysis of Financial Condition and Results of Operations included in this Form 10-K. The selected historical consolidated financial data for the periods presented have been derived from our audited consolidated financial statements.

(amounts in millions, except for per-share data)	2013	2012	2011	2010	2009
<b><u>Income statement data</u></b>					
Net sales	\$ 2,719.9	\$ 2,618.9	\$ 2,723.1	\$ 2,627.8	\$ 2,629.8
Operating income	238.6	271.2	239.8	87.5	108.9
Earnings from continuing operations	100.5	144.4	112.8	15.1	89.4
Per common share - basic (a)	\$ 1.73	\$ 2.43	\$ 1.92	\$ 0.26	\$ 1.57
Per common share - diluted (a)	\$ 1.71	\$ 2.41	\$ 1.91	\$ 0.26	\$ 1.56
Dividends declared per share of common stock		\$ 8.55		\$ 13.74	
<b><u>Balance sheet data (end of period)</u></b>					
Total assets	\$ 2,916.6	\$ 2,854.3	\$ 2,994.7	\$ 2,922.4	\$ 3,302.6
Long-term debt	1,042.6	1,038.0	822.9	839.6	432.5
Total equity	673.2	719.1	1,130.2	1,090.8	1,907.9

**Notes:**

(a) See definition of basic and diluted earnings per share in Note 2 to the Consolidated Financial Statements.

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**ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS**

Armstrong World Industries, Inc. ( AWI ) is a Pennsylvania corporation incorporated in 1891.

This discussion should be read in conjunction with the financial statements, the accompanying notes, the cautionary note regarding forward-looking statements and risk factors included in this Form 10-K.

**Overview**

We are a leading global producer of flooring products and ceiling systems for use primarily in the construction and renovation of residential, commercial and institutional buildings. We design, manufacture and sell flooring products (primarily resilient and wood) and ceiling systems (primarily mineral fiber, fiberglass and metal) around the world.

During 2013, we opened three new manufacturing facilities in China; consisting of two resilient flooring plants and a mineral fiber ceiling plant.

During 2012, we closed two previously idled facilities: an engineered wood production facility in Statesville, NC, and a Building Products plant in Mobile, AL. Additionally, in 2012, we sold the assets of our wood flooring distribution (Patriot) and cabinets businesses. As of December 31, 2013, we operated 35 manufacturing plants in eight countries, including 20 plants located throughout the U.S.

Worthington Armstrong Venture ( WAVE ), our joint venture with Worthington Industries, Inc., operates eight additional plants in five countries to produce suspension system (grid) products which we use in our ceiling systems.

We report our financial results through the following segments: Building Products, Resilient Flooring, Wood Flooring, and Unallocated Corporate. See Results of Operations and Reportable Segment Results for additional financial information on our consolidated company and our segments.

**Factors Affecting Revenues**

For information on our segments' 2013 net sales by geography, see Note 3 to the Consolidated Financial Statements included in this Form 10-K.

*Markets.* We compete in building material markets around the world. The majority of our sales are in North America and Europe. We closely monitor publicly available macroeconomic trends that provide insight to commercial and residential market activity including Gross Domestic Product, the Architecture Billings Index and the Consumer Confidence Index. In addition, we noted several factors and trends within our markets that directly affected our business performance during 2013, including:

**Americas**

We noted softness in commercial markets, particularly education and, to a lesser extent, healthcare, as public spending remained constrained. In addition, we saw some regional variability in the office market, and strength in retail. These trends impacted both our Building Products and Resilient Flooring businesses, but with greater impact on Resilient Flooring, as a significant portion of our commercial sales in Resilient Flooring originate from the education and healthcare markets.

Residential markets continued to improve, driven primarily by strength in builder activity while renovation activity increased slightly. These trends impacted our Wood and Resilient businesses.

Europe, Middle East and Africa ( EMEA )

The majority of our sales in EMEA are to commercial markets in sectors dependent on public spending. Continued softness in commercial sectors, such as office, education and healthcare, contributed to mixed results across EMEA. These trends impacted our Building Products and Resilient Flooring businesses.

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### **Management's Discussion and Analysis of Financial Condition and Results of Operations**

#### **Pacific Rim**

A continued soft commercial construction market in Australia negatively impacted our Resilient Flooring and Building Products businesses. Commercial markets in India and Southeast Asia grew, while China markets were mixed.

*Pricing Initiatives.* We periodically modify prices in each of our business segments in response to changes in costs for raw materials and energy, and to market conditions and the competitive environment. In certain cases, realized price increases are less than the announced price increases because of competitive reactions and changing market conditions. We estimate that pricing actions increased our 2013 consolidated net sales by approximately \$40 million, compared to 2012.

Due to rising raw material prices we announced price increases in our resilient flooring, wood flooring, ceilings and grid businesses in the Americas, and in our ceilings businesses in EMEA and the Pacific Rim, effective in the first quarter of 2014. We may implement additional pricing actions if raw material prices continue at, or rise from, current levels.

*Mix.* Each of our businesses offers a wide assortment of products that are differentiated by style, design and performance attributes. Pricing and margins for products within the assortment vary. Changes in the relative quantity of products purchased at the different price points can impact year-to-year comparisons of net sales and operating income. We estimate that mix improvements increased our 2013 consolidated net sales by approximately \$13 million, compared to 2012.

#### **Factors Affecting Operating Costs**

*Operating Expenses.* Our operating expenses are comprised of direct production costs (principally raw materials, labor and energy), manufacturing overhead costs, freight, costs to purchase sourced products and selling, general and administrative ( SG&A ) expenses.

Our largest individual raw material expenditures are for lumber, veneers, PVC resins and plasticizers. Natural gas is also a significant input cost. Fluctuations in the prices of these inputs are generally beyond our control and have a direct impact on our financial results. In 2013, the costs for raw materials, sourced products and energy negatively impacted operating income by approximately \$45 million, compared to 2012.

During 2013, our Resilient Flooring business incurred approximately \$12 million associated with cost reduction actions in Europe, and another \$4 million associated with cost reductions in Australia. During 2012, we decided to close our Building Products plant in Mobile, AL, and recorded approximately \$21 million of accelerated depreciation, impairment and other charges. We subsequently sold that facility during the third quarter of 2013 and recorded a pre-tax gain of \$3.8 million within SG&A expense (inclusive of release of unused environmental liabilities and asset retirement obligations). During 2012, we also incurred approximately \$4 million of net costs related to the collective bargaining contract settlement with employees at the Marietta, PA Building Products plant.

We continue to evaluate the efficiency of our manufacturing footprint and may take additional actions in support of our cost and standardization initiatives. The charges associated with any additional cost reduction initiatives could

include severance and related termination benefits, fixed asset write-downs, asset impairments and accelerated depreciation and may be material to our financial statements.

See also [Results of Operations](#) for further discussion of other significant items affecting operating costs.

### **Employees**

As of December 31, 2013, we had approximately 8,700 full-time and part-time employees worldwide, compared to approximately 8,500 employees as of December 31, 2012. Most of the increase related to crews added at our U.S. wood flooring plants. During 2013, we negotiated three collective bargaining agreements covering approximately 400 production and maintenance employees in North America.

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**Management's Discussion and Analysis of Financial Condition and Results of Operations**

During 2014, we negotiated a collective bargaining agreement covering approximately 700 production and maintenance employees, at one of our wood flooring plants. Collective bargaining agreements covering approximately 400 production and maintenance employees at three U.S. plants are scheduled to expire throughout the remainder of 2014.

**CRITICAL ACCOUNTING ESTIMATES**

In preparing our consolidated financial statements in accordance with U.S. generally accepted accounting principles ( GAAP ), we are required to make certain estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. We evaluate our estimates and assumptions on an on-going basis, using relevant internal and external information. We believe that our estimates and assumptions are reasonable. However, actual results may differ from what was estimated and could have a significant impact on the financial statements.

We have identified the following as our critical accounting estimates. We have discussed these critical accounting estimates with our Audit Committee.

**U.S. Pension Credit and Postretirement Benefit Costs** We maintain pension and postretirement plans throughout the world, with the most significant plans located in the U.S. Our defined benefit pension and postretirement benefit costs are developed from actuarial valuations. These valuations are calculated using a number of assumptions, which represent management's best estimate of the future. The assumptions that have the most significant impact on reported results are the discount rate, the estimated long-term return on plan assets and the estimated inflation in health care costs. These assumptions are generally updated annually.

The discount rate is used to determine retirement plan liabilities and to determine the interest cost component of net periodic pension and postretirement cost. Management utilizes the Aon Hewitt AA only above median yield curve, which is a hypothetical AA yield curve comprised of a series of annualized individual discount rates, as the primary basis for determining the discount rate. As of December 31, 2013 and 2012, we assumed discount rates of 4.75% and 3.95%, respectively, for the U.S. defined benefit pension plans. As of December 31, 2013, we assumed a discount rate of 4.50% compared with a discount rate of 3.75% as of December 31, 2012 for the U.S. postretirement plans. The effects of the change in discount rate will be amortized into earnings as described below. Absent any other changes, a one-quarter percentage point decrease in the discount rates for the U.S. pension and postretirement plans would decrease 2014 operating income by \$4.7 million and a one-quarter percentage point increase in the discount rates would increase 2014 operating income by \$4.6 million.

We have two U.S. defined benefit pension plans, a qualified funded plan and a nonqualified unfunded plan. For the qualified funded plan, the expected long-term return on plan assets represents a long-term view of the future estimated investment return on plan assets. This estimate is determined based on the target allocation of plan assets among asset classes and input from investment professionals on the expected performance of the asset classes over 10 to 30 years. Historical asset returns are monitored and considered when we develop our expected long-term return on plan assets. An incremental component is added for the expected return from active management based on historical information obtained from the plan's investment consultants. These forecasted gross returns are reduced by estimated management fees and expenses, yielding a long-term rate of return of 7.0% per annum for 2014. Over the 10 year period ended

December 31, 2013, the annualized return was approximately 7.2% compared to an average expected return of 7.6%. The actual return on plan assets achieved for 2013 was 3.7%. The difference between the actual and expected rate of return on plan assets will be amortized into earnings as described below.

The expected long-term return on plan assets used in determining our 2013 U.S. pension credit was 6.25%. We have assumed a return on plan assets during 2014 of 7.0%. The 2014 expected return on assets was calculated in a manner consistent with 2013. A one-quarter percentage point increase or decrease in this assumption would increase or decrease 2014 operating income by approximately \$5.0 million.

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Contributions to the unfunded plan were \$3.9 million in 2013 and were made on a monthly basis to fund benefit payments. We estimate the 2014 contributions will be approximately \$3.9 million. See Note 18 to the Consolidated Financial Statements for more information.

The estimated inflation in health care costs represents a 5-10 year view of the expected inflation in our postretirement health care costs. We separately estimate expected health care cost increases for pre-65 retirees and post-65 retirees due to the influence of Medicare coverage at age 65, as illustrated below:

	Assumptions		Actual	
	Post 65	Pre 65	Post 65	Pre 65
2012	8.1%	8.1%	(13.0%)	(1.0%)
2013	7.8%	7.6%	18.0%	(5.0%)
2014	7.0%	8.0%		

The difference between the actual and expected health care costs is amortized into earnings as described below. As of December 31, 2013, health care cost increases are estimated to decrease ratably until 2021, after which they are estimated to be constant at 5%. A one percentage point increase in the assumed health care cost trend rate would reduce 2014 operating income by \$0.9 million, while a one percentage point decrease in the assumed health care cost trend rate would increase 2014 operating income by \$1.0 million. See Note 18 to the Consolidated Financial Statements for more information.

Actual results that differ from our various pension and postretirement plan estimates are captured as actuarial gains/losses. When certain thresholds are met, the gains and losses are amortized into future earnings over the expected remaining service period of plan participants, which is approximately eight years for our U.S. pension plans and our U.S. postretirement plans. Changes in assumptions could have significant effects on earnings in future years.

We recognized a decrease in net actuarial losses related to our U.S. pension benefit plans of \$127.8 million in 2013 primarily due to changes in actuarial assumptions (most significantly an 80 basis point increase in the discount rate). The \$127.8 million actuarial gain due to our U.S. pension plans is reflected as a component of other comprehensive income in our Consolidated Statement of Earnings and Comprehensive Income along with actuarial gains and losses from our foreign pension plans and our U.S. postretirement benefit plans.

**Impairments of Long-Lived Tangible and Intangible Assets** Our indefinite-lived intangibles are primarily trademarks and brand names, which are integral to our corporate identity and expected to contribute indefinitely to our corporate cash flows. Accordingly, they have been assigned an indefinite life. We conduct our annual impairment test for non-amortizable intangible assets during the fourth quarter, although we conduct interim impairment tests if events or circumstances indicate the asset might be impaired. We conduct impairment tests for tangible assets and amortizable intangible assets when indicators of impairment exist, such as operating losses and/or negative cash flows. If an indication of impairment exists, we compare the carrying amount of the asset group to the estimated undiscounted future cash flows expected to be generated by the assets. The estimate of an asset group's fair value is based on discounted future cash flows expected to be generated by the asset group, or based on management's estimated exit price assuming the assets could be sold in an orderly transaction between market participants or estimated salvage value if no sale is assumed. If the fair value is less than the carrying value of the asset group, we record an impairment



charge equal to the difference between the fair value and carrying value of the asset group.

The principal assumption utilized in our impairment tests for definite-lived intangible assets is operating profit adjusted for depreciation and amortization. The principal assumptions utilized in our impairment tests for indefinite-lived intangible assets include revenue growth rate, discount rate and royalty rate. Revenue growth rate and operating profit assumptions are derived from those utilized in our operating plan and strategic planning processes. The discount rate assumption is calculated based upon an estimated weighted average cost of equity which reflects the overall level of inherent risk and the rate of return a

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market participant would expect to achieve. Methodologies used for valuing our intangible assets did not change from prior periods.

The cash flow estimates used in applying our impairment tests are based on management's analysis of information available at the time of the impairment test. Actual cash flows lower than the estimate could lead to significant future impairments. If subsequent testing indicates that fair values have declined, the carrying values would be reduced and our future statements of income would be affected.

There was no impairment charge in 2013, 2012 or 2011 related to intangible assets.

We tested the tangible assets within the following reporting units for impairment:

Reporting Unit	2013	2012	2011
ABP Americas		X	X
Resilient Flooring Europe		X	X
Wood Flooring		X	X

Based upon the impairment testing in 2012 and 2011, the carrying value of the tangible assets for each of these asset groups was determined to be recoverable (except as discussed below) because the related undiscounted cash flows and/or fair value exceeded the carrying value of assets.

During the first quarter of 2012, we made the decision to permanently close a previously idled ceiling tile plant in Mobile, AL. As a result, we recorded accelerated depreciation of \$11.0 million for machinery and equipment and a \$4.6 million impairment charge for the buildings in cost of goods sold. The fair values were determined by management estimates and an independent valuation based on information available at that time (considered Level 2 inputs in the fair value hierarchy as described in Note 18 to the Consolidated Financial Statements). We sold this facility in the third quarter of 2013.

During the third quarter of 2012, we recorded a \$17.5 million impairment charge to the value of the cabinets assets to reflect the expected proceeds from the sale of the cabinets business, which was accounted for as a discontinued operation.

During the fourth quarter of 2012, we made the decision to permanently close a previously idled engineered wood flooring production facility in Statesville, NC. As a result, we recorded accelerated depreciation of \$0.6 million for machinery and equipment and a \$0.6 million impairment charge for the buildings in cost of goods sold. The fair values were determined by management estimates and an independent valuation based on information available at that time (considered Level 2 inputs in the fair value hierarchy).

We recorded an asset impairment charge of \$2.2 million in the third quarter of 2011 in SG&A expense for a European Resilient Flooring office building. The fair value was determined by management estimates of market prices based upon information available at that time, including offers received from potential buyers of the property (considered Level 3 inputs in the fair value hierarchy).

The carrying value of tangible assets within the European Resilient Flooring business was \$92.4 million as of December 31, 2013. Material uncertainties that could lead to a future material impairment charge include the level of European commercial construction and renovation activity.

During the fourth quarter of 2011, we recorded asset impairment charges of \$1.1 million in cost of goods sold for two previously occupied manufacturing facilities. The fair values were determined by management estimates and independent market valuations based on information available at that time. The valuation information included sales of similar facilities and estimates of market prices (considered Level 2 inputs in the fair value hierarchy) for these assets.

We cannot predict the occurrence of certain events that might lead to material impairment charges in the future. Such events may include, but are not limited to, the impact of economic environments, particularly

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**Management's Discussion and Analysis of Financial Condition and Results of Operations**

related to the commercial and residential construction industries, material adverse changes in relationships with significant customers, or strategic decisions made in response to economic and competitive conditions.

See Notes 3 and 11 to the Consolidated Financial Statements for further information.

**Income Taxes** Our effective tax rate is primarily determined based on our pre-tax income and the statutory income tax rates in the jurisdictions in which we operate. The effective tax rate also reflects the tax impacts of items treated differently for tax purposes than for financial reporting purposes. Some of these differences are permanent, such as expenses that are not deductible in our tax returns, and some differences are temporary, reversing over time, such as depreciation expense. These temporary differences create deferred income tax assets and liabilities. Deferred income tax assets are also recorded for operating loss, capital loss and foreign tax credit ( FTC ) carryforwards.

Deferred income tax assets and liabilities are recognized by applying enacted tax rates to temporary differences that exist as of the balance sheet date. We reduce the carrying amounts of deferred tax assets by a valuation allowance if, based on the available evidence, it is more likely than not that such assets will not be realized. The need to establish valuation allowances for deferred tax assets is assessed quarterly. In assessing the requirement for, and amount of, a valuation allowance in accordance with the more likely than not standard, we give appropriate consideration to all positive and negative evidence related to the realization of the deferred tax assets. This assessment considers, among other matters, the nature, frequency and severity of current and cumulative losses, forecasts of future profitability and foreign source income ( FSI ), the duration of statutory carryforward periods, and our experience with operating loss and tax credit carryforward expirations. A history of cumulative losses is a significant piece of negative evidence used in our assessment. If a history of cumulative losses is incurred for a tax jurisdiction, forecasts of future profitability are not used as positive evidence related to the realization of the deferred tax assets in the assessment.

Specifically with respect to the domestic FTC carryforward deferred tax asset of \$94.4 million at December 31, 2013, we considered the following positive and negative evidence in assessing the need for a valuation allowance and concluded that a valuation allowance is not required:

**Positive Evidence**

Our emergence from bankruptcy in 2006 created significant net operating losses ( NOLs ). The last portion of these NOLs was completely utilized during 2012. Starting in 2013, we had domestic taxable income which allowed us to begin utilizing the FTCs;

Under U.S. tax law, approximately \$233.7 million of our domestic source income in future years can be characterized as FSI to enable the utilization of our FTCs. This amount primarily represents prior year intercompany dividends associated with the FTC carryforwards. These dividends created domestic taxable income that was reduced by the utilization of domestic NOLs; and

Forecasts of future profitability and FSI.

Negative Evidence

Our history of FTC expirations as a result of the carryback and carryforward of the NOLs generated upon emergence from bankruptcy. All FTCs were fully utilized before the bankruptcy NOL carryback. The NOL carryback reduced the taxable income (a portion of which is considered FSI) to zero and thus the FTCs were carried forward along with the remaining portion of the NOL. The utilization of the remaining NOL carryforward reduced taxable income to zero, which caused the expiration of the FTCs; and

Our stated position to permanently reinvest unremitted earnings of our foreign subsidiaries.

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The ability to fully utilize the FTC carryforwards may be affected by the following factors:

FSI of \$269.8 million is needed to fully utilize the FTC carryforward of \$94.4 million before they expire in 2022. In addition to the \$233.7 million of domestic source income that can be characterized as FSI in future years \$36.1 million of additional foreign source income is needed.

The main factor that could result in our inability to re-characterize domestic source income to foreign source income is a U.S. tax law change.

The main factors that could contribute to lower FSI are decreased export sales and increased allocable expenses.

The amount of U.S. FTC carryforward deferred tax assets that expire by the end of 2014, if not utilized, is \$4.5 million.

As of December 31, 2013, we have recorded valuation allowances totaling \$228.4 million for various federal, state and foreign deferred tax assets. While we have considered future taxable income in assessing the need for the valuation allowances based on our best available projections, if these estimates and assumptions change in the future or if actual results differ from our projections, we may be required to adjust our valuation allowances accordingly. Such adjustments could be material to our Consolidated Financial Statements.

As further described in Note 16 to the Consolidated Financial Statements, our Consolidated Balance Sheet as of December 31, 2013 includes net deferred income tax assets of \$320.9 million. Included in this amount are deferred federal income tax assets for FTC carryforwards of \$94.4 million, state NOL deferred income tax assets of \$47.6 million, and foreign NOL deferred tax assets of \$182.6 million. We have established valuation allowances in the amount of \$228.4 million consisting of \$25.3 million for federal capital loss carryovers and statutorily limited operating loss carryovers, \$9.4 million for state deferred tax assets, primarily operating loss carryovers, and \$193.7 million for foreign deferred tax assets, primarily foreign operating loss carryovers.

The federal FTC carryforwards arose primarily as a result of the payment of intercompany dividends from our foreign affiliates from earnings which were previously not considered as permanently reinvested. The state NOLs arose primarily as a result of the amounts paid to the Asbestos PI Trust in 2006.

Inherent in determining our effective tax rate are judgments regarding business plans and expectations about future operations. These judgments include the amount and geographic mix of future taxable income, the amount of FSI, limitations on usage of NOL carryforwards, the impact of ongoing or potential tax audits, earnings repatriation plans, and other future tax consequences.

We estimate we will need to generate future taxable income of approximately \$1,286.6 million for state income tax purposes during the respective realization periods (ranging from 2014 to 2033) in order to fully realize the net deferred

income tax assets.

The Internal Revenue Code and some states impose limitations on a corporation's ability to utilize tax attributes, including FTCs and NOLs, if it experiences an ownership change. An ownership change may result from transactions increasing the ownership of certain shareholders by more than 50 percentage points over a three-year period. There have been no ownership changes as defined in the Internal Revenue Code subsequent to our bankruptcy emergence. Future ownership changes could have an impact on our ability to utilize the deferred tax assets.

We recognize the tax benefits of an uncertain tax position if those benefits are more likely than not to be sustained based on existing tax law. Additionally, we establish a reserve for tax positions that are more likely than not to be sustained based on existing tax law, but uncertain in the ultimate benefit to be sustained upon examination by the relevant taxing authorities. Unrecognized tax benefits are subsequently

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recognized at the time the more likely than not recognition threshold is met, the tax matter is effectively settled or the statute of limitations for the relevant taxing authority to examine and challenge the tax position has expired, whichever is earlier.

**ACCOUNTING PRONOUNCEMENTS EFFECTIVE IN FUTURE PERIODS**

There were no new accounting pronouncements issued or effective during the fiscal year which have had or are expected to have a material impact on the Consolidated Financial Statements. For a discussion of new accounting pronouncements, see Note 2 to our Consolidated Financial Statements.

**RESULTS OF OPERATIONS**

Unless otherwise indicated, net sales in these results of operations are reported based upon the location where the sale was made. Please refer to Notes 3 and 5 to the Consolidated Financial Statements for a reconciliation of segment operating income to consolidated earnings from continuing operations before income taxes and additional financial information related to discontinued operations.

**2013 COMPARED TO 2012****CONSOLIDATED RESULTS FROM CONTINUING OPERATIONS**

(dollar amounts in millions)

	2013	2012	Change is Favorable/ (Unfavorable)
Net sales:			
Americas	\$ 1,959.3	\$ 1,873.9	4.6%
EMEA	542.4	523.9	3.5%
Pacific Rim	218.2	221.1	(1.3)%
Total consolidated net sales	\$ 2,719.9	\$ 2,618.9	3.9%
Operating income	\$ 238.6	\$ 271.2	(12.0)%

The increase in consolidated net sales was driven by \$75 million of higher volume and \$53 million of favorable price and mix. Sales were also negatively impacted by \$26 million due to our sale of the Patriot wood flooring distribution business which occurred in the third quarter of 2012.

The increase in net sales in the Americas was driven primarily by higher volumes in the wood business, and improvements in price and mix. Sales were negatively impacted by the sale of the Patriot wood flooring distribution business.

The increase in net sales in the EMEA region was driven primarily by favorable foreign exchange impact of approximately \$11 million and favorable mix, which were only partially offset by lower volumes.



Excluding unfavorable foreign exchange impact of \$7 million, net sales in the Pacific Rim increased 2% as improvements in volumes and price were partially offset by unfavorable mix.

Cost of goods sold was 77.1% of net sales in 2013, compared to 75.8% in 2012. The increase was primarily due to raw material inflation, particularly lumber, increased production costs in the wood flooring segment, and plant start-up costs associated with our investments in China and Russia. The comparison was impacted by approximately \$16 million associated with cost reduction actions in the Resilient Flooring business in Europe and Australia in 2013, and approximately \$21 million of costs associated with the closure of our Mobile, AL Building Products facility in 2012.

SG&A expenses in 2013 were \$443.7 million, or 16.3% of net sales, compared to \$418.3 million, or 16.0% of net sales, in 2012. The increase was primarily due to emerging market growth initiatives and increased Unallocated Corporate Expenses. See Reportable Segment Results for additional information.

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Equity earnings from our WAVE joint venture were \$59.4 million in 2013, compared to \$55.9 million in 2012. See Note 10 to the Consolidated Financial Statements for further information.

Interest expense was \$68.8 million in 2013, compared to \$53.7 million in 2012. The increase was due to the write-off of unamortized debt financing costs associated with the refinancing of our senior credit facility that occurred during the first quarter of 2013 partially offset by lower interest expense under the amended credit facility (see Liquidity for further information).

Income tax expense was \$71.4 million and \$76.1 million in 2013 and 2012, respectively. The effective tax rate for 2013 was 41.5% as compared to a rate of 34.5% for 2012. The effective tax rate for 2013 was higher than 2012 primarily due to higher unbenefitted foreign operating losses in 2013 and to the release of foreign tax credit valuation allowance in 2012, partially offset by research and development tax credits covering multiple years, domestic production activities, and mix of income in tax jurisdictions.

As reported in Note 16 to the Consolidated Financial Statements, our foreign operations recorded losses before income taxes of \$14.3 million in 2013 compared with income of \$31.9 million in 2012. The main driver of these losses were expenses related to the construction of the four international manufacturing plants; three in China and one in Russia. We also incurred higher severance expenses in Europe and Australia during 2013. While we believe we will continue to incur overall foreign losses in 2014, we do not believe this indicates a long-term trend.

Total other comprehensive income ( OCI ) was \$99.8 million income for 2013 and \$56.4 million loss for 2012, respectively. Foreign currency translation adjustments represent the change in the U.S. dollar value of assets and liabilities denominated in foreign currencies. Amounts in 2013 were driven primarily by changes in the exchange rate of the Australian dollar. Amounts in 2012 were driven primarily by changes in the Euro, the Renminbi, the British pound and the Australian dollar. Derivative gain/loss represents the mark to market value adjustments of our derivative assets and liabilities and the recognition of gains and losses previously deferred in OCI. The period changes are primarily due to the mark to market changes related to our interest rate swap derivatives. Pension and postretirement adjustments represent actuarial gains and losses related to our defined-benefit pension and postretirement plans. The amounts in all periods primarily related to the U.S. pension plans.

**REPORTABLE SEGMENT RESULTS****Building Products**

(dollar amounts in millions)

	2013	2012	Change is Favorable
Net sales:			
Americas	\$ 780.9	\$ 757.1	3.1%
EMEA	349.9	333.6	4.9%
Pacific Rim	133.8	128.2	4.4%

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Total segment net sales	\$ 1,264.6	\$ 1,218.9	3.7%
Operating income	\$ 263.1	\$ 230.4	14.2%

The improvement in Building Products net sales was driven by \$29 million of favorable price and mix, and higher volumes of \$18 million.

Net sales in the Americas increased due to improved price realization and positive mix which more than offset the impact of slightly lower volumes.

Excluding favorable foreign exchange impact of \$5 million, net sales in EMEA markets increased 3%, driven by improvements in mix and higher volumes.

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Excluding unfavorable foreign exchange impact of \$4 million, net sales in the Pacific Rim increased 8%, driven primarily by higher volumes offset by the impact of unfavorable mix.

The increase in operating income was primarily driven by improvements in gross profit, and a reduction in facility closure costs when compared to the prior year. Gross profit increased primarily from the benefits of price and mix of \$17 million, and improved volumes of \$7 million. Manufacturing costs were flat as improvements in productivity were able to offset costs incurred to support our investments in China and Russia. SG&A expenses increased by \$16 million associated with go-to-market investments to support emerging market growth initiatives. During 2013 we recorded higher earnings from WAVE of \$4 million. During 2012, we decided to close our Building Products plant in Mobile, AL, and recorded approximately \$21 million of accelerated depreciation, impairment and other charges. We subsequently sold that facility during the third quarter of 2013 and recorded a pre-tax gain of \$3.8 million within SG&A expense (inclusive of release of unused environmental liabilities and asset retirement obligations). During 2012, we also incurred approximately \$4 million of net costs related to the collective bargaining contract settlement with employees at the Marietta, PA Building Products plant.

**Resilient Flooring**

(dollar amounts in millions)

	2013	2012	Change is Favorable/ (Unfavorable)
Net sales:			
Americas	\$ 644.4	\$ 656.2	(1.8)%
EMEA	192.5	190.3	1.2%
Pacific Rim	84.4	92.9	(9.1)%
Total segment net sales	\$ 921.3	\$ 939.4	(1.9)%
Operating income	\$ 44.1	\$ 56.9	(22.5)%

The decline in Resilient Flooring net sales was driven by \$23 million of lower volume, which was only partially offset with favorable price and mix of \$4 million.

Net sales in the Americas decreased as improvements in mix were unable to offset commercial and residential volume declines and unfavorable price.

Excluding favorable foreign exchange impact of \$6 million, net sales in the European markets decreased 2%, as improvements in mix and price were unable to offset market driven volume declines, especially in the public sector.

Excluding unfavorable foreign exchange impact of \$2 million, net sales in the Pacific Rim decreased 7% as market driven sales declines in Australia offset increased sales in China and India.

Operating income declined primarily due to increased charges associated with cost reduction initiatives and the margin impact of lower volumes of \$9 million. These impacts were partially offset by reductions in SG&A expenses

of \$4 million and lower input and manufacturing costs of \$12 million. Higher productivity more than offset costs incurred to support investments in China. Our Resilient Flooring business incurred approximately \$16 million associated with cost reduction actions in Europe and Australia during 2013.

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(dollar amounts in millions)

	2013	2012	Change is Favorable/ (Unfavorable)
Total segment net sales	\$ 534.0	\$ 460.6	15.9%
Operating income	\$ 6.0	\$ 37.3	(83.9)%

The increase in Wood Flooring net sales was driven primarily by higher volumes of \$80 million, and aided by favorable price and mix of \$20 million. The higher volumes were driven by strong demand from the home center channel and independent distributors. Sales were also negatively impacted by \$26 million resulting from our sale of the Patriot wood flooring distribution business in the third quarter of 2012.

The decline in operating income was driven by higher manufacturing and input costs of \$64 million, which were only partially offset by the \$19 million impact of higher volumes and \$12 million impact of improved price and mix. Improvements in price more than offset the dilutive impact of mix driven by increased demand from the builder channel. Increases in manufacturing and input costs were driven by rising lumber costs and higher labor costs as we increased our workforce to respond to increased demand.

**Unallocated Corporate**

Unallocated corporate expense of \$74.6 million increased from \$53.4 million in the prior year. The increase was impacted by higher foreign and domestic pension expense of \$12.7 million, increased spending on outside professional services and higher expense associated with employee benefits.

**FINANCIAL CONDITION AND LIQUIDITY****Cash Flow**

Operating activities for 2013 provided \$213.7 million of cash, compared to \$220.0 million of cash provided in 2012. The change was due to lower cash earnings partially offset by changes in working capital. The working capital change was driven by an increase in accounts payable.

Net cash used for investing activities was \$145.8 million for 2013, compared to \$91.9 million in 2012. This change was primarily due to lower proceeds from divestitures, increased purchases of property, plant and equipment, and lower proceeds from the sale of assets.

Net cash used for financing activities was \$263.7 million for 2013, compared to \$273.7 million during 2012. Net cash used in 2013 included the \$261.4 million re-purchase of common stock, including associated fees. Net cash used in 2012 was impacted by dividend payments of \$507.1 million, partially offset by proceeds from the issuance of long-term debt of \$250.0 million.

## Liquidity

Our liquidity needs for operations vary throughout the year. We retain lines of credit to facilitate our seasonal cash flow needs, since cash flow is generally lower during the first and fourth quarters of our fiscal year. On March 15, 2013, we refinanced our \$1.3 billion senior credit facility. The amended facility is composed of a \$250 million revolving credit facility (with a \$150 million sublimit for letters of credit), a \$550 million Term Loan A and a \$475 million Term Loan B. The terms of the facility resulted in a lower interest rate spread (2.5% vs. 3.0%) than our previous facility. We also extended the maturity of Term Loan A from November 2015 to March 2018 and of Term Loan B from March 2018 to March 2020, and we amended our year end leverage tests (see below). Per the terms of the underlying agreement, this \$1.3 billion senior credit facility is secured by U.S. personal property, the capital stock of material U.S. subsidiaries and a pledge of 65% of the stock of our material first tier foreign subsidiaries.

Under the amended senior credit facility, beginning December 31, 2013, we are subject to year-end leverage tests that may trigger mandatory prepayments. If our ratio of consolidated funded indebtedness minus AWI and domestic subsidiary unrestricted cash and cash equivalents up to \$100 million to consolidated earnings before interest, taxes, depreciation and amortization ( EBITDA ) ( Consolidated Net Leverage Ratio ) is greater than 3.5 to 1.0, the prepayment amount would be 50% of fiscal year

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Consolidated Excess Cash Flow. These annual payments would be made in the first quarter of the following year. No payment will be required in 2014.

In connection with the refinancing, we incurred \$8.3 million for bank, legal, and other fees, of which \$7.2 million was capitalized and is being amortized into interest expense over the life of the loans. Additionally, we wrote off \$18.9 million of unamortized debt financing costs in the first quarter of 2013 related to our previous credit facility to interest expense.

The amended senior credit facility includes two financial covenants that require the ratio of consolidated EBITDA to consolidated cash interest expense minus cash consolidated interest income ( consolidated interest coverage ratio ) to be greater than or equal to 3.0 to 1.0 and requires the Consolidated Net Leverage Ratio to be less than or equal to 4.5 to 1.0 through December 31, 2013, 4.0 to 1.0 after December 31, 2013 through March 31, 2015 and 3.75 to 1.0 after March 31, 2015. During 2013, we were in compliance with all covenants of the previous and amended senior credit facilities.

The Revolving Credit and Term Loan A portions are currently priced at a spread of 2.50% over LIBOR and the Term Loan B portion is priced at 2.50% over LIBOR with a 1.00% LIBOR floor for its entire term. The Term Loan A and Term Loan B were both fully drawn and are currently priced on a variable interest rate basis.

The following table summarizes our interest rate swaps:

Trade Date	Notional Amount	Interest Rate Paid	Coverage Period	Risk Coverage
March 31, 2011	\$ 100.0	2.303%	March 2011 to November 2015	Term Loan A
March 31, 2011	\$ 200.0	2.523%	March 2011 to November 2015	Term Loan B
March 27, 2012	\$ 250.0	1.928%	March 2012 to March 2018	Term Loan B
March 27, 2012	\$ 200.0	2.810%	November 2015 to March 2018	Term Loan B
April 16, 2013	\$ 250.0	1.398%	November 2015 to March 2018	Term Loan A

These swaps are designated as cash flow hedges against changes in LIBOR for a portion of our variable rate debt. The unpaid balances of Term Loan A, the Revolving Credit and Term Loan B of the credit facility may be prepaid without penalty at the maturity of their respective interest reset periods. Any amounts prepaid on the Term Loan A or Term Loan B may not be re-borrowed.

As of December 31, 2013, we had \$135.2 million of cash and cash equivalents, \$35.5 million in the U.S. and \$99.7 million in various foreign jurisdictions.

On March 23, 2012, our Board of Directors declared a special cash dividend in the amount of \$8.55 per share, or \$508 million in the aggregate, of which \$502.9 million was paid on April 10, 2012. Payment of an additional \$1.5 million



was made during the remainder of 2012, and the remaining \$3.4 million of the dividend is expected to be paid when the underlying shares vest. The dividend was funded in part by surplus cash on our balance sheet, and in part by the proceeds of additional debt issued under our Term Loan B.

On March 28, 2013, we amended our \$100 million Accounts Receivable Securitization Facility with the Bank of Nova Scotia, under which AWI and its subsidiary, Armstrong Hardwood Flooring Company, sell their U.S. receivables to Armstrong Receivables Company LLC ( ARC ), a Delaware entity that is consolidated in these financial statements. We decreased the facility to \$75 million to reduce commitment fees on the unused capacity and extended the maturity date from December 2014 to March 2016.

On December 31, 2013, we had outstanding letters of credit totaling \$71.9 million, of which \$14.8 million was issued under the revolving credit facility, \$56.9 million was issued under the securitization facility, and \$0.2 million was issued by other banks of international subsidiaries. Letters of credit are issued to third party suppliers, insurance and financial institutions and typically can only be drawn upon in the event of AWI s failure to pay its obligations to the beneficiary.

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	As of December 31, 2013		
	Limit	Used	Available
Foreign Financing Arrangements			
Lines of Credit Available for Borrowing	\$ 14.6		\$ 14.6
Lines of Credit Available for Letters of Credit	1.7	\$ 0.7	1.0
<b>Total</b>	<b>\$ 16.3</b>	<b>\$ 0.7</b>	<b>\$ 15.6</b>

These lines of credit are uncommitted, and poor operating results or credit concerns at the related foreign subsidiaries could result in the lines being withdrawn by the lenders. We have historically been able to maintain and, as needed, replace credit facilities to support our foreign operations.

Since 2009, our Board of Directors has approved the construction of five manufacturing plants. These include a U.S. mineral wool plant to supply our Building Products plants, mineral fiber ceiling plants in Russia and China, and two resilient flooring plants in China. In July 2013, our Board of Directors approved the expansion of our Lancaster, PA flooring plant to include the manufacture of luxury vinyl tile. Total spending for these projects is currently projected to be approximately \$375 million. As of December 31, 2013, we have completed construction of the mineral wool plant and three plants in China. Through December 31, 2013, we have incurred approximately \$272 million related to these projects. Spending for the final plant, in Russia, will be incurred through 2014, while spending for the Lancaster plant expansion will be incurred through 2015 with the majority of the spending expected to occur in 2014.

During the third quarter of 2013, the Asbestos PI Trust and TPG together sold 12,057,382 of their remaining shares in a secondary public offering. In connection with this transaction, we paid \$261.4 million, including associated fees, to buy-back 5,057,382 shares, which we currently hold in treasury. The treasury share purchase was funded by existing cash, borrowings under our credit facility and our securitization facility. Funds borrowed to complete this transaction were repaid by the end of the third quarter.

We believe that cash on hand and cash generated from operations, together with lines of credit, availability under our \$75 million securitization facility and the availability under our \$250 million revolving credit facility, will be adequate to address our foreseeable liquidity needs based on current expectations of our business operations, capital expenditures and scheduled payments of debt obligations.

**2012 COMPARED TO 2011****CONSOLIDATED RESULTS FROM CONTINUING OPERATIONS**

(dollar amounts in millions)

	2012	2011	Change is Favorable/ (Unfavorable)
Net sales:			
Americas	\$ 1,873.9	\$ 1,903.9	(1.6)%
EMEA	523.9	597.3	(12.3)%

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Pacific Rim	221.1	221.9	(0.4)%
Total consolidated net sales	\$ 2,618.9	\$ 2,723.1	(3.8)%
Operating income	\$ 271.2	\$ 239.8	13.1%

The decline in consolidated net sales was driven by \$93 million of lower volume and \$48 million of unfavorable foreign exchange impact which were only partially offset with favorable price and mix of \$47 million. Sales were also negatively impacted by our sale of the Patriot wood flooring distribution business which occurred in the third quarter of 2012 and negatively impacted sales for the full year 2012 by \$11 million when compared to the prior year.

Net sales in the Americas decreased driven primarily by volume declines, which were only partially offset by improvements in price and mix.

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Excluding unfavorable foreign exchange impact of \$39 million, net sales in the European markets decreased 6%, driven by continued volume declines which were only partially offset by improvements in price.

Excluding unfavorable foreign exchange impact of \$6 million, net sales in the Pacific Rim increased 2% as improvements in mix were partially offset by lower volumes.

Cost of goods sold was 75.8% of net sales in 2012, compared to 76.2% for the same period in 2011. The decrease of \$90 million was driven by lower sales in 2012 and manufacturing cost reductions of \$30 million. The comparison was impacted by \$21 million of costs associated with the closure of our Mobile, AL Building Products facility in 2012, \$13 million of costs associated with the closure of our Beaver Falls, PA Building Products facility in 2011 and \$9 million of costs associated with European Flooring cost reduction actions taken in 2011.

SG&A expenses in 2012 were \$418.3 million, or 16% of net sales, compared to \$454.0 million, or 17% of net sales, in 2011. The decreases were primarily due to reductions in core SG&A expense of \$32 million.

Restructuring charges for severance and related costs of (\$0.4) million were recorded in 2012, compared to \$9.0 million in 2011. See Note 15 to the Consolidated Financial Statements for further information.

Equity earnings from our WAVE joint venture were \$55.9 million in 2012 compared to \$54.9 million in 2011. See Note 10 to the Consolidated Financial Statements for further information.

Interest expense was \$53.7 million in 2012 compared to \$48.5 million in 2011. The increase in interest expense was driven by additional borrowings of \$250 million under our senior credit facility in March 2012 (see Liquidity section for further information).

Income tax expense was \$76.1 million and \$81.0 million in 2012 and 2011, respectively. The effective tax rate for 2012 was 34.5% as compared to a rate of 41.8% for 2011. The effective tax rate for 2012 was lower than 2011 primarily due to the release of foreign tax credit valuation allowance and changes in mix of geographic income and losses.

**REPORTABLE SEGMENT RESULTS****Building Products**

(dollar amounts in millions)

	2012	2011	Change is Favorable/ (Unfavorable)
Net sales:			
Americas	\$ 757.1	\$ 749.3	1.0%
EMEA	333.6	356.8	(6.5)%
Pacific Rim	128.2	131.4	(2.4)%

Total segment net sales	\$ 1,218.9	\$ 1,237.5	(1.5)%
Operating income	\$ 230.4	\$ 226.1	1.9%

The decline in Building Products net sales was driven by \$31 million of lower volume due to unfavorable market conditions in key geographies and \$25 million of unfavorable foreign exchange impact, which were only partially offset with favorable price and mix of \$37 million.

Net sales in the Americas increased due to improved price realization and positive mix which more than offset lower volumes.

Excluding unfavorable foreign exchange impact of \$20 million, net sales in the European markets decreased 1%, as improvements in price were unable to offset volume declines.

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Excluding unfavorable foreign exchange impact of \$4 million, net sales in the Pacific Rim increased 1% as improvements in mix were partially offset by lower volumes.

The increase in operating income was primarily driven by improvements in gross profit, partially offset by an increase in facility closure costs. Gross profit increased primarily from the benefits of price and mix of \$26 million and reductions in manufacturing and input costs of \$10 million, which more than offset volume declines of \$17 million. Operating income was negatively impacted by \$25 million of severance, impairment, and other charges associated with cost reduction actions in 2012 related to the closure of our Mobile, AL facility and European headcount reductions; and \$13 million of severance and other charges associated with cost reduction actions related to the closure of our Beaver Falls, PA facility in 2011.

**Resilient Flooring**

(dollar amounts in millions)

	2012	2011	Change is Favorable/ (Unfavorable)
Net sales:			
Americas	\$ 656.2	\$ 671.3	(2.2)%
EMEA	190.3	240.5	(20.9)%
Pacific Rim	92.9	90.5	2.7%
Total segment net sales	\$ 939.4	\$ 1,002.3	(6.3)%
Operating income	\$ 56.9	\$ 15.7	Favorable

The decline in Resilient Flooring net sales was driven by \$67 million of lower volume and \$23 million of unfavorable foreign exchange impact; which were only partially offset with favorable price and mix of \$21 million.

Net sales in the Americas decreased as improvements in mix and price gains were unable to offset volume declines driven by lower sales to our national home center channel.

Excluding unfavorable foreign exchange impact of \$20 million, net sales in the European markets decreased 14%, as improvements in price were unable to offset market driven volume declines, especially in the public sector.

Excluding unfavorable foreign exchange impact of \$2 million, net sales in the Pacific Rim increased 5% as increased sales in China offset market driven sales declines in Australia.

The increase in operating income was driven by improvements in price and mix of \$14 million and reductions in manufacturing and input costs and SG&A expenses of \$16 million and \$23 million, respectively; which more than offset the impact of volume declines of \$31 million. The comparison was also impacted by \$2 million and \$21 million of severance, impairment, restructuring and other charges associated with our cost reduction actions in the European Flooring business in 2012 and 2011, respectively.

**Wood Flooring**

(dollar amounts in millions)

	2012	2011	Change is (Unfavorable)
Total segment net sales	\$ 460.6	\$ 483.3	(4.7)%
Operating income	\$ 37.3	\$ 43.4	(14.1)%

The decline in Wood Flooring net sales was driven by lower price and mix of \$11 million while the divestiture of our Patriot wood flooring distribution business negatively impacted sales by \$11 million when

**Table of Contents****Management's Discussion and Analysis of Financial Condition and Results of Operations**

compared to the prior year. Lower sales to our national home center channel were offset by increased sales to independent distributors.

The decrease in operating income was driven by unfavorable price and mix of \$14 million, partially offset by improvements in manufacturing and input costs of \$8 million. The operating income impact of the higher sales volume and Patriot divestiture offset each other.

**Unallocated Corporate**

Unallocated corporate expense of \$53.4 million increased from \$45.4 million in the prior year. 2012 included a \$14 million lower pension credit as compared to 2011. SG&A reductions only partially offset the impact of the pension credit reduction.

**OFF-BALANCE SHEET ARRANGEMENTS**

No disclosures are required pursuant to Item 303(a)(4) of Regulation S-K.

**CONTRACTUAL OBLIGATIONS**

As part of our normal operations, we enter into numerous contractual obligations that require specific payments during the term of the various agreements. The following table includes amounts ongoing under contractual obligations existing as of December 31, 2013. Only known payments that are dependent solely on the passage of time are included. Obligations under contracts that contain minimum payment amounts are shown at the minimum payment amount. Contracts that contain variable payment structures without minimum payments are excluded. Purchase orders that are entered into in the normal course of business are also excluded because they are generally cancelable and not legally binding. Amounts are presented below based upon the currently scheduled payment terms. Actual future payments may differ from the amounts presented below due to changes in payment terms or events affecting the payments.

(dollar amounts in millions)	2014	2015	2016	2017	2018	Thereafter	Total
Long-term debt	\$ 23.9	\$ 39.6	\$ 52.1	\$ 55.3	\$ 402.9	\$ 492.7	\$ 1,066.5
Scheduled interest payments <sup>(1)</sup>	41.1	43.6	43.0	42.7	31.5	72.6	274.5
Operating lease obligations, net of sublease income <sup>(2)</sup>	9.7	8.5	5.4	3.0	1.6	3.5	31.7
Unconditional purchase obligations <sup>(3)</sup>	45.7	26.0	3.7	3.1	2.9		81.4
Pension contributions <sup>(4)</sup>	19.3						19.3
Other obligations <sup>(5), (6)</sup>	1.1						1.1
<b>Total contractual obligations</b>	<b>\$ 140.8</b>	<b>\$ 117.7</b>	<b>\$ 104.2</b>	<b>\$ 104.1</b>	<b>\$ 438.9</b>	<b>\$ 568.8</b>	<b>\$ 1,474.5</b>



- (1) For debt with variable interest rates and interest rate swaps, we projected future interest payments based on market-based interest rate swap curves.
- (2) Lease obligations include the minimum payments due under existing agreements with non-cancelable lease terms in excess of one year.
- (3) Unconditional purchase obligations include (a) purchase contracts whereby we must make guaranteed minimum payments of a specified amount regardless of how little material is actually purchased ( take or pay contracts) and (b) service agreements. Unconditional purchase obligations exclude contracts entered into during the normal course of business that are non-cancelable and have fixed per unit fees, but where the monthly commitment varies based upon usage. Cellular phone contracts are an example.
- (4) Pension contributions include estimated contributions for our defined benefit pension plans. We are not presenting estimated payments in the table above beyond 2014 as funding can vary significantly from year to year based upon changes in the fair value of plan assets, funding regulations and actuarial assumptions.
- (5) Other obligations include payments under severance agreements.
- (6) Other obligations, does not include \$145.2 million of liabilities under ASC 740 *Income Taxes*. Due to the uncertainty relating to these positions, we are unable to reasonably estimate the ultimate amount or timing of the settlement of these issues. See Note 16 to the Consolidated Financial Statements for more information.

**Table of Contents****Management's Discussion and Analysis of Financial Condition and Results of Operations**

This table excludes obligations related to postretirement benefits (retiree health care and life insurance) since we voluntarily provide these benefits. The amount of benefit payments we made in 2013 was \$22.2 million. See Note 18 to the Consolidated Financial Statements for additional information regarding future expected cash payments for postretirement benefits.

We have issued financial guarantees to assure payment on behalf of our subsidiaries in the event of default on various debt and lease obligations in the table above. We have not issued any guarantees on behalf of joint-venture or unrelated businesses.

We are party to supply agreements, some of which require the purchase of inventory remaining at the supplier upon termination of the agreement. The last such agreement will expire in 2015. Had these agreements terminated at December 31, 2013, we would have been obligated to purchase approximately \$12.8 million of inventory. Historically, due to production planning, we have not had to purchase material amounts of product at the end of similar contracts. Accordingly, no liability has been recorded for these guarantees.

We utilize lines of credit and other commercial commitments in order to ensure that adequate funds are available to meet operating requirements. Letters of credit are issued to third-party suppliers, insurance and financial institutions and typically can only be drawn upon in the event of our failure to pay our obligations to the beneficiary. This table summarizes the commitments we have available in the U.S. for use as of December 31, 2013. Letters of credit are currently arranged through our revolving credit facility or our securitization facility.

**Other Commercial**

Commitments (dollar amounts in millions)	Total	Less				
	Amounts Committed	Than 1 Year	1 Year	3 Years	4 Years	5 Over 5 Years
Letters of credit	\$ 71.9	\$ 71.9				

In addition, our foreign subsidiaries had available lines of credit totaling \$16.3 million of which \$1.7 million was available only for letters of credit and guarantees. There were \$0.7 million of letters of credit and guarantees issued under these credit lines as of December 31, 2013, leaving an additional letter of credit availability of \$1.0 million. There were no borrowings under these lines of credit as of December 31, 2013 leaving \$14.6 million of unused lines of credit available for foreign borrowings.

On December 31, 2013, we had a \$250 million revolving credit facility with a \$150 million sublimit for letters of credit, of which \$14.8 million was outstanding. There were no borrowings under the revolving credit facility. Availability under this facility totaled \$235.2 million as of December 31, 2013. We also have the \$75 million securitization facility which as of December 31, 2013 had letters of credit outstanding of \$56.9 million and no borrowings against it. Maximum capacity under this facility was \$69.8 million (of which \$12.9 million was available), subject to accounts receivable balances and other collateral adjustments.

In connection with our disposition of certain assets through a variety of unrelated transactions, we have entered into contracts that included various indemnity provisions, some of which are customary for such transactions, while others

hold the acquirer of the assets harmless with respect to liabilities relating to such matters as taxes, environmental and other litigation. Some of these provisions include exposure limits, but many do not. Due to the nature of the indemnities, it is not possible to estimate the potential maximum exposure under these contractual provisions. For contracts under which an indemnity claim has been received, a liability of \$3.4 million has been recorded as of December 31, 2013, which is included in environmental liabilities as disclosed in Note 30 to the Consolidated Financial Statements.

Under our sale agreements related to the cabinets business divestiture, we have agreed to indemnify the buyer with respect to a portion of any potential withdrawal liability that may be incurred by the buyer in the event of their withdrawal from the Carpenters Labor-Management Pension Fund. Such indemnities only apply in the event that the sale of assets transaction itself did not trigger withdrawal liability. As of December 31, 2013, we have recorded a liability of \$7.2 million relative to this matter. The maximum indemnification liability is \$10.0 million. See Note 30 to the Consolidated Financial Statements for additional details.

**Table of Contents****ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK****Market Risk**

We are exposed to market risk from changes in foreign currency 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. Forward swap and option contracts are entered into for periods consistent with underlying exposure and do not constitute positions independent of those exposures. We use derivative financial instruments as risk management tools and not for speculative trading purposes. In addition, derivative financial instruments are entered into with a diversified group of major financial institutions in order to manage our exposure to potential nonperformance on such instruments. We regularly monitor developments in the capital markets.

**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 receive cash collateral with any counterparty for our derivative transactions. As of December 31, 2013 we had no cash collateral posted or received for any of our derivative transactions. These ISDAs do not contain any credit contingent features other than those contained in our bank credit facility. Exposure to individual counterparties is controlled, and thus we consider the risk of counterparty default to be negligible.

**Interest Rate Sensitivity**

We are subject to interest rate variability on our Term Loan A, Term Loan B, revolving credit facility and other borrowings. A hypothetical increase of one-quarter percentage point in LIBOR interest rates from December 31, 2013 levels would increase 2014 interest expense by approximately \$0.6 million. A significant portion of our debt has a 1% LIBOR floor which would not be affected by a one-quarter percentage point move in LIBOR given the current interest rate environment. We also have \$1 billion of interest rate swaps outstanding, which fix a portion of our debt. The effects of the interest rate swaps are included in this calculation.

As of December 31, 2013, we had interest rate swaps outstanding on Term Loan A and on Term Loan B, with notional amounts of \$350 million and \$650 million, respectively. 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. Under the terms of Term Loan A swap, we receive 3-month LIBOR and pay a fixed rate over the hedged period. Under the terms of the Term Loan B swaps, we receive the greater of 3-month LIBOR or the 1% LIBOR Floor and pay a fixed rate over the hedged period. The following table summarizes our interest rate swaps:

Trade Date	Notional Amount	Interest Rate Paid	Coverage Period	Risk Coverage
March 31, 2011	\$ 100.0	2.303%	March 2011 to November 2015	Term Loan A
March 31, 2011	\$ 200.0	2.523%	March 2011 to November 2015	Term Loan B
March 27, 2012	\$ 250.0	1.928%	March 2012 to March 2018	Term Loan B

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March 27, 2012	\$ 200.0	2.810%	November 2015 to March 2018	Term Loan B
April 16, 2013	\$ 250.0	1.398%	November 2015 to March 2018	Term Loan A

These swaps are designated as cash flow hedges against changes in LIBOR for a portion of our variable rate debt. The mark-to-market loss was \$7.9 million at December 31, 2013.

The table below provides information about our long-term debt obligations as of December 31, 2013, including payment requirements and related weighted-average interest rates by scheduled maturity dates. Weighted average variable rates are based on implied forward rates in the yield curve and are exclusive of our interest rate swaps.

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Scheduled maturity date

(dollar amounts in millions)	2014	2015	2016	2017	2018	After 2018	Total
Variable rate	\$ 23.9	\$ 39.6	\$ 52.1	\$ 55.3	\$ 402.9	\$ 492.7	\$ 1,066.5
Avg. interest rate	3.03%	3.30%	4.14%	5.06%	5.90%	5.52%	5.44%

**Exchange Rate Sensitivity**

We manufacture and sell our products in a number of countries throughout the world and, as a result, 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. We use foreign currency forward exchange contracts to reduce our remaining exposure. At December 31, 2013, our major, pre-hedging foreign currency exposures are to the Canadian Dollar, Euro, and Chinese Renminbi. A 10% strengthening of all currencies against the U.S. dollar compared to December 31, 2013 levels would increase our 2014 earnings before income taxes by approximately \$2.3 million, including the impact of current foreign currency forward exchange contracts.

We also use foreign currency forward exchange contracts to hedge exposures created by cross-currency intercompany loans.

The table below details our outstanding currency instruments as of December 31, 2013.

On balance sheet foreign exchange related derivatives

(dollar amounts in millions)	Maturing in 2014	Maturing in 2015	Total
Notional amounts	\$ 143.2	\$ 24.4	\$ 167.6
Assets at fair value	4.4	0.8	5.2

**Natural Gas Price Sensitivity**

We purchase natural gas for use in the manufacture of ceiling tiles and other products, as well as to heat many of our facilities. As a result, we are exposed to fluctuations in the price of natural gas. We have a policy of reducing North American natural gas volatility through derivative instruments, including forward swap contracts, purchased call options and zero-cost collars. As of December 31, 2013, we had contracts to hedge approximately \$20.1 million (notional amounts) of natural gas. All of these contracts mature by December 2014. A 10% increase in North American natural gas prices compared to December 31, 2013 prices would increase our 2014 expenses by approximately \$1 million including the impact of current hedging contracts. At December 31, 2013 we had recorded net assets of \$0.5 million related to these contracts.

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**ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA**

**SUPPLEMENTARY DATA**

Quarterly Financial Information for the Years Ended December 31, 2013 and 2012 (Unaudited)

The following consolidated financial statements are filed as part of this Annual Report on Form 10-K:  
Reports of Independent Registered Public Accounting Firm.

Consolidated Statements of Earnings and Comprehensive Income for the Years Ended December 31, 2013, 2012 and 2011.

Consolidated Balance Sheets as of December 31, 2013 and 2012.

Consolidated Statements of Equity for the Years Ended December 31, 2013, 2012 and 2011.

Consolidated Statements of Cash Flows for the Years Ended December 31, 2013, 2012 and 2011.

Notes to Consolidated Financial Statements.

Schedule II for the Years Ended December 31, 2013, 2012, and 2011.

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## Armstrong World Industries, Inc., and Subsidiaries

## Quarterly Financial Information (unaudited)

(dollar amounts in millions, except for per share data)

	First	Second	Third	Fourth
<b>2013</b>				
Net Sales	\$ 622.3	\$ 706.6	\$ 729.7	\$ 661.3
Gross profit	144.5	164.3	179.9	134.0
Earnings from continuing operations	3.2	30.6	55.9	10.8
Per share of common stock:				
Basic	\$ 0.05	\$ 0.51	\$ 0.95	\$ 0.20
Diluted	\$ 0.05	\$ 0.51	\$ 0.94	\$ 0.20
Price range of common stock - high	\$ 58.48	\$ 55.94	\$ 57.14	\$ 57.83
Price range of common stock - low	\$ 49.84	\$ 44.93	\$ 45.81	\$ 49.55
Dividend paid per share				
<b>2012</b>				
Net Sales	\$ 636.0	\$ 675.4	\$ 694.7	\$ 612.8
Gross profit	140.0	170.6	186.9	135.7
Earnings from continuing operations	19.0	42.2	74.0	9.2
Per share of common stock:				
Basic	\$ 0.32	\$ 0.71	\$ 1.25	\$ 0.15
Diluted	\$ 0.32	\$ 0.71	\$ 1.24	\$ 0.15
Price range of common stock - high	\$ 59.78	\$ 49.97	\$ 50.00	\$ 54.98
Price range of common stock - low	\$ 44.60	\$ 42.57	\$ 38.08	\$ 45.83
Dividend paid per share	\$ 8.55			

Note: The net sales and gross profit amounts above are reported on a continuing operations basis. The sum of the quarterly earnings per share data may not equal the total year amounts due to changes in the average shares outstanding and, for diluted data, the exclusion of the anti-dilutive effect in certain quarters.



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**Fourth Quarter 2013 Compared With Fourth Quarter 2012 – Continuing Operations**

Net sales of \$661.3 million in the fourth quarter of 2013 increased from net sales of \$612.8 million in the fourth quarter of 2012. Net sales increased \$29 million or 7% in the Americas. Excluding the favorable impact of foreign exchange of \$4 million, net sales in Europe improved by \$15 million or 12%. Excluding unfavorable impact from foreign exchange of \$3 million, net sales in the Pacific Rim increased \$4 million or 7%.

Building Products net sales increased by \$27 million driven primarily by improved volumes in all geographies. Net sales also increased due to improved price realization and favorable mix. Resilient Flooring net sales decreased by \$4 million or 2%, primarily due to lower volumes in the Americas. Wood Flooring net sales increased \$25 million or 24% as volume, price and mix all improved.

For the fourth quarter of 2013, cost of goods sold was 80% of net sales, compared to 78% in 2012. The increase was primarily due to raw material inflation, particularly lumber, and plant start-up costs in Russia. The comparison was also impacted by approximately \$8 million associated with cost reduction actions in the Resilient Flooring business in Europe and Australia during the fourth quarter of 2013.

Selling, general and administrative ( SG&A ) expenses for the fourth quarter of 2013 were \$116.8 million, or 18% of net sales compared to \$105.7 million, or 17% of net sales, for the fourth quarter of 2012. The increase was primarily due to emerging market growth initiatives, and increased Unallocated Corporate spending on outside professional services.

Equity earnings in the fourth quarter of 2013 and 2012 were \$13.2 million and \$11.9 million, respectively.

Operating income of \$30.4 million in the fourth quarter of 2013 compared to \$42.3 million in the fourth quarter of 2012.

Interest expense was \$12.4 million compared to \$14.0 million in 2012. The decrease in the fourth quarter was primarily due to the lower interest rate associated with the amendment of our senior credit facility in the first quarter of 2013.

Fourth quarter income tax expense was \$7.5 million and \$20.5 million in 2013 and 2012, respectively. The fourth quarter effective tax rate for 2013 was 41.0% as compared to a rate of 69.0% for 2012. The effective tax rate for the fourth quarter of 2013 was lower primarily due to research and development tax credits covering multiple years, domestic production activities, and mix of income in tax jurisdictions, partially offset by higher unbenefitted foreign losses.

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**Management's Report on Internal Control over Financial Reporting**

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934, as amended. Our internal control over financial reporting was designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of our financial statements for external purposes in accordance with generally accepted accounting principles.

Because of inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in *Internal Control-Integrated Framework (1992)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this evaluation and the criteria in the COSO framework, our management concluded that our internal control over financial reporting was effective as of December 31, 2013.

KPMG LLP, an independent registered public accounting firm, audited our internal control over financial reporting as of December 31, 2013, as stated in their report included herein.

/s/ Matthew J. Espe  
Matthew J. Espe  
President and Chief Executive Officer

/s/ David S. Schulz  
David S. Schulz  
  
Senior Vice President and Chief Financial  
Officer

/s/ Stephen F. McNamara  
Stephen F. McNamara  
  
Vice President and Corporate Controller  
February 24, 2014

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**Report of Independent Registered Public Accounting Firm**

The Board of Directors and Shareholders

Armstrong World Industries, Inc.:

We have audited Armstrong World Industries, Inc. and subsidiaries (the Company) internal control over financial reporting as of December 31, 2013, based on criteria established in *Internal Control-Integrated Framework (1992)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, Armstrong World Industries, Inc. and subsidiaries maintained, in all material respects, effective internal control over financial reporting as of December 31, 2013, based on criteria established in *Internal Control-Integrated Framework (1992)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of the Company as of December 31, 2013 and 2012, and the related consolidated statements of earnings and comprehensive income, equity, and cash flows for each of the years in the three-year period ended December 31, 2013, and our report dated February 24, 2014 expressed an unqualified opinion on those consolidated financial statements.

/s/ KPMG LLP

Philadelphia, Pennsylvania

February 24, 2014

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**Report of Independent Registered Public Accounting Firm**

The Board of Directors and Shareholders

Armstrong World Industries, Inc.:

We have audited the accompanying consolidated balance sheets of Armstrong World Industries, Inc. and subsidiaries ( the Company ) as of December 31, 2013 and 2012, and the related consolidated statements of earnings and comprehensive income, equity and cash flows for each of the years in the three-year period ended December 31, 2013. In connection with our audits of the consolidated financial statements, we also have audited the financial statement schedule as listed in the accompanying index on page 40. These consolidated financial statements and financial statement schedule are the responsibility of the Company s management. Our responsibility is to express an opinion on these consolidated financial statements and financial statement schedule based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Armstrong World Industries, Inc. and subsidiaries as of December 31, 2013 and 2012, and the results of their operations and their cash flows for each of the years in the three-year period ended December 31, 2013, in conformity with U.S. generally accepted accounting principles. Also in our opinion, the related financial statement schedule, when considered in relation to the basic consolidated financial statements taken as a whole, presents fairly, in all material respects, the information set forth therein.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Company s internal control over financial reporting as of December 31, 2013, based on criteria established in *Internal Control-Integrated Framework (1992)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), and our report dated February 24, 2014 expressed an unqualified opinion on the effectiveness of the Company s internal control over financial reporting.

/s/ KPMG LLP

Philadelphia, Pennsylvania

February 24, 2014

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## Armstrong World Industries, Inc., and Subsidiaries

## Consolidated Statements of Earnings and Comprehensive Income

(amounts in millions, except per share data)

	Years Ended December 31,		
	2013	2012	2011
Net sales	\$ 2,719.9	\$ 2,618.9	\$ 2,723.1
Cost of goods sold	2,097.2	1,985.7	2,075.2
Gross profit	622.7	633.2	647.9
Selling, general and administrative expenses	443.7	418.3	454.0
Restructuring charges, net	(0.2)	(0.4)	9.0
Equity earnings from joint venture	(59.4)	(55.9)	(54.9)
Operating income	238.6	271.2	239.8
Interest expense	68.8	53.7	48.5
Other non-operating expense	1.8	0.5	1.3
Other non-operating (income)	(3.9)	(3.5)	(3.8)
Earnings from continuing operations before income taxes	171.9	220.5	193.8
Income tax expense	71.4	76.1	81.0
Earnings from continuing operations	100.5	144.4	112.8
Net (loss) from discontinued operations, net of tax benefit of (\$ - ), (\$7.1) and (\$0.2)		(12.2)	(0.4)
Loss on sale of discontinued business, net of tax benefit of (\$3.6), (\$0.6) and (\$ - )	(6.4)	(0.9)	
Net (loss) from discontinued operations	(6.4)	(13.1)	(0.4)
Net earnings	\$ 94.1	\$ 131.3	\$ 112.4
Other comprehensive income (loss), net of tax:			
Foreign currency translation adjustments	(8.8)	7.0	(1.6)
Derivative gain (loss)	18.5	(5.2)	(9.0)
Pension and postretirement adjustments	90.1	(58.2)	(78.7)
Total other comprehensive income (loss)	99.8	(56.4)	(89.3)
Total comprehensive income	\$ 193.9	\$ 74.9	\$ 23.1
Earnings per share of common stock, continuing operations:			
Basic	\$ 1.73	\$ 2.43	\$ 1.92

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Diluted	\$ 1.71	\$ 2.41	\$ 1.91
(Loss) per share of common stock, discontinued operations:			
Basic	(\$ 0.11)	(\$ 0.22)	(\$ 0.01)
Diluted	(\$ 0.11)	(\$ 0.22)	(\$ 0.01)
Net earnings per share of common stock:			
Basic	\$ 1.62	\$ 2.21	\$ 1.91
Diluted	\$ 1.60	\$ 2.19	\$ 1.90
Average number of common shares outstanding:			
Basic	57.8	58.9	58.3
Diluted	58.4	59.5	58.8
Dividend declared per common share		\$ 8.55	
See accompanying notes to consolidated financial statements beginning on page 50.			

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## Armstrong World Industries, Inc., and Subsidiaries

## Consolidated Balance Sheets

(amounts in millions, except share data)

	December 31, 2013	December 31, 2012
<u>Assets</u>		
Current assets:		
Cash and cash equivalents	\$ 135.2	\$ 336.4
Accounts and notes receivable, net	222.2	204.6
Inventories, net	381.7	369.8
Deferred income taxes	72.0	49.9
Income tax receivable	17.4	16.9
Other current assets	55.5	42.3
<b>Total current assets</b>	<b>884.0</b>	<b>1,019.9</b>
Property, plant, and equipment, less accumulated depreciation and amortization of \$639.7 and \$583.8, respectively	1,107.2	1,005.0
Prepaid pension costs	167.0	39.6
Investment in joint venture	132.0	133.5
Intangible assets, net	522.9	527.7
Deferred income taxes	30.1	35.1
Other noncurrent assets	73.4	93.5
<b>Total assets</b>	<b>\$ 2,916.6</b>	<b>\$ 2,854.3</b>
<u>Liabilities and Shareholders' Equity</u>		
Current liabilities:		
Current installments of long-term debt	\$ 23.9	\$ 33.0
Accounts payable and accrued expenses	383.6	346.3
Income tax payable	2.7	4.1
Deferred income taxes	0.7	1.3
<b>Total current liabilities</b>	<b>410.9</b>	<b>384.7</b>
Long-term debt, less current installments	1,042.6	1,038.0
Postretirement benefit liabilities	234.2	248.5
Pension benefit liabilities	225.5	247.9
Other long-term liabilities	67.5	86.6
Income taxes payable	81.7	63.3
Deferred income taxes	181.0	66.2
<b>Total noncurrent liabilities</b>	<b>1,832.5</b>	<b>1,750.5</b>
Shareholders' equity:		
Common stock, \$0.01 par value per share, authorized		



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200 million shares; issued 59,464,309 shares, outstanding 54,406,927 shares in 2013 and 58,934,050 shares issued and outstanding in 2012	0.6	0.6
Capital in excess of par value	1,098.4	1,076.8
Retained earnings	207.2	113.1
Treasury stock, at cost, 5,057,382 shares in 2013	(261.4)	
Accumulated other comprehensive (loss)	(371.6)	(471.4)
Total shareholders' equity	673.2	719.1
Total liabilities and shareholders' equity	\$ 2,916.6	\$ 2,854.3

See accompanying notes to consolidated financial statements beginning on page 50.

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## Armstrong World Industries, Inc., and Subsidiaries

## Consolidated Statements of Equity

(amounts in millions, except share data)

	Common Stock				Treasury Stock		Accumulated Other Comprehensive Income		Total
	Shares	Amount	Capital in Excess of Par Value	Retained Earnings (Accumulated Deficit)	Shares	Amount	(Loss)		
December 31, 2010	58,070,807	\$ 0.6	\$ 1,451.2	(\$35.3)			(\$325.7)	\$ 1,090.8	
Stock issuance, net	353,884								
Share-based employee compensation			16.3					16.3	
Net earnings				112.4				112.4	
Other comprehensive loss							(89.3)	(89.3)	
<b>December 31, 2011</b>	58,424,691	\$ 0.6	\$ 1,467.5	\$ 77.1			(\$415.0)	\$ 1,130.2	
Stock issuance, net	509,359								
Share-based employee compensation			22.2					22.2	
Net earnings				131.3				131.3	
Dividends declared				(95.3)				(95.3)	
Dividends declared in excess of retained earnings			(412.9)					(412.9)	
Other comprehensive loss							(56.4)	(56.4)	
<b>December 31, 2012</b>	58,934,050	\$ 0.6	\$ 1,076.8	\$ 113.1			(\$471.4)	\$ 719.1	
Stock issuance, net	530,259								
Repurchase of common stock	(5,057,382)				5,057,382	(\$ 261.4)		(261.4)	
Share-based employee compensation			21.6					21.6	
Net earnings				94.1				94.1	
Other comprehensive							99.8	99.8	

income

<b>December 31, 2013</b>	54,406,927	\$ 0.6	\$ 1,098.4	\$ 207.2	5,057,382	(\$ 261.4)	(\$371.6)	\$ 673.2
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See accompanying notes to consolidated financial statements beginning on page 50.

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## Armstrong World Industries, Inc., and Subsidiaries

## Consolidated Statements of Cash Flows

(amounts in millions)

	Years Ended December 31,		
	2013	2012	2011
Cash flows from operating activities:			
Net earnings	\$ 94.1	\$ 131.3	\$ 112.4
Adjustments to reconcile earnings to net cash provided by operating activities:			
Depreciation and amortization	109.0	112.7	113.8
Write off of debt financing costs	18.9		
Loss on sale of discontinued operations	10.0	1.5	
Impairment on assets of discontinued operations		17.5	
Fixed asset impairment		5.7	3.3
Gain on sale of fixed assets	(4.1)	(0.1)	(1.8)
Deferred income taxes	37.0	26.5	62.7
Share-based compensation	15.9	15.6	11.1
Equity earnings from joint venture	(59.4)	(55.9)	(54.9)
U.S. pension credit	(2.1)	(12.2)	(26.0)
Restructuring charges, net	(0.2)	(0.4)	9.0
Restructuring payments	(0.3)	(2.8)	(20.0)
Changes in operating assets and liabilities:			
Receivables	(18.8)	8.8	(2.0)
Inventories	(11.9)	(0.6)	9.2
Other current assets	(9.2)	(10.4)	0.7
Other noncurrent assets	7.1	3.7	(15.5)
Accounts payable and accrued expenses	47.4	(23.6)	11.4
Income taxes payable	16.3	33.4	(1.8)
Other long-term liabilities	(35.3)	(27.9)	(15.1)
Other, net	(0.7)	(2.8)	3.2
Net cash provided by operating activities	213.7	220.0	199.7
Cash flows from investing activities:			
Purchases of property, plant and equipment	(213.7)	(198.8)	(150.6)
Divestiture (Acquisition)		24.6	(4.2)
Restricted cash		1.5	28.5
Return of investment from joint venture	61.1	63.5	102.4
(Payment of) proceeds from company owned life insurance, net	(0.4)	0.7	8.9
Proceeds from the sale of assets	7.2	16.6	5.5
Net cash (used for) investing activities	(145.8)	(91.9)	(9.5)

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Cash flows from financing activities:			
Proceeds from long-term debt	1,111.0	250.0	2.2
Payments of long-term debt	(1,115.5)	(22.0)	(34.1)
Financing costs	(7.2)	(8.1)	(7.9)
Special dividends paid	(1.4)	(507.1)	(0.3)
Proceeds from exercised stock options	8.6	12.2	7.7
Proceeds from company owned life insurance loans, net	2.2	1.3	3.6
Payment for treasury stock acquired	(261.4)		
Net cash (used for) financing activities	(263.7)	(273.7)	(28.8)
Effect of exchange rate changes on cash and cash equivalents	(5.4)	1.4	3.4
Net (decrease) increase in cash and cash equivalents	(201.2)	(144.2)	164.8
Cash and cash equivalents at beginning of year	336.4	480.6	315.8
Cash and cash equivalents at end of year	\$ 135.2	\$ 336.4	\$ 480.6
Supplemental Cash Flow Disclosures:			
Interest paid	\$ 42.4	\$ 47.0	\$ 40.5
Income taxes paid, net	14.4	8.4	19.9
Amounts in accounts payable for capital expenditures	15.3	25.9	11.0
See accompanying notes to consolidated financial statements beginning on page 50.			

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Armstrong World Industries, Inc., and Subsidiaries

Notes to Consolidated Financial Statements

(dollar amounts in millions)

**NOTE 1. BUSINESS AND CHAPTER 11 REORGANIZATION**

Armstrong World Industries, Inc. ( AWI ) is a Pennsylvania corporation incorporated in 1891. When we refer to we, our and us in these notes, we are referring to AWI and its subsidiaries. We use the term AWI when we are referring solely to Armstrong World Industries, Inc.

In December 2000, AWI filed a voluntary petition for relief (the Filing ) under Chapter 11 of the U.S. Bankruptcy Code (the Bankruptcy Code ) in the United States Bankruptcy Court for the District of Delaware (the Bankruptcy Court ) in order to use the court-supervised reorganization process to achieve a resolution of AWI s asbestos-related liability. On October 2, 2006, AWI s court-approved plan of reorganization ( POR ) became effective and AWI emerged from Chapter 11. All claims in AWI s Chapter 11 case have been resolved and closed.

On October 2, 2006, the Armstrong World Industries, Inc. Asbestos Personal Injury Settlement Trust ( Asbestos PI Trust ) was created to address AWI s personal injury (including wrongful death) asbestos-related liability. All present and future asbestos-related personal injury claims against AWI, including contribution claims of co-defendants but excluding certain foreign claims against subsidiaries, arising directly or indirectly out of AWI s pre-Filing use of, or other activities involving, asbestos are channeled to the Asbestos PI Trust.

In August 2009, Armor TPG Holdings LLC ( TPG ) and the Asbestos PI Trust entered into agreements pursuant to which TPG purchased from the Asbestos PI Trust 7,000,000 shares of AWI common stock and acquired an economic interest in an additional 1,039,777 shares pursuant to a forward sales contract. During the fourth quarter of 2012, the Asbestos PI Trust and TPG together sold 5,980,000 shares in a secondary public offering. In the third quarter of 2013, the Asbestos PI Trust and TPG together sold 12,057,382 shares in another secondary public offering. Contemporaneously with this secondary public offering, we paid \$261.4 million, including associated fees, to buy back 5,057,382 shares, which we currently hold in treasury. The treasury share purchase was funded by existing cash and borrowings under our credit and securitization facilities. In November 2013, the Asbestos PI Trust physically settled the 2009 forward sales contract by delivering to TPG the 1,039,777 shares in which TPG previously held an economic interest. Additionally, during the fourth quarter of 2013, the Asbestos PI Trust and TPG together sold an additional 6,000,000 shares. We did not sell any shares and did not receive any proceeds from these offerings. As a result of these transactions, the Asbestos PI Trust and TPG together now hold approximately 25% of AWI s outstanding shares and maintain a shareholders agreement, pursuant to which they agree to vote their shares together on certain matters.

**NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

**Consolidation Policy.** The consolidated financial statements and accompanying data in this report include the accounts of AWI and its majority-owned subsidiaries. All significant intercompany transactions have been eliminated from the consolidated financial statements.

**Use of Estimates.** We prepare our financial statements in conformity with U.S. generally accepted accounting principles, which requires management to make estimates and assumptions. These estimates and assumptions affect the reported amounts of assets, liabilities, revenues and expenses. When preparing an estimate, management

determines the amount based upon the consideration of relevant internal and external information. Actual results may differ from these estimates.

Reclassifications. Certain amounts in the prior year's Consolidated Financial Statements and related notes and schedule thereto have been recast to conform to the 2013 presentation.

Revenue Recognition. We recognize revenue from the sale of products when persuasive evidence of an arrangement exists, title and risk of loss transfers to the customers, prices are fixed and determinable, and it is reasonably assured the related accounts receivable is collectible. Our standard sales terms are Free On Board ( FOB ) shipping point. We have some sales terms that are FOB destination. Our products are sold with normal and customary return provisions. Sales discounts are deducted immediately from the sales invoice. Provisions, which are recorded as a reduction of revenue, are made for the estimated cost of rebates, promotional programs and warranties. We defer recognizing revenue if special sales agreements, established at the time of sale, warrant this treatment.

Sales Incentives. Sales incentives are reflected as a reduction of net sales.

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(dollar amounts in millions)

Shipping and Handling Costs. Shipping and handling costs are reflected in cost of goods sold.

Advertising Costs. We recognize advertising expenses as they are incurred.

Research and Development Costs. We recognize research and development costs as they are incurred.

Pension and Postretirement Benefits. We have benefit plans that provide for pension, medical and life insurance benefits to certain eligible employees when they retire from active service. See Note 18 to the Consolidated Financial Statements for disclosures on pension and postretirement benefits.

Taxes. The provision for income taxes has been determined using the asset and liability approach of accounting for income taxes to reflect the expected future tax consequences of events recognized in the financial statements. Deferred income tax assets and liabilities are recognized by applying enacted tax rates to temporary differences that exist as of the balance sheet date which result from differences in the timing of reported taxable income between tax and financial reporting.

We reduce the carrying amounts of deferred tax assets by a valuation allowance if, based on the available evidence, it is more likely than not that such assets will not be realized. The need to establish valuation allowances for deferred tax assets is assessed quarterly. In assessing the requirement for, and amount of, a valuation allowance in accordance with the more likely than not standard, we give appropriate consideration to all positive and negative evidence related to the realization of the deferred tax assets. This assessment considers, among other matters, the nature, frequency and severity of current and cumulative losses, forecasts of future profitability and foreign source income, the duration of statutory carryforward periods, and our experience with operating loss and tax credit carryforward expirations. A history of cumulative losses is a significant piece of negative evidence used in our assessment. If a history of cumulative losses is incurred for a tax jurisdiction, forecasts of future profitability are not used as positive evidence related to the realization of the deferred tax assets in the assessment.

We recognize the tax benefits of an uncertain tax position if those benefits are more likely than not to be sustained based on existing tax law. Additionally, we establish a reserve for tax positions that are more likely than not to be sustained based on existing tax law, but uncertain in the ultimate benefit to be sustained upon examination by the relevant taxing authorities. Unrecognized tax benefits are subsequently recognized at the time the more likely than not recognition threshold is met, the tax matter is effectively settled or the statute of limitations for the relevant taxing authority to examine and challenge the tax position has expired, whichever is earlier.

Taxes collected from customers and remitted to governmental authorities are reported on a net basis.

Earnings per Share. Basic earnings per share is computed by dividing the earnings attributable to common shares by the weighted average number of shares of common stock outstanding during the period. Diluted earnings per share reflects the potential dilution of securities that could share in the earnings.



Cash and Cash Equivalents. Cash and cash equivalents include cash on hand and short-term investments that have maturities of three months or less when purchased.

Concentration of Credit. We principally sell products to customers in the building products industries in various geographic regions. No one customer accounted for 10% or more of our total consolidated net sales in the years 2013, 2012, and 2011. We monitor the creditworthiness of our customers and generally do not require collateral.

Receivables. We sell the vast majority of our products to select, pre-approved customers using customary trade terms that allow for payment in the future. Customer trade receivables, customer notes receivable and miscellaneous receivables (which include supply related rebates and other), net of allowances for doubtful accounts, customer credits and warranties are reported in accounts and notes receivable, net. Notes receivable from divesting certain businesses are included in other current assets and other non-current assets based upon the payment terms. Cash flows from the collection of current receivables are classified as operating cash flows on the consolidated statements of cash flows.

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Armstrong World Industries, Inc., and Subsidiaries

Notes to Consolidated Financial Statements

(dollar amounts in millions)

We establish credit-worthiness prior to extending credit. We estimate the recoverability of receivables each period. This estimate is based upon new information in the period, which can include the review of any available financial statements and forecasts, as well as discussions with legal counsel and the management of the debtor company. As events occur, which impact the collectability of the receivable, all or a portion of the receivable is reserved. Account balances are charged off against the allowance when the potential for recovery is considered remote. We do not have any off-balance-sheet credit exposure related to our customers.

**Inventories.** Inventories are valued at the lower of cost or market. Inventories also include certain samples used in ongoing sales and marketing activities. See Note 7 to the Consolidated Financial Statements for further information on our accounting for inventories.

**Property Plant and Equipment.** Property plant and equipment is recorded at cost reduced by accumulated depreciation. Depreciation expense is recognized on a straight-line basis over the assets' estimated useful lives. Machinery and equipment includes manufacturing equipment (depreciated over 3 to 15 years), computer equipment (depreciated over 3 to 5 years) and office furniture and equipment (depreciated over 5 to 7 years). Within manufacturing equipment, assets that are subject to quick obsolescence or wear out quickly, such as tooling and engraving equipment, are depreciated over shorter periods (3 to 7 years). Heavy production equipment, such as conveyors and production presses, are depreciated over longer periods (10 to 15 years). Buildings are depreciated over 15 to 30 years, depending on factors such as type of construction and use. Computer software is depreciated over 3 to 7 years.

Property, plant and equipment are tested for impairment when indicators of impairment are present, such as operating losses and/or negative cash flows. If an indication of impairment exists, we compare the carrying amount of the asset group to the estimated undiscounted future cash flows expected to be generated by the assets. The estimate of an asset group's fair value is based on discounted future cash flows expected to be generated by the asset group, or based on management's estimated exit price assuming the assets could be sold in an orderly transaction between market participants, or estimated salvage value if no sale is assumed. If the fair value is less than the carrying value of the asset group, we record an impairment charge equal to the difference between the fair value and carrying value of the asset group. Impairments of assets related to our manufacturing operations are recorded in cost of goods sold.

When assets are disposed of or retired, their costs and related depreciation are removed from the financial statements, and any resulting gains or losses normally are reflected in cost of goods sold or selling, general and administrative (SG&A) expenses depending on the nature of the asset.

**Asset Retirement Obligations.** We recognize the fair value of obligations associated with the retirement of tangible long-lived assets in the period in which they are incurred. Upon initial recognition of a liability, the discounted cost is capitalized as part of the related long-lived asset and depreciated over the corresponding asset's useful life. Over time, accretion of the liability is recognized as an operating expense to reflect the change in the liability's present value.

**Intangible Assets.** Our definite-lived intangible assets are primarily customer relationships (amortized over 20 years) and developed technology (amortized over 15 years). We periodically review significant definite-lived intangible

assets for impairment when indicators of impairment exist. We review our businesses for indicators of impairment such as operating losses and/or negative cash flows. If an indication of impairment exists, we compare the carrying amount of the asset group to the estimated undiscounted future cash flows expected to be generated by the assets. The estimate of an asset group's fair value is based on discounted future cash flows expected to be generated by the asset group, or based on management's estimated exit price assuming the assets could be sold in an orderly transaction between market participants. If the fair value is less than the carrying value of the asset group, we record an impairment charge equal to the difference between the fair value and carrying value of the asset group.

Our indefinite-lived intangibles are primarily trademarks and brand names, which are integral to our corporate identity and expected to contribute indefinitely to our cash flows. Accordingly, they have been assigned an indefinite life. We perform annual impairment tests during the fourth quarter on these indefinite-lived intangibles. These assets undergo more frequent tests if an indication of possible impairment exists.

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(dollar amounts in millions)

The principal assumption used in our impairment tests for definite-lived intangible assets is future operating profit adjusted for depreciation and amortization. The principal assumptions used in our impairment tests for indefinite-lived intangible assets include revenue growth rate, discount rate and royalty rate. Revenue growth rate and future operating profit assumptions are derived from those utilized in our operating plan and strategic planning processes. The discount rate assumption is calculated based upon an estimated weighted average cost of equity which reflects the overall level of inherent risk and the rate of return a market participant would expect to achieve. The royalty rate assumption represents the estimated contribution of the intangible asset to the overall profits of the reporting unit. Methodologies used for valuing our intangible assets did not change from prior periods.

See Note 11 to the Consolidated Financial Statements for disclosure on intangible assets.

Foreign Currency Transactions. Assets and liabilities of our subsidiaries operating outside the United States which account in a functional currency other than U.S. dollars are translated using the period end exchange rate. Revenues and expenses are translated at exchange rates effective during each month. Foreign currency translation gains or losses are included as a component of accumulated other comprehensive income (loss) within shareholders' equity. Gains or losses on foreign currency transactions are recognized through the statement of earnings.

Financial Instruments and Derivatives. From time to time, we use derivatives and other financial instruments to offset the effect of currency, interest rate and commodity price variability. See Notes 19 and 20 to the Consolidated Financial Statements for further discussion.

Share-based Employee Compensation. For awards with only service and performance conditions that have a graded vesting schedule, we recognize compensation expense on a straight-line basis over the vesting period for the entire award. For awards with market conditions, we recognize compensation expense over the derived service period. See Note 24 to the Consolidated Financial Statements for additional information on share-based employee compensation.

Subsequent Events. We have evaluated subsequent events for potential recognition and disclosure through the date the consolidated financial statements included in the Annual Report on Form 10-K were issued.

Recently Adopted Accounting Standards

During 2013, we adopted guidance that is now part of Accounting Standards Codification (ASC) 350: *Intangibles Goodwill and Other*. The guidance permits an entity to first assess qualitative factors to determine whether it is more likely than not that an indefinite-lived intangible asset is impaired as a basis for determining whether it is necessary to perform a quantitative impairment test on indefinite-lived intangible assets. Because the objective of this new guidance is to simplify how entities test for indefinite-lived intangible asset impairment, there was no impact on our financial condition, results of operations or cash flows.

During 2013, we adopted guidance which is now part of ASC 210: *Balance Sheet Disclosures about Offsetting Assets and Liabilities* originally issued in December 2011. The 2011 guidance requires an entity to provide

additional disclosures to allow investors to better compare financial statements prepared under U.S. generally accepted accounting principles ( GAAP ) with financial statements prepared under International Financial Reporting Standard ( IFRS ). During 2013, additional guidance was issued to limit the scope of the original guidance requirements to derivatives, repurchase and reverse repurchase agreements, and securities borrowing and lending agreements subject to master netting arrangements or similar agreements. There was no impact on our financial condition, results of operations or cash flows as a result of this guidance.

During 2013, we adopted guidance which is now part of ASC 220: *Comprehensive Income Reporting of Amounts Reclassified out of Accumulated Other Comprehensive Income* . The guidance requires an entity to disclose in a single location the effects of reclassifications out of accumulated other comprehensive income ( AOCI ). For items reclassified out of AOCI and into net income in their entirety, entities must disclose the effect of the reclassification on each affected net income item. For AOCI reclassification items that are not reclassified in their entirety into net income, entities must provide a cross reference to other required U.S. GAAP disclosures. The standard does not change the items which must be reported in other comprehensive income. There was no impact on our financial condition, results of operations or cash flows as a result of the adoption of this guidance.

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Armstrong World Industries, Inc., and Subsidiaries

Notes to Consolidated Financial Statements

(dollar amounts in millions)

**Recently Issued Accounting Standards**

In February 2013, the Financial Accounting Standards Board ( FASB ) issued Accounting Standards Update ( ASU ) 2013-04 *Obligations Resulting from Joint and Several Liability Arrangements for Which the Total Amount of the Obligation Is Fixed at the Reporting Date* which is part of ASC 405: Liabilities. The new guidance requires an entity to measure obligations resulting from joint and several liability arrangements, within the scope of this ASU, as the amount the reporting entity agreed to pay on the basis of its arrangement among its co-obligors and any additional amount the reporting entity expects to pay on behalf of its co-obligors. The guidance requires an entity to disclose the nature and amount of the obligation. The guidance is to be applied retrospectively and will be effective for us beginning January 1, 2014. We have not had and do not expect a material impact our financial condition, results of operations or cash flows from the adoption of this guidance.

In July 2013, the FASB issued ASU 2013-11 *Income Taxes Presentation of an Unrecognized Tax Benefit When a Net Operating Loss Carryforward, a Similar Tax Loss, or a Tax Credit Carryforward Exists* which is part of ASC 740: Income Taxes. The new guidance requires an entity to present an unrecognized tax benefit and a net operating loss ( NOL ) carryforward, a similar tax loss, or a tax credit carryforward on a net basis as part of a deferred tax asset, unless the unrecognized tax benefit is not available to reduce the deferred tax asset component or would not be utilized for that purpose, then a liability would be recognized. The guidance is to be applied prospectively and will be effective for us beginning January 1, 2014. Since this guidance impacts presentation only, it will have no effect on our financial condition, results of operations or cash flows.

**NOTE 3. NATURE OF OPERATIONS**

*Building Products* produces suspended mineral fiber, soft fiber and metal ceiling systems for use in commercial, institutional and residential settings. In addition, our Building Products segment sources complementary ceiling products. Our products, which are sold worldwide, are available in numerous colors, performance characteristics and designs, and offer attributes such as acoustical control, rated fire protection and aesthetic appeal. Commercial ceiling materials and accessories are sold to resale distributors and to ceiling systems contractors. Residential ceiling products are sold in North America primarily to wholesalers and retailers (including large home centers). Suspension system (grid) products manufactured by Worthington Armstrong Venture ( WAVE ) are sold by both us and WAVE.

*Resilient Flooring* produces and sources a broad range of floor coverings primarily for homes and commercial and institutional buildings. Manufactured products in this segment include vinyl sheet, vinyl tile and linoleum flooring. In addition, our Resilient Flooring segment sources and sells laminate flooring products, vinyl tile products, vinyl sheet products, adhesives, and installation and maintenance materials and accessories. Resilient Flooring products are offered in a wide variety of types, designs, and colors. We sell these products worldwide to wholesalers, large home centers, retailers, contractors and to the manufactured homes industry.

*Wood Flooring* produces and sources wood flooring products for use in new residential construction and renovation, with some commercial applications in stores, restaurants and high-end offices. The product offering includes

pre-finished solid and engineered wood floors in various wood species, and related accessories. Virtually all of our Wood Flooring sales are in North America. Our Wood Flooring products are generally sold to independent wholesale flooring distributors and large home centers.

*Unallocated Corporate* includes assets, liabilities, income and expenses that have not been allocated to the business units. Balance sheet items classified as Unallocated Corporate are primarily income tax related accounts, cash and cash equivalents, the Armstrong brand name, the U.S. prepaid pension cost and long-term debt. Expenses for our corporate departments and certain benefit plans are allocated to the reportable segments based on known metrics, such as specific activity or headcount. The remaining items, which cannot be attributed to the other reportable segments without a high degree of generalization, are reported in Unallocated Corporate.

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## Armstrong World Industries, Inc., and Subsidiaries

## Notes to Consolidated Financial Statements

(dollar amounts in millions)

	Building Products	Resilient Flooring	Wood Flooring	Unallocated Corporate	Total
For the year ended 2013					
Net sales to external customers	\$ 1,264.6	\$ 921.3	\$ 534.0		\$ 2,719.9
Equity (earnings) from joint venture	(59.4)				(59.4)
Segment operating income (loss)	263.1	44.1	6.0	(\$ 74.6)	238.6
Restructuring charges		(0.2)			(0.2)
Segment assets	1,071.9	635.2	335.2	874.3	2,916.6
Depreciation and amortization	56.3	32.3	11.4	9.0	109.0
Investment in joint venture	132.0				132.0
Purchases of property, plant and equipment	134.5	55.4	8.0	15.8	213.7
For the year ended 2012					
Net sales to external customers	\$ 1,218.9	\$ 939.4	\$ 460.6		\$ 2,618.9
Equity (earnings) from joint venture	(55.9)				(55.9)
Segment operating income (loss)	230.4	56.9	37.3	(\$ 53.4)	271.2
Restructuring charges		(0.4)			(0.4)
Segment assets	975.1	617.6	326.4	935.2	2,854.3
Depreciation and amortization <sup>(1)</sup>	62.2	28.7	11.1	9.0	111.0
Asset impairment	4.6	0.5	0.6		5.7
Investment in joint venture	133.5				133.5
Purchases of property, plant and equipment <sup>(1)</sup>	98.5	76.0	14.4	9.2	198.1
For the year ended 2011					
Net sales to external customers	\$ 1,237.5	\$ 1,002.3	\$ 483.3		\$ 2,723.1
Equity (earnings) from joint venture	(54.9)				(54.9)
Segment operating income (loss)	226.1	15.7	43.4	(\$ 45.4)	239.8
Restructuring charges	1.5	6.8	(0.2)	0.9	9.0
Segment assets	935.6	575.9	329.5	1,153.7	2,994.7
Depreciation and amortization <sup>(1)</sup>	57.8	32.3	10.5	11.0	111.6
Asset impairment <sup>(1)</sup>		2.2	0.7		2.9
Investment in joint venture	141.0				141.0
Purchases of property, plant and equipment <sup>(1)</sup>	94.8	38.9	9.8	6.6	150.1

<sup>(1)</sup> Totals for 2012 and 2011 will differ from the totals on our Consolidated Statement of Cash Flow by the amounts that have been classified as discontinued operations.

Segment operating income (loss) is the measure of segment profit or loss reviewed by the chief operating decision maker. The sum of the segments' operating income (loss) equals the total consolidated operating income as reported on



our income statement. The following reconciles our total consolidated operating income to earnings from continuing operations before income taxes. These items are only measured and managed on a consolidated basis:

	2013	2012	2011
Segment operating income	\$ 238.6	\$ 271.2	\$ 239.8
Interest expense	68.8	53.7	48.5
Other non-operating expense	1.8	0.5	1.3
Other non-operating income	(3.9)	(3.5)	(3.8)
Earnings from continuing operations before income taxes	\$ 171.9	\$ 220.5	\$ 193.8

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## Armstrong World Industries, Inc., and Subsidiaries

## Notes to Consolidated Financial Statements

(dollar amounts in millions)

Accounting policies of the segments are the same as those described in the summary of significant accounting policies.

The sales in the table below are allocated to geographic areas based upon the location of the customer.

	2013	2012	2011
<u>Geographic Areas</u>			
<u>Net trade sales</u>			
Americas:			
United States	\$ 1,744.1	\$ 1,646.9	\$ 1,672.1
Canada	176.6	187.9	179.6
Other	35.1	38.1	42.9
Total Americas	1,955.8	1,872.9	1,894.6
Europe, Middle East & Africa:			
Germany	120.4	119.9	147.8
United Kingdom	83.7	81.2	85.6
Russia	72.4	63.2	51.2
France	60.7	61.4	71.2
Other	203.7	181.1	228.2
Total Europe, Middle East & Africa	540.9	506.8	584.0
Pacific Rim:			
Australia	66.2	80.4	86.1
China	81.3	74.5	73.6
India	40.6	38.8	42.2
Other	35.1	45.5	42.6
Total Pacific Rim	223.2	239.2	244.5
Total net trade sales	\$ 2,719.9	\$ 2,618.9	\$ 2,723.1

	2013	2012
<u>Property, plant and equipment, net at December 31,</u>		

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Americas:

United States	\$ 668.6	\$ 648.4
Other	9.5	7.9

Total Americas	678.1	656.3
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Europe, Middle East & Africa:

Germany	126.1	119.6
Russia	49.2	7.2
France	20.9	19.7
Other	27.5	22.7

Total Europe, Middle East & Africa	223.7	169.2
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Pacific Rim:

China	185.6	147.5
Other	19.8	32.0

Total Pacific Rim	205.4	179.5
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Total property, plant and equipment, net	\$ 1,107.2	\$ 1,005.0
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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.

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(dollar amounts in millions)

During the first quarter of 2012, we made the decision to permanently close a previously idled ceiling tile plant in Mobile, AL. As a result, we recorded accelerated depreciation of \$11.0 million for machinery and equipment and a \$4.6 million impairment charge for the buildings in cost of goods sold in 2012. The fair values were determined by management estimates and an independent valuation based on information available at that time (considered Level 2 inputs in the fair value hierarchy as described in Note 18 to the Consolidated Financial Statements). We sold this facility in the third quarter of 2013.

During the fourth quarter of 2012, we made the decision to permanently close a previously idled engineered wood flooring production facility in Statesville, NC. As a result, we recorded accelerated depreciation of \$0.6 million for machinery and equipment and a \$0.6 million impairment charge for the buildings in cost of goods sold. The fair values were determined by management estimates and an independent valuation based on information available at that time (considered Level 2 inputs in the fair value hierarchy).

**NOTE 4 ACQUISITIONS**

In the fourth quarter of 2011, we acquired Canada-based Intalite, Inc., which operated under the name Simplex, for \$4.2 million. The acquisition, which was financed from existing cash balances, expands our technical capabilities, broadens our specialty ceilings portfolio and improves our service and lead times for customers in North America. The acquisition was accounted for under the purchase method of accounting.

**NOTE 5. DISCONTINUED OPERATIONS**

In September 2012, we entered into a definitive agreement to sell our cabinets business to American Industrial Partners ( AIP ) for \$27 million in cash. During the third quarter of 2012, we recorded an impairment charge of \$17.5 million to the cabinets assets to reflect the expected proceeds from the sale. The sale was completed in October 2012. The transaction was subject to working capital adjustments which were completed in the first quarter of 2013.

During the third quarter of 2013, we recorded an estimated liability of \$7.5 million for a potential withdrawal liability related to a multi-employer pension plan. As of December 31, 2013 we have a recorded liability of \$7.2 million. See Note 30 to the Condensed Consolidated Financial Statements for further information.

The financial results of the cabinets business have been classified as discontinued operations for all periods presented. The Consolidated Statement of Cash Flows does not separately report the cash flows of the discontinued operation.

The following is a summary of discontinued operations which includes the operating results of the cabinets business in 2012 and 2011 (previously shown as the Cabinets reporting segment).

2013                      2012                      2011

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Net sales		\$ 115.7	\$ 136.6
Loss before income tax	(\$ 10.0)	(20.8)	(0.6)
Income tax benefit	3.6	7.7	0.2
Net loss from discontinued operations	(\$6.4)	(\$13.1)	(\$0.4)

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**NOTE 6. ACCOUNTS AND NOTES RECEIVABLE**

	December 31, 2013	December 31, 2012
Customer receivables	\$ 242.7	\$ 228.1
Customer notes	1.6	4.5
Miscellaneous receivables	5.9	7.6
Less allowance for warranties, discounts and losses	(28.0)	(35.6)
<b>Accounts and notes receivable, net</b>	<b>\$ 222.2</b>	<b>\$ 204.6</b>

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.

**NOTE 7. INVENTORIES**

	December 31, 2013	December 31, 2012
Finished goods	\$ 292.8	\$ 265.9
Goods in process	29.2	27.6
Raw materials and supplies	118.6	107.8
Less LIFO and other reserves	(58.9)	(31.5)
<b>Total inventories, net</b>	<b>\$ 381.7</b>	<b>\$ 369.8</b>

Approximately 62% and 63% of our total inventory in 2013 and 2012, respectively, was valued on a LIFO (last-in, first-out) basis. Inventory values were lower than would have been reported on a total FIFO (first-in, first-out) basis by \$42.0 million and \$18.1 million in 2013 and 2012, respectively.

The distinction between the use of different methods of inventory valuation is primarily based on geographical locations and/or legal entities rather than types of inventory. The following table summarizes the amount of inventory that is not accounted for under the LIFO method.

	December 31, 2013	December 31, 2012
International locations	\$ 142.2	\$ 132.3
U.S. sourced products	3.6	3.6
<b>Total</b>	<b>\$ 145.8</b>	<b>\$ 135.9</b>

Substantially all of our international locations use the FIFO method of inventory valuation (or other methods which closely approximate the FIFO method) primarily because either the LIFO method is not permitted for local tax and/or statutory reporting purposes, or the entities were part of various acquisitions that had adopted the FIFO method prior to our acquisition. In these situations, a conversion to LIFO would be highly complex and involve excessive cost and effort to achieve under local tax and/or statutory reporting requirements.

The sourced products represent certain finished goods sourced from third party manufacturers, primarily from foreign suppliers.

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**NOTE 8. OTHER CURRENT ASSETS**

	December 31, 2013	December 31, 2012
Prepaid expenses	\$ 46.0	\$ 39.0
Fair value of derivative assets	5.9	0.3
Other	3.6	3.0
Total other current assets	\$ 55.5	\$ 42.3

**NOTE 9. PROPERTY, PLANT AND EQUIPMENT**

	December 31, 2013	December 31, 2012
Land	\$ 105.4	\$ 111.6
Buildings	380.1	318.4
Machinery and equipment	1,089.9	940.7
Computer software	16.6	11.5
Construction in progress	154.9	206.6
Less accumulated depreciation and amortization	(639.7)	(583.8)
Net property, plant and equipment	\$ 1,107.2	\$ 1,005.0

See Note 2 to the Consolidated Financial Statements for discussion of policies related to property and depreciation and asset retirement obligations.

**NOTE 10. EQUITY INVESTMENTS**

Investment in joint venture at December 31, 2013 reflected the equity interest in our 50% investment in our Worthington Armstrong Venture ( WAVE ) joint venture. The WAVE joint venture is reflected in our consolidated financial statements using the equity method of accounting.

We use the equity in earnings method to determine the appropriate classification of distributions from WAVE within our cash flow statement. During 2013, 2012 and 2011, WAVE distributed amounts in excess of our capital contributions and proportionate share of retained earnings. Accordingly, the distributions in these years were reflected as a return of investment in cash flows from investing activity in our Consolidated Statement of Cash Flows.



Distributions from WAVE in 2013, 2012 and 2011 were \$61.1 million, \$63.5 million, and \$102.4 million (including a special distribution of \$50.1 million in December 2011), respectively.

In certain markets, we sell WAVE products directly to customers pursuant to specific terms of sale. In those circumstances, we record the sales and associated costs within our consolidated financial statements. The total sales associated with these transactions were \$111.7 million, \$114.3 million and \$119.0 million for the years ended 2013, 2012 and 2011, respectively.

Our recorded investment in WAVE was higher than our 50% share of the carrying values reported in WAVE's consolidated financial statements by \$183.3 million as of December 31, 2013 and \$188.9 million as of December 31, 2012. These differences are due to our adoption of fresh-start reporting upon emergence from Chapter 11, while WAVE's consolidated financial statements do not reflect fresh-start reporting. The differences are composed of the following fair value adjustments to assets:

	December 31, 2013	December 31, 2012
Property, plant and equipment	\$ 0.6	\$ 0.7
Other intangibles	152.3	157.8
Goodwill	30.4	30.4
Total	\$ 183.3	\$ 188.9

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Other intangibles include customer relationships, trademarks and developed technology. Customer relationships are amortized over 20 years and developed technology is amortized over 15 years. Trademarks have an indefinite life.

See Exhibit 99.1 for WAVE's consolidated financial statements. Condensed financial data for WAVE is summarized below:

	December 31, 2013	December 31, 2012
Current assets	\$ 122.6	\$ 113.3
Non-current assets	40.7	38.5
Current liabilities	28.4	24.9
Other non-current liabilities	240.9	243.2

	2013	2012	2011
Net sales	\$ 381.8	\$ 368.0	\$ 367.2
Gross profit	172.9	163.7	155.7
Net earnings	132.4	125.5	123.7

See discussion in Note 29 to the Consolidated Financial Statements for additional information on this related party.

**NOTE 11. INTANGIBLE ASSETS**

We conduct our annual impairment testing of non-amortizable intangible assets during the fourth quarter. Our 2013, 2012 and 2011 reviews concluded that no impairment charges were necessary. See Note 2 to the Consolidated Financial Statements for a discussion of our accounting policy for intangible assets.

The following table details amounts related to our intangible assets as of December 31, 2013 and 2012:

	Estimated Useful Life	December 31, 2013 Gross Carrying Amount	December 31, 2013 Accumulated Amortization	December 31, 2012 Gross Carrying Amount	December 31, 2012 Accumulated Amortization
<b><u>Amortizing intangible assets</u></b>					
Customer relationships	20 years	\$ 165.5	\$ 60.2	\$ 165.4	\$ 51.9
Developed technology	15 years	83.1	39.4	81.9	33.8
Other	Various	21.5	1.9	15.0	1.3

Total		\$ 270.1	\$ 101.5	\$ 262.3	\$ 87.0
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Non-amortizing intangible assets

Trademarks and brand names	Indefinite	354.3		352.4	
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Total intangible assets		\$ 624.4		\$ 614.7	
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		2013	2012	2011
Amortization expense		\$ 14.4	\$ 14.1	\$ 14.0

The expected annual amortization expense for the years 2014 through 2018 is approximately \$14 million.

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## Armstrong World Industries, Inc., and Subsidiaries

## Notes to Consolidated Financial Statements

(dollar amounts in millions)

**NOTE 12. OTHER NON-CURRENT ASSETS**

	December 31, 2013	December 31, 2012
Cash surrender value of Company owned life insurance policies	\$ 52.0	\$ 58.8
Debt financing costs	8.9	23.9
Other	12.5	10.8
Total other non-current assets	\$ 73.4	\$ 93.5

**NOTE 13. ACCOUNTS PAYABLE AND ACCRUED EXPENSES**

	December 31, 2013	December 31, 2012
Payables, trade and other	\$ 250.6	\$ 216.7
Employment costs	89.9	81.6
Other	43.1	48.0
Total accounts payable and accrued expenses	\$ 383.6	\$ 346.3

**NOTE 14. SEVERANCE AND RELATED COSTS**

See Note 15 to the Consolidated Financial Statements for a discussion of severance charges associated with restructuring actions.

In the fourth quarter of 2013, we recorded \$8.2 million in cost of goods sold for severance and related costs in our Resilient Flooring business in Europe and Australia.

In the first quarter of 2013, we recorded \$5.2 million for severance and related costs to reflect approximately 40 position eliminations in our European Resilient Flooring business (\$1.8 million in cost of goods sold and \$1.0 million in SG&A expense) and approximately 40 position eliminations in our Resilient Flooring business in Australia, (\$2.4 million in cost of goods sold).

In the second quarter of 2012, we recorded \$3.4 million for severance and related costs in SG&A expense (\$3.2 million) and cost of goods sold (\$0.2 million) to reflect approximately 35 position eliminations in our European

Building Products business, primarily as a result of streamlining SG&A functions.

In the first quarter of 2011, we recorded \$3.0 million in cost of goods sold for severance and related costs to reflect position eliminations in our European Resilient Flooring business as a result of improved manufacturing productivity.

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**NOTE 15. RESTRUCTURING ACTIONS**

During the third quarter of 2010, management made several significant decisions to address our cost structure. Given the materiality to our financial statements and impact to our operations, we decided to classify charges related to these actions as restructuring charges. The following table summarizes the restructuring charges recorded in 2013, 2012 and 2011:

Action Title	2013	2012	2011	Segment
Floor Products Europe	(\$0.2)	(\$0.4)	\$ 6.4	Resilient Flooring
North America SG&A			1.4	Unallocated Corporate, Resilient Flooring, Building Products
Beaver Falls plant			1.4	Building Products
Wood products			(0.2)	Wood Flooring
<b>Total</b>	<b>(\$0.2)</b>	<b>(\$0.4)</b>	<b>\$ 9.0</b>	

**Floor Products Europe:** In the third quarter of 2010, we announced our intent to focus our European flooring strategy on products and regions in which we believe we can be a market leader, and to streamline our product range and sales organization accordingly. During the fourth quarter of 2010, we withdrew from the residential market and, as a result, we sold our Teesside, UK manufacturing facility. In addition, during the second quarter of 2011, we ceased production at our heterogeneous vinyl flooring plant in Holmsund, Sweden. This facility was sold in December 2012.

In addition to the restructuring costs reflected in the above table, we recorded \$6.7 million in 2011 of other related costs in cost of goods sold (\$5.2 million) and SG&A expense (\$1.5 million). Other related costs were primarily related to inventory and samples obsolescence, accelerated depreciation and plant closure costs.

Through December 31, 2013, we have incurred expense of \$29.3 million related to this initiative. We do not expect to incur further restructuring costs related to this initiative.

**North America SG&A:** In the third quarter of 2010, we began to restructure our North American SG&A operations in an effort to standardize, simplify and eliminate SG&A activities. The 2011 restructuring expense related to this initiative was recorded in the Unallocated Corporate (\$0.9 million), Resilient Flooring (\$0.4 million) and Building Products (\$0.1 million) segments.

Through December 31, 2013, we have incurred restructuring expense of \$7.2 million related to this initiative. We do not expect to incur further restructuring costs related to this initiative.

Beaver Falls Plant: In the third quarter of 2010, we announced that the Beaver Falls, PA, plant was scheduled to close in 2011. Production at the facility ended March 31, 2011, and production requirements have been transitioned to other facilities. The decision to close the plant was driven by the location and layout of the plant, technology limitations and the continued limited demand for the products we made at the plant.

In addition to the restructuring costs reflected in the table above, we also recorded \$6.6 million of accelerated depreciation and \$4.8 million of closure-related costs in 2011 in cost of goods sold.

Through December 31, 2013, we have incurred expense of \$25.1 million related to this initiative. We do not expect to incur additional costs in the future as the plant was sold in 2011. The sale resulted in a net gain of \$0.7 million which was recorded in SG&A in 2011.

Wood Products: In the third quarter of 2010, we announced the closing of our previously idled Center, TX plant and a portion of our previously idled Oneida, TN plant. Operations at Center and the strip mill operations at Oneida ceased in the fourth quarter of 2010. The decision to close these facilities was driven by our ability to service the demand for our wood products from our other manufacturing locations.

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(dollar amounts in millions)

We do not expect to incur further restructuring costs related to these locations.

The following table summarizes activity in the restructuring accruals.

	Severance and Related Costs			Total
	Floor Products Europe	North America SG&A	Beaver Falls Plant	
December 31, 2011	\$ 3.2	\$ 0.5	\$ 0.1	\$ 3.8
Reversals	(0.4)			(0.4)
Cash payments	(2.3)	(0.5)		(2.8)
Other	0.2			0.2
December 31, 2012	\$ 0.7		\$ 0.1	\$ 0.8
Reversals	(0.2)			(0.2)
Cash payments	(0.2)		(0.1)	(0.3)
December 31, 2013	\$ 0.3			\$ 0.3

The amounts in **Other** are related to the effects of foreign currency translation.

The remaining accrual balance as of December 31, 2013 will be paid in 2014.

**NOTE 16. INCOME TAXES**

The tax effects of principal temporary differences between the carrying amounts of assets and liabilities and their tax bases are summarized in the following table. Management believes it is more likely than not that the results of future operations will generate sufficient taxable income and foreign source income to realize deferred tax assets, net of valuation allowances. In arriving at this conclusion, we considered the profit before tax generated for the years 2011 through 2013, as well as future reversals of existing taxable temporary differences and projections of future profit before tax and foreign source income.

We reduce the carrying amounts of deferred tax assets by a valuation allowance if, based on the available evidence, it is more likely than not that such assets will not be realized. The need to establish valuation allowances for deferred tax assets is assessed quarterly. In assessing the requirement for, and amount of, a valuation allowance in accordance with the more likely than not standard for all periods, we give appropriate consideration to all positive and negative evidence related to the realization of the deferred tax assets. This assessment considers, among other matters, the nature, frequency and severity of current and cumulative losses, forecasts of future profitability and foreign source income, the duration of statutory carryforward periods, and our experience with operating loss and tax credit



carryforward expirations. A history of cumulative losses is a significant piece of negative evidence used in our assessment. If a history of cumulative losses is incurred for a tax jurisdiction, forecasts of future profitability are not used as positive evidence related to the realization of the deferred tax assets in the assessment.

We have established a valuation allowance in the amount of \$228.4 million consisting of \$25.3 million for federal capital loss carryovers and statutorily limited operating loss carryovers, \$9.4 million for state deferred tax assets, primarily operating loss carryovers, and \$193.7 million for foreign deferred tax assets, primarily foreign operating loss carryovers.

We have \$1,067.3 million of state net operating loss ( NOL ) carryforwards with expirations between 2014 and 2033. In addition, we have \$643.5 million of foreign NOL carryforwards, of which \$576.0 million are available for carryforward indefinitely and \$67.5 million expire between 2014 and 2028. We also have U.S. foreign tax credit ( FTC ) carryforwards of \$94.4 million expiring between 2014 and 2022.

Our valuation allowances at December 31, 2013 increased from December 31, 2012 by a net amount of \$22.9 million. This includes net increases for certain foreign deferred tax assets of \$20.4 million and \$9.3 million for federal deferred tax assets. There was a net decrease of \$6.8 million for certain deferred state income tax assets. The increase in the valuation allowance for deferred foreign income tax assets was primarily due to

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additional foreign losses and other deferred tax assets, partially offset by the impact of current year income and carryforward expirations. The increase in the valuation allowance for deferred federal income tax assets of \$9.3 million was primarily due to an increase in a valuation allowance for certain statutorily limited federal losses of \$10.3 million offset by a decrease of the valuation allowance on capital loss carryforwards of \$1.0 million. The decrease in the valuation allowance for certain deferred state income tax assets of \$6.8 million was primarily due to carryover expirations and an increase in projected utilization. We estimate we will need to generate future federal taxable income of \$269.8 million, including foreign source income of \$36.1 million, to fully realize the FTCs before they expire in 2022. We estimate we will need to generate future taxable income of approximately \$1,286.6 million for state income tax purposes during the respective realization periods (ranging from 2014 to 2033) in order to fully realize the net deferred income tax assets discussed above.

The Internal Revenue Code and some states impose limitations on a corporation's ability to utilize tax attributes, including NOLs and FTCs, if it experiences an ownership change. An ownership change may result from transactions increasing the ownership of certain shareholders by more than 50 percentage points over a three-year period. There have been no ownership changes as defined in the Internal Revenue Code subsequent to our bankruptcy emergence. Future ownership changes could have an impact on our ability to realize the deferred tax assets discussed above.

	December 31, 2013	December 31, 2012
<u>Deferred income tax assets (liabilities)</u>		
Postretirement benefits	\$ 102.8	\$ 105.9
Pension benefit liabilities	21.4	30.7
Net operating losses	230.2	218.6
Foreign tax credit carryforwards	94.4	119.1
Other	100.5	104.2
Total deferred income tax assets	549.3	578.5
Valuation allowances	(228.4)	(205.5)
Net deferred income tax assets	320.9	373.0
Intangibles	(239.3)	(245.6)
Accumulated depreciation	(91.5)	(83.8)
Prepaid pension costs	(44.2)	
Inventories	(15.7)	(20.8)
Other	(9.8)	(5.3)
Total deferred income tax liabilities	(400.5)	(355.5)

Net deferred income tax (liabilities) assets	(\$79.6)	\$	17.5
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Deferred income taxes have been classified in the Consolidated Balance Sheet as:

Deferred income tax assets - current	\$ 72.0	\$	49.9
Deferred income tax assets - noncurrent	30.1		35.1
Deferred income tax liabilities - current	(0.7)		(1.3)
Deferred income tax liabilities - noncurrent	(181.0)		(66.2)

Net deferred income tax (liabilities) assets	(\$79.6)	\$	17.5
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	2013	2012	2011
<u>Details of taxes</u>			
Earnings (loss) before income taxes:			
Domestic	\$ 186.2	\$ 188.6	\$ 221.2
Foreign	(14.3)	31.9	(3.9)
Eliminations of dividends from foreign subsidiaries			(23.5)
Total	\$ 171.9	\$ 220.5	\$ 193.8

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<b>Income tax expense (benefit):</b>			
<b>Current:</b>			
Federal	\$ 18.7	\$ 24.1	\$ 3.1
Foreign	8.1	13.1	16.7
State	3.3	4.4	2.7
<b>Total current</b>	<b>30.1</b>	<b>41.6</b>	<b>22.5</b>
<b>Deferred:</b>			
Federal	40.1	27.2	55.0
Foreign	2.3	1.8	(1.6)
State	(1.1)	5.5	5.1
<b>Total deferred</b>	<b>41.3</b>	<b>34.5</b>	<b>58.5</b>
<b>Total income tax expense</b>	<b>\$ 71.4</b>	<b>\$ 76.1</b>	<b>\$ 81.0</b>

We are currently expanding international operations by constructing a plant in Russia and increasing our investments in emerging markets.

During 2013, we reviewed our position with regards to foreign unremitted earnings and determined that unremitted earnings would continue to be permanently reinvested. Accordingly we have not recorded U.S. income or foreign withholding taxes on approximately \$293.1 million of undistributed earnings of foreign subsidiaries that could be subject to taxation if remitted to the U.S. because we currently plan to keep these amounts permanently invested overseas. It is not practical to calculate the residual income tax which would result if these basis differences reversed due to the complexities of the tax law and the hypothetical nature of the calculations.

	2013	2012	2011
<b><u>Reconciliation to U.S. statutory tax rate</u></b>			
Continuing operations tax at statutory rate	\$ 60.2	\$ 77.2	\$ 67.8
State income tax expense, net of federal benefit	5.9	6.2	7.7
(Decrease) in valuation allowances on deferred domestic income tax assets	(2.9)	(0.7)	(0.8)
Increase in valuation allowances on deferred foreign income tax assets	32.4	14.9	14.7
Tax on foreign and foreign-source income	(13.8)	(8.2)	(2.8)
Domestic production activities	(9.0)	(2.3)	
Permanent book/tax differences	3.5	1.4	0.6

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IRS audit settlement	2.2		
Net benefit due to increase in foreign tax credits	(15.7)	(6.6)	
Research and development credits	(4.4)		
Other	(0.5)	1.1	0.4
<b>Tax expense at effective rate</b>	<b>\$ 71.4</b>	<b>\$ 76.1</b>	<b>\$ 81.0</b>

During 2010 and 2011, we recorded \$169.6 million of dividends from our foreign subsidiaries related to unremitted foreign earnings for which we previously recorded a net deferred tax liability as the earnings were not considered permanently reinvested. The receipt of the foreign dividends in 2011 provided an opportunity to elect to credit foreign taxes that were previously deducted. In 2011, we increased the deferred tax assets by \$21.1 million offset by a valuation allowance of \$15.7 million, for a net tax benefit of \$5.4 million to reflect the net impact of the foreign tax credit over the tax deduction for the foreign taxes.

In 2012, we released the valuation allowance with respect to the foreign tax credits of \$15.7 million.

We recognize the tax benefits of an uncertain tax position only if those benefits are more likely than not to be sustained based on existing tax law. Additionally, we establish a reserve for tax positions that are more likely than not to be sustained based on existing tax law, but uncertain in the ultimate benefit to be sustained upon

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examination by the relevant taxing authorities. Unrecognized tax benefits are subsequently recognized at the time the more likely than not recognition threshold is met, the tax matter is effectively settled or the statute of limitations for the relevant taxing authority to examine and challenge the tax position has expired, whichever is earlier.

We have \$145.2 million of Unrecognized Tax Benefits ( UTB ) as of December 31, 2013, \$92.4 million (\$90.0 million, net of federal benefit) of this amount, if recognized in future periods, would impact the reported effective tax rate.

It is reasonably possible that certain UTB s may increase or decrease within the next twelve months due to tax examination changes, settlement activities, expirations of statute of limitations, or the impact on recognition and measurement considerations related to the results of published tax cases or other similar activities. Over the next twelve months, we estimate that UTB s may decrease by \$0.7 million due to statutes expiring and increase by \$6.0 million due to uncertain tax positions expected to be taken on tax returns.

We account for all interest and penalties on uncertain income tax positions as income tax expense. We reported \$1.7 million of interest and penalty exposure as accrued income tax in the Consolidated Balance Sheet as of December 31, 2013.

We had the following activity for UTB s for the years ended December 31, 2013, 2012 and 2011:

	2013	2012	2011
Unrecognized tax benefits balance at January 1,	\$ 138.4	\$ 127.2	\$ 126.3
Gross change for current year positions	8.5	10.2	4.1
Increases for prior period positions	1.4	7.8	1.4
Decrease for prior period positions	(2.1)	(6.1)	(3.9)
Decrease due to statute expirations	(1.0)	(0.7)	(0.7)
Unrecognized tax benefits balance at December 31,	\$ 145.2	\$ 138.4	\$ 127.2

We conduct business globally, and as a result, we file income tax returns in the U.S., various states and international jurisdictions. In the normal course of business, we are subject to examination by taxing authorities throughout the world in such major jurisdictions as Australia, Canada, Germany, India, the Netherlands, the United Kingdom and the United States. Generally, we have open tax years subject to tax audit on average of between three years and six years. Our U.S. income tax returns from 2007 to 2009 are currently under review by the IRS. With respect to these years, we have extended the statute of limitations to June 30, 2014. All tax years prior to 2007 have been settled with the IRS. With few exceptions, the statute of limitations is no longer open for state or non-U.S. income tax examinations for the years before 2007. Other than the U.S., we have not significantly extended any open statutes of limitation for any major jurisdiction and have reviewed and accrued for, where necessary, tax liabilities for open periods. The tax years 2007 through 2012 are subject to future potential tax adjustments.

	2013	2012	2011
<u>Other taxes</u>			
Payroll taxes	\$ 57.2	\$ 55.4	\$ 58.3
Property, franchise and capital stock taxes	10.5	11.4	12.1

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**NOTE 17. DEBT**

	December 31, 2013	Average year-end interest rate	December 31, 2012	Average year-end interest rate
Term loan A due 2018	\$ 550.0	2.82%	\$ 237.5	3.47%
Term loan B due 2020	471.4	3.50%	788.5	4.00%
Tax exempt bonds due 2025 - 2041	45.1	0.92%	45.0	1.00%
Subtotal	1,066.5	3.04%	1,071.0	3.76%
Less current portion and short-term debt	23.9	2.96%	33.0	3.60%
Total long-term debt, less current portion	\$ 1,042.6	3.04%	\$ 1,038.0	3.76%

The average year-end interest rates are inclusive of our interest rate swaps. See Note 20 to the Consolidated Financial Statements for further information.

On March 15, 2013, we refinanced our \$1.3 billion senior credit facility and amended the underlying credit agreement. The amended facility is composed of a \$250 million revolving credit facility (with a \$150 million sublimit for letters of credit), a \$550 million Term Loan A and a \$475 million Term Loan B. The terms of the facility resulted in a lower interest rate spread (2.5% vs. 3.0%) than our previous facility. We also extended the maturity of Term Loan A from November 2015 to March 2018 and of Term Loan B from March 2018 to March 2020. The facility is secured by U.S. personal property, the capital stock of material U.S. subsidiaries, and a pledge of 65% of the stock of our material first tier foreign subsidiaries. In connection with the refinancing, we incurred \$8.3 million for bank, legal, and other fees, of which \$7.2 million was capitalized and is being amortized into interest expense over the life of the loans. Additionally, we wrote off \$18.9 million of unamortized debt financing costs in the first quarter of 2013 related to our previous credit facility to interest expense.

The primary covenant change resulting from the 2013 refinancing is related to mandatory prepayments required under the senior credit facility. This is an annual leverage test beginning with the year ended December 31, 2013, where, if our ratio of consolidated funded indebtedness minus AWI and domestic subsidiary unrestricted cash and cash equivalents up to \$100 million to consolidated earnings before interest, taxes, depreciation and amortization ( EBITDA ) ( Consolidated Net Leverage Ratio ) is greater than or equal to 3.5 to 1.0, we would be required to make a prepayment of 50% of calendar year Consolidated Excess Cash Flow, as defined by the credit agreement. If our Consolidated Net Leverage Ratio is less than 3.5 to 1.0, no prepayment would be required. This test is on a calendar year basis, except for the first period ended December 31, 2013, for which the Consolidated Excess Cash Flow is calculated for the period April 1, 2013 to December 31, 2013. These annual payments would be made in the first quarter of the following year. No payment will be required in 2014.



As of December 31, 2013, we were in compliance with all covenants of the amended senior credit facility. Our debt agreements include other restrictions, including restrictions pertaining to the acquisition of additional debt, the redemption, repurchase or retirement of our capital stock, payment of dividends, and certain financial transactions as it relates to specified assets. We currently believe that default under these covenants is unlikely. Fully borrowing under our revolving credit facility would not violate these covenants.

On March 22, 2012, we amended our \$1.05 billion senior credit facility. We added \$250 million to our existing Term Loan B facility. The amended \$1.3 billion facility was made up of a \$250 million revolving credit facility (with a \$150 million sublimit for letters of credit), a \$250 million Term Loan A and an \$800 million Term Loan B. In connection with the additional \$250 million Term Loan B borrowings, we paid \$8.1 million for bank fees. This amount was capitalized and was being amortized into interest expense over the scheduled life of the loan.

On March 10, 2011, we amended our \$1.05 billion senior credit facility and paid a \$5.5 million prepayment premium (representing one percent of the principal amount of Term Loan B). The premium was capitalized and amortized into interest expense over the scheduled life of the loan. Additionally, we paid approximately \$1.6 million of fees to third parties, which was reflected in interest expense in 2011.

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On December 10, 2010 we established a \$100 million Accounts Receivable Securitization Facility with the Bank of Nova Scotia (the funding entity). The purchase and letter of credit commitments under the program were due to expire in December 2014. On March 28, 2013, we amended this facility. We decreased the facility to \$75 million to reduce commitment fees on unused capacity. The maturity was extended to March 2016. Under this agreement Armstrong World Industries and Armstrong Hardwood Flooring Company (the Originators) sell their accounts receivables to Armstrong Receivables Company, LLC (ARC), a Delaware entity that is consolidated in these financial statements. ARC is a 100% wholly owned single member LLC special purpose entity created specifically for this transaction; therefore, any receivables sold to ARC are not available to the general creditors of AWI. ARC then sells an undivided interest in the purchased accounts receivables to the funding entity. This undivided interest acts as collateral for drawings on the facility. Any borrowings under this facility are obligations of ARC and not AWI. ARC contracts with and pays a servicing fee to AWI to manage, collect and service the purchased accounts receivables.

All new receivables under the program generated by the originators are continuously purchased by ARC with the proceeds from collections of receivables previously purchased. Ongoing changes in the amount of funding under the program, through changes in the amount of undivided interests sold by ARC, reflect seasonal variations in the level of accounts receivable, changes in collection trends and other factors such as changes in sales prices and volumes. ARC has issued subordinated notes payable to the originators for the difference between the face amount of uncollected accounts receivable purchased, less a discount, and cash paid to the originators that was funded by the sale of the undivided interests. The subordinated notes issued by ARC are subordinated to the undivided interests of the funding entity in the purchased receivables. The balance of the subordinated notes payable, which are eliminated during consolidation, totaled \$104.1 million and \$100.6 million as of December 31, 2013 and December 31, 2012, respectively. As of December 31, 2013 we had no borrowings under this facility but had \$56.9 million of letters of credit issued under the facility, with an additional \$0.2 million of international subsidiary letters of credit issued by other banks.

None of the remaining outstanding debt as of December 31, 2013 was secured with buildings and other assets. The credit lines at our foreign subsidiaries are subject to immaterial annual commitment fees.

Scheduled payments of long-term debt:	
2014	\$ 23.9
2015	39.6
2016	52.1
2017	55.3
2018	402.9
2019 and later	492.7

We utilize lines of credit and other commercial commitments in order to ensure that adequate funds are available to meet operating requirements. On December 31, 2013, we had a \$250 million revolving credit facility with a \$150 million sublimit for letters of credit, of which \$14.8 million was outstanding. There were no borrowings under the

revolving credit facility. Availability under this facility totaled \$235.2 million as of December 31, 2013. We also have the \$75 million securitization facility which as of December 31, 2013 had letters of credit outstanding of \$56.9 million and no borrowings against it. Maximum capacity under this facility was \$69.8 million (of which \$12.9 million was available), subject to accounts receivable balances and other collateral adjustments, as of December 31, 2013. As of December 31, 2013, our foreign subsidiaries had available lines of credit totaling \$16.3 million of which \$1.7 million was available only for letters of credit and guarantees. There were \$0.7 million of letters of credit and guarantees issued under these credit lines as of December 31, 2013, leaving an additional letter of credit availability of \$1.0 million. There were no borrowings under these lines of credit as of December 31, 2013 leaving \$15.6 million of unused lines of credit available for foreign borrowings. Letters of credit are issued to third party suppliers, insurance and financial institutions and typically can only be drawn upon in the event of AWI's failure to pay its obligations to the beneficiary.

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**NOTE 18. PENSION AND OTHER BENEFIT PROGRAMS**

We have defined benefit pension plans and postretirement medical and insurance benefit plans covering eligible employees worldwide. We also have defined-contribution pension plans for eligible employees. Benefits from defined benefit pension plans are based primarily on an employee's compensation and years of service. We fund our pension plans when appropriate. We fund postretirement benefits on a pay-as-you-go basis, with the retiree paying a portion of the cost for health care benefits by means of deductibles and contributions.

**UNITED STATES PLANS**

The following tables summarize the balance sheet impact of the pension and postretirement benefit plans, as well as the related benefit obligations, assets, funded status and rate assumptions. The pension benefits disclosures include both the qualified, funded Retirement Income Plan ( RIP ) and the Retirement Benefit Equity Plan, which is a nonqualified, unfunded plan designed to provide pension benefits in excess of the limits defined under Sections 415 and 401(a)(17) of the Internal Revenue Code.

We use a December 31 measurement date for our U.S. defined benefit plans.

	2013	2012
<b><u>U.S. defined-benefit pension plans</u></b>		
Change in benefit obligation:		
Benefit obligation as of beginning of period	\$ 2,092.9	\$ 1,933.0
Service cost	16.9	15.7
Interest cost	79.7	90.7
Actuarial (gain) loss	(159.4)	194.0
Benefits paid	(162.0)	(140.5)
Benefit obligation as of end of period	\$ 1,868.1	\$ 2,092.9
	2013	2012
Change in plan assets:		
Fair value of plan assets as of beginning of period	\$ 2,072.6	\$ 1,941.6
Actual return on plan assets	63.9	267.5
Employer contribution	3.9	4.0
Benefits paid	(162.0)	(140.5)
Fair value of plan assets as of end of period	\$ 1,978.4	\$ 2,072.6

Funded status of the plans	\$ 110.3	(\$20.3)
	2013	2012
<u>U.S. defined-benefit pension plans</u>		
Weighted-average assumptions used to determine benefit obligations at end of period:		
Discount rate	4.75%	3.95%
Rate of compensation increase	3.10%	3.10%
Weighted-average assumptions used to determine net periodic benefit cost for the period:		
Discount rate	3.95%	4.85%
Expected return on plan assets	6.25%	6.50%
Rate of compensation increase	3.10%	3.10%

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The accumulated benefit obligation for the U.S. defined benefit pension plans was \$1,851.7 million and \$2,070.7 million at December 31, 2013 and 2012, respectively.

	2013	2012
<u>U.S. pension plans with benefit obligations in excess of assets</u>		
Projected benefit obligation, December 31	\$ 56.2	\$ 59.9
Accumulated benefit obligation, December 31	55.6	58.9
Fair value of plan assets, December 31		

The components of the pension credit are as follows:

	2013	2012	2011
<u>U.S. defined-benefit pension plans</u>			
Service cost of benefits earned during the period	\$ 16.9	\$ 15.7	\$ 15.6
Interest cost on projected benefit obligation	79.7	90.7	92.3
Expected return on plan assets	(136.5)	(140.0)	(152.5)
Amortization of prior service cost	1.9	1.9	1.9
Recognized net actuarial loss	40.9	23.4	19.2
Net periodic pension cost (credit)	\$ 2.9	(\$8.3)	(\$23.5)

**Investment Policies**

The RIP's primary investment objective is to maintain the funded status of the plan such that the likelihood that we will be required to make significant contributions to the plan is limited. This objective is expected to be achieved by:

Investing a substantial portion of the plan assets in high quality corporate bonds whose duration is at least equal to that of the plan's liabilities such that there is a relatively high correlation between the movements of the plan's liability and asset values.

Investing in publicly traded equities in order to increase the ratio of plan assets to liabilities over time.

Limiting investment return volatility by diversifying among additional asset classes with differing expected rates of return and return correlations.

Using derivatives to either implement investment positions efficiently or to hedge risk but not to create investment leverage.

Each asset class utilized by the RIP has a defined asset allocation target and allowable range. The table below shows the asset allocation target and the December 31, 2013 and 2012 position for each asset class:

Asset Class	Target Weight at December 31, 2013	Position at December 31,	
		2013	2012
Long duration bonds	59%	56%	57%
Equities	29%	29%	31%
High yield bonds	4%	4%	5%
Real estate	4%	6%	5%
Real assets	4%	4%	0%
Other fixed income	0%	1%	2%

Pension plan assets are required to be reported and disclosed at fair value in the financial statements. 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

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participants on 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 asset's fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques used need to maximize the use of observable inputs and minimize the use of unobservable inputs.

The following table sets forth by level within the fair value hierarchy a summary of the RIP's assets measured at fair value on a recurring basis:

Description	Value at December 31, 2013			Total
	Level 1	Level 2	Level 3	
Long duration bonds		\$ 1,112.0	\$ 0.2	\$ 1,112.2
Domestic equity	\$ 263.0	22.0		285.0
International equity	193.5	69.0		262.5
Global equity		42.5		42.5
High yield bonds		80.7		80.7
Real estate			109.8	109.8
Real assets		33.0		33.0
Other investments			5.5	5.5
Short term investments and other, net	9.9	37.3		47.2
Net assets	\$ 466.4	\$ 1,396.5	\$ 115.5	\$ 1,978.4

Description	Value at December 31, 2012		Total
	Level 1	Level 2	



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	Level 1		Level 3	
Long duration bonds		\$ 1,166.1	\$ 0.9	\$ 1,167.0
Domestic equity	\$ 219.3	99.9		319.2
International equity	109.4	201.8		311.2
High yield bonds		102.0		102.0
Real estate			103.3	103.3
Other investments			5.5	5.5
Short term investments and other, net	63.2	1.2		64.4
Net assets	\$ 391.9	\$ 1,571.0	\$ 109.7	\$ 2,072.6

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The table below sets forth a summary of changes in the fair value of the RIP's level 3 assets for the years ended December 31, 2012 and 2013:

	Level 3 Assets Gains and Losses			
	Real Estate	Other Investments	Long Duration Bonds	Total
December 31, 2011	\$ 109.8	\$ 5.3		\$ 115.1
Realized gain	2.2			2.2
Unrealized gain	7.2	0.1		7.3
Transfers from Level 2			\$ 0.4	0.4
Purchases	2.3	0.4	0.5	3.2
Sales	(18.2)	(0.1)		(18.3)
Settlements		(0.2)		(0.2)
December 31, 2012	\$ 103.3	\$ 5.5	\$ 0.9	\$ 109.7
Realized gain	0.7			0.7
Unrealized gain (loss)	10.8	(0.2)		10.6
Purchases	3.6	0.5	0.2	4.3
Sales	(8.6)	(0.1)	(0.9)	(9.6)
Settlements		(0.2)		(0.2)
December 31, 2013	\$ 109.8	\$ 5.5	\$ 0.2	\$ 115.5

Following is a description of the valuation methodologies used for assets measured at fair value.

There have been no changes in the methodologies used at December 31, 2013 and 2012.

*Long Duration Bonds:* Consists of investments in individual corporate bonds as well as investments in registered investment funds and common and collective trust funds investing in fixed income securities tailored to institutional investors. Certain corporate bonds are valued based on a compilation of primarily observable market information or a broker quote in a non-active market. There are no readily available market quotations for registered investment company funds or common collective trust funds. The fair value is based on the underlying securities in the fund's portfolio which is typically the amount which the fund might reasonably expect to receive for the security upon a current sale.

*Domestic, International and Global equity securities:* Consists of investments in common and preferred stocks as well as investments in registered investment funds investing in equities tailored to institutional investors. Common and

preferred stocks are valued at the closing price reported on the active market on which the individual securities are traded. There are no readily available market quotations for registered investment company funds. The fair value is based on the underlying securities in the fund's portfolio which is typically the amount which the fund might reasonably expect to receive for the security upon a current sale.

*High Yield Bonds:* Consists of investments in individual corporate bonds as well as an investment in a registered investment fund investing in fixed income securities tailored to institutional investors. Certain corporate bonds are valued based on a compilation of primarily observable market information or a broker quote in a non-active market. There are no readily available market quotations for registered investment company funds. The fair value is based on the underlying securities in the fund's portfolio which is typically the amount which the fund might reasonably expect to receive for the security upon a current sale.

*Real Estate:* The RIP's real estate investments are comprised of both open-end and closed-end funds. There are no readily available market quotations for these real estate funds. The fund's fair value is based on the underlying real estate assets held by the fund. Underlying real estate assets are valued on the basis of a discounted cash flow approach, which includes the future rental receipts, expenses and residual values as the highest and best use of the real estate from a market participant view. Independent appraisals may also be used to determine fair value for the underlying assets of these funds.

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*Real Assets:* Consists of a fund that has underlying investments in commodity futures contracts, as well as cash and fixed income instruments used as collateral instruments against the commodity future contracts. The futures contracts are considered real assets as the underlying securities include natural resources such as oil or precious metals, livestock, or raw agricultural products such as soybeans or coffee beans.

*Other Investments:* Consists of investments in a group insurance annuity contract and a limited partnership. The fair value for the group insurance annuity contract was determined by discounting the related cash flows based on current yields of similar instruments with comparable durations considering the credit-worthiness of the issuer. For our investment in the limited partnership, the majority of the partnership's underlying securities are invested in publicly traded securities which are valued at the closing price reported on the active market on which the individual securities are traded. The remaining other investments within the partnership are valued based on available inputs, including recent financing rounds, comparable company valuations, and other available data. The investment in the limited partnership is non-redeemable until the expiration of the term of the agreement.

*Short Term Investments and other, net:* Cash and short term investments consist of cash and cash equivalents and other payables and receivables (net). The carrying amounts of cash and cash equivalents approximate fair value due to the short-term maturity of these instruments. Other payables and receivables consist primarily of margin on account for a fund, accrued fees and receivables related to investment positions liquidated for which proceeds had not been received at December 31. The carrying amounts of payables and receivables approximate fair value due to the short-term nature of these instruments.

The RIP has \$1,357.8 million and \$1,102.8 million of investments in alternative investment funds at December 31, 2013 and December 31, 2012, respectively, which are reported at fair value. We have concluded that the net asset value reported by the underlying fund approximates the fair value of the investment. These investments are redeemable at NAV under agreements with the underlying funds. However, it is possible that these redemption rights may be restricted or eliminated by the funds in the future in accordance with the underlying fund agreements. Due to the nature of the investments held by the funds, changes in market conditions and the economic environment may significantly impact the NAV of the funds and, consequently, the fair value of the RIP's interest in the funds. Furthermore, changes to the liquidity provisions of the funds may significantly impact the fair value of the RIP's interest in the funds.

**Basis of Rate-of-Return Assumption**

Long-term asset class return assumptions are determined based on input from investment professionals on the expected performance of the asset classes over 10 to 30 years. The forecasts were averaged to come up with consensus passive return forecasts for each asset class. Incremental components were added for the expected return from active management and asset class rebalancing based on historical information obtained from the RIP's investment consultants. These forecasted gross returns were reduced by estimated management fees and expenses, yielding a long-term return forecast of 6.25% and 6.5% for the years ended December 31, 2013 and 2012, respectively.

	2013	2012
<u>U.S. defined-benefit retiree health and life insurance plans</u>		
Change in benefit obligation:		
Benefit obligation as of beginning of period	\$ 271.8	\$ 297.7
Service cost	1.2	1.2
Interest cost	9.7	12.3
Plan participants' contributions	5.9	6.0
Plan amendments	(0.2)	
Effect of settlements	(0.1)	
Actuarial (gain)	(2.0)	(17.4)
Benefits paid, gross	(28.3)	(28.9)
Medicare subsidy receipts	0.2	0.9
Benefit obligation as of end of period	\$ 258.2	\$ 271.8

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	2013	2012
<b>Change in plan assets:</b>		
Fair value of plan assets as of beginning of period		
Employer contribution	\$ 22.2	\$ 22.0
Plan participants contributions	5.9	6.0
Benefits paid, gross	(28.3)	(28.9)
Medicare subsidy receipts	0.2	0.9
Fair value of plan assets as of end of period	\$	\$
Funded status of the plans	(\$ 258.2)	(\$ 271.8)
	2013	2012
<b><u>U.S. defined-benefit retiree health and life insurance plans</u></b>		
Weighted-average discount rate used to determine benefit obligations at end of period	4.50%	3.75%
Weighted-average discount rate used to determine net periodic benefit cost for the period	3.75%	4.75%

The components of postretirement benefits costs are as follows:

	2013	2012	2011
<b><u>U.S. defined-benefit retiree health and life insurance plans</u></b>			
Service cost of benefits earned during the period	\$ 1.2	\$ 1.2	\$ 2.1
Interest cost on accumulated postretirement benefit obligation	9.7	12.3	14.1
Amortization of prior service cost	(0.6)	(0.6)	(0.1)
Amortization of net actuarial gain	(3.5)	(7.5)	(2.1)
Net periodic postretirement benefit cost	\$ 6.8	\$ 5.4	\$ 14.0

As a result of the elimination of future benefits for certain employees, we recorded a curtailment gain of \$8.4 million in 2011 in cost of goods sold. This gain is not reflected in the table above.

For measurement purposes, an average rate of annual increase in the per capita cost of covered health care benefits of 8.0% for pre-65 retirees and 7.0% for post-65 retirees was assumed for 2013, decreasing ratably to an ultimate rate of 5% in 2021. Assumed health care cost trend rates have a significant effect on the amounts reported for the health care plans. A one-percentage-point change in assumed health care cost trend rates would have the following effects:

	One percentage point	
	Increase	Decrease
<u>U.S. retiree health and life insurance benefits plans</u>		
Effect on total service and interest cost components	\$ 0.3	(\$0.3)
Effect on postretirement benefit obligation	6.1	(6.5)

Amounts recognized in assets and (liabilities) at year end consist of:

	Pension Benefits		Retiree Health and Life Insurance Benefits	
	2013	2012	2013	2012
Prepaid pension costs	\$ 166.5	\$ 39.6		
Accounts payable and accrued expenses	(3.9)	(3.8)	(\$24.0)	(\$23.3)
Postretirement benefit liabilities			(234.2)	(248.5)
Pension benefit liabilities	(52.3)	(56.1)		
Net amount recognized	\$ 110.3	(\$20.3)	(\$258.2)	(\$271.8)

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Pre-tax amounts recognized in accumulated other comprehensive income (loss) at year end consist of:

	Pension Benefits		Retiree Health and Life Insurance Benefits	
	2013	2012	2013	2012
Net actuarial (loss) gain	(\$ 609.4)	(\$ 737.2)	\$ 54.1	\$ 56.0
Prior service (cost) credit	(7.7)	(9.5)	1.8	2.2
Accumulated other comprehensive (loss) income	(\$ 617.1)	(\$ 746.7)	\$ 55.9	\$ 58.2

We expect to amortize \$42.8 million of previously unrecognized prior service cost and net actuarial losses into the pension credit in 2014. We expect to amortize \$3.9 million of previously unrecognized net actuarial gains and prior service credits into postretirement benefit cost in 2014.

We expect to contribute \$3.9 million to our U.S. defined benefit pension plans and \$23.9 million to our U.S. postretirement benefit plans in 2014.

The following benefit payments, which reflect expected future service, as appropriate, are expected to be paid over the next ten years for our U.S. plans:

	Pension Benefits	Retiree Health and Life Insurance Benefits, Gross	Retiree Health Medicare Subsidy Receipts
2014	\$ 131.2	\$ 24.6	(\$0.7)
2015	131.0	25.1	(0.7)
2016	132.2	25.0	(0.7)
2017	132.6	22.4	(0.7)
2018	133.4	22.0	(0.8)
2019 - 2023	672.9	97.3	(5.2)

These estimated benefit payments are based on assumptions about future events. Actual benefit payments may vary significantly from these estimates.

NON-U.S. PLANS



We have defined benefit pension plans covering employees in a number of foreign countries that utilize assumptions which are consistent with, but not identical to, those of the U.S. plans. The following tables summarize the balance sheet impact of foreign pension benefit plans, as well as the related benefit obligations, assets, funded status and rate assumptions.

We use a December 31 measurement date for all of our non-U.S. defined benefit plans.

	2013	2012
<u>Non-U.S. defined-benefit pension plans</u>		
Change in benefit obligation:		
Benefit obligation as of beginning of period	\$ 405.2	\$ 355.9
Service cost	3.1	2.1
Interest cost	13.4	15.7
Plan participants' contributions	0.2	0.2
Plan amendments	0.5	
Foreign currency translation adjustment	8.7	12.3
Effects of plan settlements and curtailments	(5.7)	
Actuarial loss	0.1	42.8
Benefits paid	(21.4)	(23.8)
Benefit obligation as of end of period	\$ 404.1	\$ 405.2

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	2013	2012
<b>Change in plan assets:</b>		
Fair value of plan assets as of beginning of period	\$ 202.5	\$ 184.0
Actual return on plan assets	14.9	16.7
Employer contribution	21.8	17.9
Plan participants contributions	0.2	0.2
Foreign currency translation adjustment	2.4	7.5
Benefits paid	(21.4)	(23.8)
Fair value of plan assets as of end of period	\$ 220.4	\$ 202.5
Funded status of the plans	(\$ 183.7)	(\$ 202.7)

	2013	2012
<b>Non-U.S. defined-benefit pension plans</b>		
Weighted-average assumptions used to determine benefit obligations at end of period:		
Discount rate	3.60%	3.50%
Rate of compensation increase	2.90%	2.60%
Weighted-average assumptions used to determine net periodic benefit cost for the period:		
Discount rate	3.50%	4.50%
Expected return on plan assets	5.20%	5.40%
Rate of compensation increase	2.60%	3.10%

	2013	2012
<b>Non-U.S. pension plans with benefit obligations in excess of assets</b>		
Projected benefit obligation, December 31	\$ 223.2	\$ 405.2
Accumulated benefit obligation, December 31	218.2	396.3
Fair value of plan assets, December 31	39.0	202.5

The components of the pension cost are as follows:

	2013	2012	2011
<b>Non-U.S. defined-benefit pension plans</b>			
Service cost of benefits earned during the period	\$ 3.1	\$ 2.1	\$ 3.6
Interest cost on projected benefit obligation	13.4	15.7	17.9
Expected return on plan assets	(9.6)	(10.3)	(13.2)

Amortization of prior service cost	0.5		
Amortization of net actuarial loss	2.8	1.4	0.3
Net periodic pension cost	\$ 10.2	\$ 8.9	\$ 8.6

### Investment Policies

Each of the funded non-U.S. pension plan's primary investment objectives is to earn sufficient long-term returns on investments both to increase the ratio of the assets to liabilities in order for the plans to meet their benefits obligations and to minimize required cash contributions to the plans. This is expected to be achieved by (a) investing primarily in publicly-traded equities, (b) limiting return volatility by diversifying investments among additional asset classes with differing expected rates of return and return correlations, and (c) utilizing long duration bonds to limit the volatility of the plans' asset/liability ratios.

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Each of the plans has a targeted asset allocation for each asset class. The table below shows, for each asset class, the weighted average of the several plans' asset allocation targets and positions at December 31, 2013 and 2012:

Asset Class	Target Weight at December 31, 2013	Position at December 31,	
		2013	2012
Long duration bonds	47%	45%	49%
Equities	40%	44%	42%
Real estate	9%	7%	8%
Other investments	4%	4%	1%

The following table sets forth by level within the fair value hierarchy a summary of our non-U.S. plan assets measured at fair value on a recurring basis:

Description	Value at December 31, 2013			
	Level 1	Level 2	Level 3	Total
Bonds		\$ 98.3		\$ 98.3
Equities		96.7		96.7
Real estate		15.5		15.5
Real assets		0.2		0.2
Other investments		0.5	\$ 6.4	6.9
Cash and other short term investments	2.8			2.8
Net assets	\$ 2.8	\$ 211.2	\$ 6.4	\$ 220.4

Description	Value at December 31, 2012			
	Level 1	Level 2	Level 3	Total
Bonds		\$ 100.6		\$ 100.6
Equities		84.7		84.7
Real estate		15.6		15.6
Cash and other short term investments	\$ 1.6			1.6
Net assets	\$ 1.6	\$ 200.9		\$ 202.5

Level 3 assets increased from December 31, 2012 to December 31, 2013 due to a purchase of individual life insurance contracts described in other investments.

Following is a description of the valuation methodologies used for non-U.S. plan assets measured at fair value. There have been no changes in the methodologies used at December 31, 2013 and 2012.

*Bonds:* Consists of investments in individual corporate bonds as well as investments in pooled funds investing in fixed income securities tailored to institutional investors. Certain corporate bonds are valued at the closing price reported in the active market in which the bond is traded. There are no readily available market quotations for pooled funds. The fair value is based on the underlying securities in the fund's portfolio which is typically the amount which the fund might reasonably expect to receive for the security upon a current sale.

*Equities:* Consists of investments in common and preferred stocks as well as investments in pooled funds investing in international equities tailored to institutional investors. Equity securities are valued at the closing price reported on the active market on which the individual securities are traded. There are no readily available market quotations for pooled funds. The fair value is based on the underlying securities in the fund's portfolio which is typically the amount which the fund might reasonably expect to receive for the security upon a current sale.

*Real Estate:* The plans' real estate investments are comprised of pooled real estate mutual funds valued based on a compilation of primarily observable market information or a broker quote in a non-active market.

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*Real Assets:* Consists of a fund that has underlying investments in commodity futures contracts, as well as cash and fixed income instruments used as collateral instruments against the commodity future contracts. The futures contracts are considered real assets as the underlying securities include natural resources such as oil or precious metals, livestock, or raw agricultural products such as soybeans or coffee beans.

*Other Investments:* Consists primarily of an investment in individual life insurance policies. The fair value is based on an actuarial reserve calculated using life tables and by discounting the related cash flows based on a fixed interest rate.

*Cash and other Short Term Investments:* Cash and short term investments consist primarily of cash and cash equivalents, and plan receivables/payables. The carrying amounts of cash and cash equivalents and receivables/payables approximate fair value due to the short-term nature of these instruments.

The non-U.S. pension plans have \$217.2 million and \$200.4 million of investments in alternative investment funds at December 31, 2013 and December 31, 2012, respectively, which are reported at fair value. We have concluded that the net asset value reported by the underlying fund approximates the fair value of the investment. These investments are redeemable at net asset value under agreements with the underlying funds. However, it is possible that these redemption rights may be restricted or eliminated by the funds in the future in accordance with the underlying fund agreements. Due to the nature of the investments held by the funds, changes in market conditions and the economic environment may significantly impact the net asset value of the funds and, consequently, the fair value of the plans interest in the funds. Furthermore, changes to the liquidity provisions of the funds may significantly impact the fair value of the plans interest in the funds.

**Basis of Rate-of-Return Assumption**

Long-term asset class return assumptions are determined based on input from investment professionals on the expected performance of the asset classes. The forecasts were averaged to come up with consensus passive return forecasts for each asset class. These forecast asset class returns were weighted by the plans target asset class weights, yielding a long-term return forecast of 5.2% and 5.4% for the years ended December 31, 2013 and 2012, respectively.

**Amounts recognized in the consolidated balance sheets consist of:**

	2013	2012
Prepaid pension costs	\$ 0.5	
Accounts payable and accrued expenses	(11.0)	(\$11.0)
Pension benefit liabilities	(173.2)	(191.7)
Net amount recognized	(\$183.7)	(\$ 202.7)

Pre-tax amounts recognized in accumulated other comprehensive (loss) at year end consist of:

	2013	2012
Net actuarial (loss)	(\$ 50.6)	(\$ 62.7)
Accumulated other comprehensive (loss)	(\$ 50.6)	(\$ 62.7)

We expect to amortize \$2.2 million of previously unrecognized net actuarial losses into pension cost in 2014.

The accumulated benefit obligation for the non-U.S. defined benefit pension plans was \$395.7 million and \$396.3 million at December 31, 2013 and 2012, respectively.

We expect to contribute \$15.4 million to our non-U.S. defined benefit pension plans in 2014.

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The following benefit payments, which reflect expected future service, as appropriate, are expected to be paid over the next ten years:

	Pension Benefits
2014	\$ 19.8
2015	21.1
2016	20.9
2017	21.4
2018	22.1
2019 - 2023	119.6

Costs for other worldwide defined contribution benefit plans were \$14.3 million in 2013, \$12.8 million in 2012 and \$11.9 million in 2011.

**NOTE 19. FINANCIAL INSTRUMENTS**

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

	December 31, 2013		December 31, 2012	
	Carrying amount	Estimated fair value	Carrying amount	Estimated fair value
Assets/(Liabilities), net:				
Total debt, including current portion	(\$ 1,066.5)	(\$ 1,065.2)	(\$ 1,071.0)	(\$ 1,075.9)
Foreign currency contracts	5.2	5.2	(1.8)	(1.8)
Natural gas contracts	0.5	0.5	(2.7)	(2.7)
Interest rate swap contracts	(7.9)	(7.9)	(25.7)	(25.7)

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.

Refer to Note 18 for a discussion of fair value and the related inputs used to measure fair value.

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Assets and liabilities measured at fair value on a recurring basis are summarized below:

	December 31, 2013		December 31, 2012	
	Quoted, active markets Level 1	Other observable inputs Level 2	Quoted, active markets Level 1	Other observable inputs Level 2
Assets/(Liabilities), net:				
Total debt, including current portion	(\$ 470.9)	(\$ 594.3)	(\$ 792.4)	(\$ 283.5)
Foreign currency contracts	5.2		(1.8)	
Natural gas contracts		0.5		(2.7)
Interest rate swap contracts		(7.9)		(25.7)

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

**NOTE 20. 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 to reduce our overall exposure to natural gas price movements. 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 hedged instrument. The gains and losses on these transactions offset gains and losses on the transactions being hedged. These instruments are designated as cash flow hedges. At December 31, 2013 and December 31, 2012, the notional amount of these hedges was \$20.1 million and \$21.5 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

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goods sold immediately. The earnings impact of the ineffective portion of these hedges was not material for the years ended December 31, 2013, 2012 and 2011.

**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. As of December 31, 2013, our major, pre-hedging foreign currency exposures are to the Canadian dollar, the Australian dollar and the Chinese Renminbi.

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 \$130.9 million and \$129.7 million at December 31, 2013 and December 31, 2012, 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 years ended December 31, 2013, 2012 and 2011.

**Currency Rate Risk – Intercompany Loans and Dividends**

We may use foreign currency forward exchange contracts to hedge exposures created by cross-currency intercompany loans and dividends. The translation adjustments related to these loans are recorded in other non-operating income or expense. The offsetting gains or losses on the related derivative contracts are also recorded in other non-operating income or expense. These contracts are decreased or increased as repayments are made or additional intercompany loans are extended or adjusted for intercompany dividend activity as necessary. The notional amount of these hedges was \$36.7 million at December 31, 2013. We did not have any open hedges related to intercompany loans and dividends as of December 31, 2012.

**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:

Trade Date	Notional Amount	Interest Rate Paid	Coverage Period	Risk Coverage
March 31, 2011	\$ 100.0	2.303%	March 2011 to November 2015	Term Loan A
March 31, 2011	\$ 200.0	2.523%	March 2011 to November 2015	Term Loan B
March 27, 2012	\$ 250.0	1.928%	March 2012 to March 2018	Term Loan B
March 27, 2012	\$ 200.0	2.810%	November 2015 to March 2018	Term Loan B
April 16, 2013	\$ 250.0	1.398%	November 2015 to March 2018	Term Loan A

Under the terms of the Term Loan A swaps we receive 3-month LIBOR and pay a fixed rate over the hedged period. Under the terms of the Term Loan B swaps, we receive the greater of 3-month LIBOR or the 1% 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.

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Financial Statement Impacts

The following tables detail amounts related to our derivatives as of December 31, 2013 and December 31, 2012. Our derivative liabilities not designated as hedging instruments were \$0.6 million of December 31, 2013. Our derivative assets and liabilities not designated as hedging instruments were not material as of December 31, 2012.

	Derivative Assets			Derivative Liabilities		
	Balance Sheet Location	Fair Value		Balance Sheet Location	Fair Value	
		December 31, 2013	December 31, 2012		December 31, 2013	December 31, 2012
<u>Derivatives designated as hedging instruments</u>						
Natural gas commodity contracts	Other current assets	\$ 0.7		Accounts payable and accrued expenses	\$ 0.2	\$ 2.7
Foreign exchange contracts	Other current assets	5.2	\$ 0.3	Accounts payable and accrued expenses		2.1
Foreign exchange contracts	Other non-current assets	0.6		Other long-term liabilities		
Interest rate swap contracts	Other non-current assets	4.6		Other long-term liabilities	12.5	25.7
Total derivatives designated as hedging instruments		\$ 11.1	\$ 0.3		\$ 12.7	\$ 30.5

Amount of Gain (Loss) Recognized in Accumulated Other Comprehensive Income ( AOCI ) (Effective Portion)(a)	Location of Gain (Loss) Reclassified from AOCI into Income (Effective	Gain (Loss) Reclassified from AOCI into Income (Effective Portion)
	from AOCI into	
	Income (Effective	

	2013	2012	2011	Portion)	2013	2012	2011
<u>Derivatives in Cash Flow Hedging Relationships</u>							
Natural gas commodity contracts	\$ 0.5	(\$2.7)	(\$9.1)	Cost of goods sold	(\$2.6)	(\$8.8)	(\$6.7)
Foreign exchange contracts purchases and sales	5.7	(1.7)	1.0	Cost of goods sold	2.3	(1.9)	(3.5)
Interest rate swap contracts	(7.9)	(25.7)	(14.0)	Interest Expense			
<b>Total</b>	<b>(\$1.7)</b>	<b>(\$30.1)</b>	<b>(\$22.1)</b>		<b>(\$0.3)</b>	<b>(\$10.7)</b>	<b>(\$10.2)</b>

- (a) As of December 31, 2013 the amount of existing gains in AOCI expected to be recognized in earnings over the next twelve months is \$5.5 million.

Location of Gain (Loss) Recognized  
in Income on Derivative (Ineffective

	Portion) (a)
<u>Derivatives in Cash Flow Hedging Relationships</u>	
Natural gas commodity contracts	Cost of goods sold
Foreign exchange contracts purchases and sales	SG&A expense
Interest rate swap contracts	Interest expense

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(a) The amount recognized in income related to the ineffective portion of the hedging relationships was immaterial in 2013, 2012 and 2011. No gains or losses are excluded from the assessment of the hedge effectiveness. The amount of pre-tax loss recognized in income for derivative instruments not designated as hedging instruments was \$0.6 million for the year ended December 31, 2013. There was no gain or loss recognized in 2012. A gain of \$4.7 million was recognized in 2011.

**NOTE 21. GUARANTEES**

In connection with our disposition of certain assets through a variety of unrelated transactions, we have entered into contracts that included various indemnity provisions, some of which are customary for such transactions, while others hold the acquirer of the assets harmless with respect to liabilities relating to such matters as taxes, environmental and other litigation. Some of these provisions include exposure limits, but many do not. Due to the nature of the indemnities, it is not possible to estimate the potential maximum exposure under these contractual provisions. For contracts under which an indemnity claim has been received, a liability of \$3.5 million has been recorded as of December 31, 2013, which is included in environmental liabilities as disclosed in Note 30 to the Consolidated Financial Statements.

Under our sale agreements related to the cabinets business divestiture, we have agreed to indemnify the buyer with respect to a portion (not to exceed \$10.0 million) of any potential withdrawal liability that may be incurred by the buyer in the event of their withdrawal from the Carpenters Labor-Management Pension Fund. Such indemnities only apply in the event that the sale of assets transaction itself did not trigger withdrawal liability. As of December 31, 2013, we have recorded a liability of \$7.2 million relative to this matter. See Note 30 to the Consolidated Financial Statements for additional details.

**NOTE 22. PRODUCT WARRANTIES**

We provide direct customer and end-user warranties for our products. These warranties cover manufacturing defects that would prevent the product from performing in line with its intended and marketed use. The terms of these warranties vary by product and generally provide for the repair or replacement of the defective product. We collect and analyze warranty claims data with a focus on the historic amount of claims, the products involved, the amount of time between the warranty claims and their respective sales and the amount of current sales.

The following table summarizes the activity for the accrual of product warranties for December 31, 2013 and 2012:

	2013	2012
Balance at beginning of period	\$ 11.5	\$ 12.1
Reductions for payments	(17.2)	(15.1)
Current year warranty accruals	15.9	15.5



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Preexisting warranty accrual changes	(0.3)	(1.0)
Balance at end of period	\$ 9.9	\$ 11.5

The warranty provision and related reserve are recorded as a reduction of sales and accounts receivable, respectively.

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NOTE 23. OTHER LONG-TERM LIABILITIES

	December 31, 2013	December 31, 2012
Long-term deferred compensation arrangements	\$ 22.8	\$ 23.4
Long-term portion of derivative liabilities	12.5	25.7
U.S. workers compensation	8.7	8.4
Postemployment benefit liabilities	8.0	7.2
Environmental liabilities	8.3	10.7
Other	7.2	11.2
<b>Total other long-term liabilities</b>	<b>\$ 67.5</b>	<b>\$ 86.6</b>

NOTE 24. SHARE-BASED COMPENSATION PLANS

The 2006 Long-Term Incentive Plan ( 2006 Plan ) authorized us to issue stock options, stock appreciation rights, restricted stock awards, stock units, performance-based awards and cash awards to officers and key employees, and was scheduled to terminate on October 2, 2016. On June 24, 2011 our shareholders approved an amendment and restatement of the 2006 Plan, resulting in the 2011 Long-Term Incentive Plan (the LTIP ). The 2006 Plan originally authorized up to 5,349,000 shares of common stock for issuance, and the amendment authorized an additional 1,600,000 shares of common stock for issuance, for a total of 6,949,000, which includes all shares that have been issued under the 2006 Plan. The amendment also extended the expiration date of the LTIP to June 24, 2021, after which time no further awards may be made. As of December 31, 2013, 1,956,716 shares were available for future grants under the LTIP.

	Year Ended December 31, 2013			
	Number of shares (thousands)	Weighted- average exercise price	Weighted- average remaining contractual term (years)	Aggregate intrinsic value (millions)
Option shares outstanding at beginning of period	2,311.0	\$ 30.05		
Options granted	382.4	51.75		
Option shares exercised	(438.3)	(19.65)		\$ 15.1
Options forfeited	(41.3)	(42.81)		
Options expired	(9.2)	(40.40)		

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Option shares outstanding at end of period	2,204.6	\$ 35.60	7.0	\$ 48.5
Option shares exercisable at end of period	1,255.9	28.59	6.1	\$ 36.4
Option shares vested and expected to vest	2,038.6	34.89	6.9	\$ 46.3

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	Year Ended December 31, 2012			
	Number of shares (thousands)	Weighted-average exercise price	Weighted-average remaining contractual term (years)	Aggregate intrinsic value (millions)
Option shares outstanding at beginning of period	2,024.2	\$ 28.30		
Options granted	510.2	49.26		
Option adjustment for dividend	342.9	28.69		
Option shares exercised	(545.6)	(22.34)		\$ 16.3
Options forfeited	(20.7)	(37.83)		
Option shares outstanding at end of period	2,311.0	\$ 30.05	7.2	\$ 47.8
Option shares exercisable at end of period	1,151.5	22.98	5.9	\$ 32.0
Option shares vested and expected to vest	2,149.3	29.41	7.1	\$ 45.8

We have reserved sufficient authorized shares to allow us to issue new shares upon exercise of all outstanding options. Options generally become exercisable in three to four years and expire 10 years from the date of grant. When options are exercised, we may issue new shares, use treasury shares (if available), acquire shares held by investors, or a combination of these alternatives in order to satisfy the option exercises. The total grant date fair value of options exercised during the year ended December 31, 2013 was \$3.7 million. Cash proceeds received from options exercised for the year ended December 31, 2013 were \$8.6 million.

The fair value of option grants was estimated on the date of grant using the Black-Scholes option pricing model. The weighted average assumptions for the years 2013, 2012 and 2011 are presented in the table below.

	2013	2012	2011
Weighted-average grant date fair value of options granted (dollars per option)	\$ 21.62	\$ 20.29	\$ 17.32
<b>Assumptions</b>			
Risk free rate of return	1.2%	1.2%	2.4%
Expected volatility	42.4%	41.4%	39.5%
Expected term (in years)	6.0	6.1	6.0
Expected dividend yield	0.0%	0.0%	0.0%

The risk free rate of return is determined based on the implied yield available on zero coupon U.S. Treasury bills at the time of grant with a remaining term equal to the expected term of the option. Because reorganized Armstrong stock has only been trading since the fourth quarter of 2006, the expected volatility is established based on an average of the actual historical volatilities of the stock prices of a peer group of companies. The expected life is the midpoint of the average vesting period and the contractual life of the grant. For the same reasons mentioned earlier we are using

an allowable simplified method to determine an appropriate expected term for our option valuation assumptions. The expected dividend yield is assumed to be zero because, at the time of each grant, we had no plans to declare a dividend. The assumptions outlined above are applicable to all option grants.

Under the terms of the LTIP, the Management Development and Compensation Committee of our Board of Directors is required to make equitable adjustments to stock option grants if there is a change in our capital structure. The special cash dividend in March 2012 qualified as a change to our capital structure under the terms of the LTIP. We used the Black-Scholes option pricing model to determine the fair value of the awards before and after the special cash dividend, using consistent assumptions for the risk free rate of return, expected term, expected volatility and expected dividend yield. The stock prices used in the before and after calculations were \$57.38 (the New York Stock Exchange Volume Weighted Average Price ( NYSE VWAP ) on March 29, 2012, the day before the ex-dividend date) and \$49.21 (NYSE VWAP on March 30, 2012, the ex-dividend date),

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respectively. For all option grants, the fair value of the award before and after the dividend remained the same. Therefore there was no incremental cost recognized in our financial statements due to the resulting award adjustments described in the table below.

Year Granted	Pre-Dividend Grant Terms		Post-Dividend Grant Terms	
	Number of Shares	Exercise Price	Number of Shares	Exercise Price
2006	262,418	\$22.55	305,992	\$19.34
2007	83,452	30.62	97,306	26.26
2008	171,792	21.85	200,318	18.74
2009	100,209	10.34	116,851	8.87
2010	608,278	26.21 29.23	709,309	22.48 25.07
2011	434,674	38.65 47.47	506,873	33.15 40.71
2012	403,750	50.38	470,805	43.21

We have also granted restricted stock and restricted stock units. The restricted stock awards entitle the recipient to a specified number of shares of Armstrong's common stock provided the prescribed three year service period is fulfilled. These awards generally had vesting periods of three to four years at the grant date. A summary of the 2013 and 2012 activity related to these awards follows:

	Non-Vested Stock Awards	
	Number of shares	Weighted-average fair value at grant date
December 31, 2011	128,177	\$ 39.20
Granted	51,470	50.30
Vested	(39,444)	(38.17)
Forfeited	(12,317)	(46.01)
December 31, 2012	127,886	\$ 43.32
Granted	59,356	51.97
Vested	(25,794)	(38.10)
Forfeited	(7,871)	(47.19)
December 31, 2013	153,577	\$ 47.34

The table above contains 17,060 and 9,394 restricted stock units at December 31, 2013 and 2012, respectively, that are accounted for as liability awards as they are able to be settled in cash.

We have also granted performance restricted stock and performance restricted stock units. The performance based stock awards entitle the recipient to a specified number of shares of Armstrong's common stock provided the defined financial targets are achieved at the end of the performance period. These awards generally had

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vesting periods of three years at the grant date. A summary of the 2013 and 2012 activity related to these awards follows:

	Non-Vested Performance Stock Awards	
	Number of shares	Weighted- average fair value at grant date
December 31, 2011	368,379	\$ 39.54
Granted	140,400	50.33
Vested	(179,056)	(38.40)
Forfeited	(36,248)	(40.85)
December 31, 2012	293,475	\$ 45.24
Granted	139,597	51.80
Vested	(19,979)	(37.54)
Forfeited	(22,412)	(48.14)
December 31, 2013	390,681	\$ 47.81

The table above contains 11,622 and 6,929 performance stock units at December 31, 2013 and 2012, respectively, that are accounted for as liability awards as they are able to be settled in cash.

In addition to these awards, in 2010, we granted our Chief Executive Officer performance restricted stock units vesting equally on December 31, 2012 and 2013, provided that specified stock price targets are achieved. During 2011, the performance target for the grant vesting December 31, 2012 was achieved and the shares were delivered on January 3, 2013. Additionally, in January 2013, the performance target for the grant vesting December 31, 2013 was achieved and the shares were delivered on January 2, 2014.

In addition to the equity awards described above, as of December 31, 2013 we had 20,616 fully-vested phantom shares outstanding for non-employee directors under the 2006 Phantom Stock Unit Plan. These awards are settled in cash and generally had vesting periods of one to three years. The awards are generally payable six months following the director's separation from service on the Board of Directors. The total liability recorded for these shares as of December 31, 2013 was \$2.0 million which includes associated dividends. The awards under the 2006 Phantom Stock Unit Plan are not reflected in the Non-Vested Stock Awards tables above. The 2006 Phantom Stock Unit Plan is still in place; however, no additional shares will be granted under the plan.

During 2008, we adopted the 2008 Directors Stock Unit Plan. At December 31, 2013 and 2012, there were 153,216 and 127,689 restricted units, respectively, outstanding under the 2008 Directors Stock Unit Plan. In 2013 and 2012, we granted 25,527 and 22,262 restricted stock units, respectively, to non-employee directors. These awards generally



have a vesting period of one year, and as of December 31, 2013 and 2012, 128,333 and 97,427 shares, respectively, were vested but not yet delivered. The awards are generally payable six months following the director's separation from service on the Board of Directors. The awards granted under the 2008 Directors Stock Unit Plan are not reflected in the Non-Vested Stock Awards table above.

We recognize share-based compensation expense on a straight-line basis over the vesting period. Share-based compensation cost was \$16.5 million (\$11.1 million net of tax benefit) in 2013; \$16.2 million (\$11.2 million net of tax benefit) in 2012, and \$11.2 million (\$7.5 million net of tax benefit) in 2011. Share-based compensation expense is recorded as a component of SG&A expenses. The benefits of tax deductions in excess of grant date fair value from the exercise of stock options and vesting of share-based awards for the years ended December 31, 2013 and 2012 was \$4.2 million and \$3.7 million, respectively. To the extent the vesting date value is greater than the grant date value, the excess tax benefit is a credit to additional paid in capital ( APIC ), but only if it reduces income tax currently payable. Due to our NOL and the impact of various credit carry forwards, the credit to APIC will be suspended until the NOL and credits are fully utilized, which is expected to occur in 2014.

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(dollar amounts in millions)

As of December 31, 2013, there was \$14.4 million of total unrecognized compensation cost related to non-vested share-based compensation arrangements. That cost is expected to be recognized over a weighted-average period of 1.7 years.

**NOTE 25. EMPLOYEE COMPENSATION**

Employee compensation is presented in the table below. Charges for severance costs and early retirement incentives to terminated employees that were otherwise recorded as restructuring charges have been excluded.

	2013	2012	2011
Wages, salaries and incentive compensation	\$ 540.0	\$ 509.7	\$ 542.0
Payroll taxes	57.2	55.4	58.3
Pension expense (credits), net	27.4	14.2	(2.1)
Insurance and other benefit costs	51.8	43.9	46.8
Share-based compensation	16.5	16.2	11.2
Total	\$ 692.9	\$ 639.4	\$ 656.2

The increase in wages and salaries from 2012 to 2013 is due to increased headcount related to additional crews added at our wood flooring plants and the new plants in China and severances related to our European Resilient Flooring business.

From 2011 to 2013 the net pension expense has significantly increased due to recognition of actuarial losses and decreases in the expected return on assets assumptions. See Note 18 to the Consolidated Financial Statements for further information.

**NOTE 26. LEASES**

We rent certain real estate and equipment. Several leases include options for renewal or purchase, and contain clauses for payment of real estate taxes and insurance. In most cases, management expects that in the normal course of business, leases will be renewed or replaced by other leases.

	2013	2012	2011
Rent expense	\$ 22.7	\$ 20.1	\$ 18.6
Sublease (income)	(0.4)	(0.5)	(0.5)

Net rent expense	\$ 22.3	\$ 19.6	\$ 18.1
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Future minimum payments at December 31, 2013 by year and in the aggregate, having non-cancelable lease terms in excess of one year are as follows:

	Total Minimum Lease Payments	Sublease (Income)	Net Minimum Lease Payments
<u>Scheduled minimum lease payments</u>			
2014	\$ 9.9	(\$0.2)	\$ 9.7
2015	8.7	(0.2)	8.5
2016	5.5	(0.1)	5.4
2017	3.1	(0.1)	3.0
2018	1.6		1.6
Thereafter	3.5		3.5
Total	\$ 32.3	(\$0.6)	\$ 31.7

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(dollar amounts in millions)

Assets under capital leases at December 31, 2013 and 2012 are not material.

**NOTE 27. SHAREHOLDERS EQUITY**

There were 5,057,382 treasury shares at December 31, 2013 and no treasury shares at December 31, 2012.

The balance of each component of accumulated other comprehensive (loss), net of tax as of December 31, 2013 and 2012 is presented in the table below.

	December 31, 2013	December 31, 2012
Foreign currency translation adjustments	\$ 21.3	\$ 30.1
Derivative (loss), net	(0.7)	(19.2)
Pension and postretirement adjustments	(392.2)	(482.3)
Accumulated other comprehensive (loss)	(\$371.6)	(\$471.4)

The amounts and related tax effects allocated to each component of other comprehensive income (loss) for 2013, 2012, and 2011 are presented in the table below.

	Pre-tax Amount	Tax Expense	After-tax Amount
<b><u>2013</u></b>			
Foreign currency translation adjustments	(\$8.8)		(\$8.8)
Derivative (loss), net	28.4	(\$9.9)	18.5
Pension and postretirement adjustments	139.4	(49.3)	90.1
Total other comprehensive income	\$ 159.0	(\$59.2)	\$ 99.8
<b><u>2012</u></b>			
Foreign currency translation adjustments	\$ 7.0		\$ 7.0
Derivative (loss), net	(8.0)	\$ 2.8	(5.2)
Pension and postretirement adjustments	(68.5)	10.3	(58.2)

Total other comprehensive (loss)	(\$69.5)	\$ 13.1	(\$56.4)
	Pre-tax Amount	Tax Benefit	After-tax Amount
<u>2011</u>			
Foreign currency translation adjustments	(\$1.6)		(\$1.6)
Derivative (loss), net	(14.4)	\$ 5.4	(9.0)
Pension and postretirement adjustments	(122.3)	43.6	(78.7)
Total other comprehensive (loss)	(\$138.3)	\$ 49.0	(\$89.3)

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## Armstrong World Industries, Inc., and Subsidiaries

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The following table summarizes the activity, by component, related to the change in AOCI for December 31, 2013:

	Foreign Currency Translation Adjustments <sup>(1)</sup>	Derivative (Loss) Gain <sup>(1)</sup>	Pension and Postretirement Adjustments <sup>(1)</sup>	Total Accumulated Other Comprehensive (Loss) <sup>(1)</sup>
Balance, December 31, 2012	\$ 30.1	(\$19.2)	(\$482.3)	(\$471.4)
Other comprehensive (loss) income before reclassifications, net of tax (expense) of \$ -, (\$9.5), (\$34.6), and (\$42.8)	(8.8)	18.3	62.8	72.3
Amounts reclassified from accumulated other comprehensive income		0.2	27.3	27.5
Net current period other comprehensive (loss) income	(8.8)	18.5	90.1	99.8
Balance, December 31, 2013	\$ 21.3	(\$0.7)	(\$392.2)	(\$371.6)

<sup>(1)</sup> Amounts are net of tax

The amounts reclassified from AOCI and the affected line item of the Consolidated Statement of Earnings and Comprehensive Income are presented in the table below.

	Amounts Reclassified from Accumulated Other Comprehensive Income	Affected Line Item in the Consolidated Statement of Earnings and Comprehensive Income
Derivative (Loss) Gain:		
Natural gas commodity contracts	\$ 2.6	Cost of goods sold
Foreign exchange contracts purchases and sales	(2.3)	Cost of goods sold
Total before tax	0.3	

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Tax expense	(0.1)	Income tax expense
Total net of tax	0.2	
Pension and Postretirement Adjustments:		
Prior service cost amortization	0.8	Cost of goods sold
Prior service cost amortization	1.0	SG&A expense
Amortization of net actuarial loss	21.4	Cost of goods sold
Amortization of net actuarial loss	18.8	SG&A expense
Total before tax	42.0	
Tax expense	(14.7)	Income tax expense
Total net of tax	27.3	
Total reclassifications for the period	\$ 27.5	

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**NOTE 28. SUPPLEMENTAL FINANCIAL INFORMATION**

	2013	2012	2011
<b><u>Selected operating expense</u></b>			
Maintenance and repair costs	\$ 96.2	\$ 90.8	\$ 95.0
Research and development costs	32.8	30.3	29.2
Advertising costs	12.4	12.2	16.6
<b><u>Other non-operating expense</u></b>			
Foreign currency transaction loss, net of hedging activity	\$ 1.4	\$ 0.3	\$ 0.6
Other	0.4	0.2	0.7
Total	\$ 1.8	\$ 0.5	\$ 1.3
<b><u>Other non-operating income</u></b>			
Interest income	\$ 3.2	\$ 3.1	\$ 2.8
Foreign currency transaction gain, net of hedging activity	0.1	0.4	0.2
Other	0.6		0.8
Total	\$ 3.9	\$ 3.5	\$ 3.8

**NOTE 29. RELATED PARTIES**

We purchase grid products from WAVE, our 50%-owned joint venture with Worthington Industries. The total amount of these purchases was approximately \$89 million in 2013 and 2012, and \$93 million in 2011. We also provide certain selling, promotional and administrative processing services to WAVE for which we receive reimbursement. Those services amounted to \$14.9 million in 2013, \$14.6 million in 2012, and \$15.0 million in 2011. The net amount due to us from WAVE for all of our relationships was \$1.3 million at the end of 2013 and the net amount due from us to WAVE at the end of 2012 was \$2.6 million. See Note 10 to the Consolidated Financial Statements for additional information.

During 2013 and 2012, we incurred approximately \$0.5 million and \$0.1 million, respectively, in consulting fees related to services provided by TPG and affiliates. The amount due, from us to the TPG affiliates, was \$0.1 million at the end of 2013 and 2012. There were no consulting services provided by TPG affiliates in 2011. See Note 1 to the Consolidated Financial Statements for additional information.

**NOTE 30. LITIGATION AND RELATED MATTERS****ENVIRONMENTAL MATTERS**



## Environmental Compliance

Our manufacturing and research facilities are affected by various federal, state and local requirements relating to the discharge of materials and the protection of the environment. We make expenditures necessary for compliance with applicable environmental requirements at each of our operating facilities. These regulatory requirements continually change, therefore we cannot predict with certainty future expenditures associated with compliance with environmental requirements.

## Environmental Sites

### Summary

We are actively involved in the investigation, closure and/or remediation of existing or potential environmental contamination under the Comprehensive Environmental Response, Compensation and Liability Act ( CERCLA ), and state or international Superfund and similar type environmental laws at several domestically- and internationally-owned, formerly owned and non-owned locations allegedly resulting from past industrial activity. In a few cases, we are one of several potentially responsible parties ( PRPs ) and have agreed to jointly fund the required investigation and remediation, while preserving our defenses to the liability. We may also have rights of contribution or reimbursement from other parties or coverage under applicable insurance policies.

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Estimates of our future liability at the environmental sites are based on evaluations of currently available facts regarding each individual site. We consider factors such as our activities associated with the site, existing technology, presently enacted laws and regulations and prior company experience in remediating contaminated sites. Although current law imposes joint and several liability on all parties at Superfund sites, our contribution to the remediation of these sites is expected to be limited by the number of other companies potentially liable for site remediation. As a result, our estimated liability reflects only our expected share. In determining the probability of contribution, we consider the solvency of other parties, the site activities of other parties, whether liability is being disputed, the terms of any existing agreements and experience with similar matters, and the effect of our Chapter 11 reorganization upon the validity of the claim.

**Specific Material Events**

**St Helens, OR**

In August 2010, we entered into a Consent Order (the Consent Order) with the Oregon Department of Environmental Quality ( ODEQ ), along with Kaiser Gypsum Company, Inc. ( Kaiser ), and Owens Corning Sales LLC ( OC ), with respect to our St. Helens, OR Building Products facility, which was previously owned by Kaiser and then OC. The Consent Order, which replaces a previous order of the ODEQ requiring us to investigate and remediate hazardous substances present at the facility, requires that we and Kaiser complete a remedial investigation and feasibility study ( RI/FS ) on the portion of the site owned by us ( Owned Property ), which is comprised of Upland and Lowland areas. The Consent Order further requires us, Kaiser and OC to conduct an RI/FS in the In-Water area of the adjacent Scappoose Bay. We are currently in an investigation phase for both the Owned Property and the Scappoose Bay and are preparing draft investigative and risk assessment reports for submission to ODEQ in the first quarter of 2014. At this time, we have determined that it is probable that remedial action for certain portions of the Owned Property will be required. The current estimate of our future liability at the site includes the known investigation work required by the Consent Order and the current projected cost of possible remedies for certain portions of the Owned Property. At this time, we are unable to reasonably estimate any remediation costs that we may ultimately incur with respect to other portions of the Owned Property or the Scappoose Bay, although such costs may be material. If additional investigative or remedial action is required by ODEQ, it could result in additional costs greater than the amounts currently estimated and those costs may be material.

Costs and responsibilities for investigation, including the current RI/FS for the Owned Property continue to be shared with Kaiser pursuant to a cost sharing agreement with Kaiser. Contemporaneously with the execution of the Consent Order, we, Kaiser and OC also entered into a separate cost sharing agreement for both the investigation and possible remediation of the Scappoose Bay. Kaiser's shares under the cost sharing agreements are being funded by certain insurance policies, which comprise substantially all of Kaiser's assets. If Kaiser and OC are unwilling or unable to fulfill their obligations under the cost sharing agreements, or seek to contest or challenge the allocations, or if Kaiser's insurance policies are unable to fund Kaiser's shares, it could result in additional cost to us greater than the amounts currently estimated and those costs may be material.

The principal contaminants at the St. Helens site are arsenic and dioxin compounds from historic operations by prior owners of the plant. As part of the investigation on the site pursuant to the Consent Order, we conducted an analysis of the raw materials used in our manufacturing processes at the St. Helens facility to identify possible sources of these same contaminants. Our testing found low levels of naturally occurring dioxin in sourced clay, known as ball clay, used in the production of some of our fire-retardant products at our St. Helens manufacturing facility. Based on the data from the soil and sediment samples from our St. Helens property and the data from the ball clay, we do not believe that the presence of dioxin in our raw material will have a material impact on our ultimate liability at the site. In addition, consistent with our health and safety policies, we tested employee exposure levels at two facilities representative of our handling procedures at all plants that use this ball clay and, as a result of such testing, do not believe that the ball clay poses a hazard to our employees based on applicable regulatory standards. Based on the manufacturing process and the amount of raw material utilized, we also believe that the dioxin levels in our finished products do not pose a hazard to installers or consumers. While we have not received any claims related to this raw material or our fire-retardant products, there can be no assurance that the raw material or the finished products will not become the subject of legal claims or regulatory actions or that such claims or actions will not have a material adverse effect on our financial condition or results of operations.

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**Macon, GA**

The U.S. Environmental Protection Agency ( EPA ) has listed two landfills located on a portion of our Building Products facility in Macon, GA, along with the former Macon Naval Ordnance Plant landfill adjacent to our property, and portions of Rocky Creek (collectively, the Macon Site ) as a Superfund site on the National Priorities List due to the presence of contaminants, most notably PCBs.

In September 2010, we entered into an Administrative Order on Consent for a Removal Action with the EPA to investigate PCB contamination in one of the landfills on our property, the Wastewater Treatment Plant Landfill (the WWTP Landfill ). We concluded the investigative phase of the Removal Action for the WWTP Landfill and submitted our final Engineering Evaluation/Cost Analysis ( EE/CA ) to the EPA. The EPA approved the EE/CA and issued an Action Memorandum in July 2013 selecting our recommended remedy for the Removal Action. We are currently negotiating an Administrative Order on Consent for Removal Action and will begin remedy design and implementation work once finalized. Our estimate of future liability includes costs for the remedial work for the WWTP Landfill.

It is probable that we will incur field investigation, engineering and oversight costs associated with a RI/FS with respect to the remainder of the Superfund site, which includes the other landfill on our property, as well as areas on and adjacent to Armstrong s property and Rocky Creek (the Remaining Site ). We have not yet entered into an Order with the EPA for the Remaining Site and, as a result, have not yet commenced an investigation of this portion of the site. Accordingly, we are able to estimate only a small portion of the probable costs that may be associated with the RI/FS for the Remaining Site. We anticipate, however, that the EPA may require significant investigative work for the Remaining Site and that we may ultimately incur costs in remediating any contamination discovered during the RI/FS. We are unable to reasonably estimate the total costs associated with the investigation work or any resulting remediation therefrom, although such amounts may be material.

**Elizabeth City, NC**

This site is a former cabinet manufacturing facility that was operated by Triangle Pacific Corporation, now known as Armstrong Wood Products, Inc. ( Triangle Pacific ) from 1977 until 1996. The site was formerly owned by the U.S. Navy ( Navy ) and Westinghouse, now CBS Corporation ( CBS ). We assumed ownership of the site when we acquired the stock of Triangle Pacific in 1998. Prior to our acquisition, the NC Department of Environment and Natural Resources listed the site as a hazardous waste site. In 1997, Triangle Pacific entered into a cost sharing agreement with Westinghouse whereby the parties agreed to share equally in costs associated with investigation and potential remediation. In 2000, Triangle Pacific and CBS entered into an RI/FS with the EPA for the site. In 2007, we and CBS entered into an agreement with the Navy whereby the Navy agreed to pay one third of defined past and future investigative costs up to a certain amount, which has now been exhausted. Although the parties initially submitted the RI/FS work plan to the EPA in 2004, the EPA did not approve the RI/FS work plan until August 2011. We submitted the draft Remedial Investigative and Risk Assessments in the first quarter of 2014. We are unable to reasonably estimate any additional investigative costs or determine whether remediation will be required. If remediation is

required, the related costs may be material, although we expect these costs to be shared with CBS and the Navy.

Summary of Financial Position

Liabilities of \$8.3 million and \$10.7 million at December 31, 2013 and December 31, 2012, respectively, were recorded for potential environmental liabilities, on a global basis, that we consider probable and for which a reasonable estimate of the probable liability could be made. Where existing data is sufficient to estimate the liability, that estimate has been used; where only a range of probable liabilities is available and no amount within that range is more likely than any other, the lower end of the range has been used. As assessments and remediation activities progress at each site, these liabilities are reviewed to reflect new information as it becomes available. These liabilities are undiscounted.

The estimated liabilities above do not take into account any claims for recoveries from insurance or third parties. It is our policy to record probable recoveries that are either available through settlement or anticipated to be recovered through negotiation or litigation as assets in the Condensed Consolidated Balance Sheets. No material amounts were recorded for probable recoveries at December 31, 2013 or December 31, 2012.

Actual costs to be incurred at identified sites may vary from our estimates. Based on our knowledge of the identified sites, it is not possible to reasonably estimate future costs in excess of amounts already recognized.

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**MULTI-EMPLOYER PENSION WITHDRAWAL LIABILITY CLAIM**

On February 15, 2013, we received a demand notice from the Carpenters Labor-Management Pension Fund ( Fund ) of a deemed withdrawal relating to the sale of our cabinets business to AIP in 2012. The Fund claims that the sale triggered a withdrawal liability to the Fund relating to unfunded vested plan benefits attributable to our role as a contributing employer under the Employee Retirement Income Security Act of 1974 and the Multiemployer Pension Plan Amendments Act of 1980, notwithstanding the assumption and maintenance by AIP of ongoing contribution obligations under the applicable union bargaining agreement. The claimed amount is \$15.2 million, payable in a lump-sum or over 20 years on a quarterly basis. Pursuant to the demand notice, we provided information and reviewed the determination with the Fund, and have made regular quarterly payments under protest pending resolution of the dispute. On September 24, 2013, the Fund informed us that it disagrees with our position that the sale transaction did not trigger a withdrawal liability. We have the opportunity to identify any inaccuracies in the determination of the claimed amount of unfunded vested plan benefits allocated to us, and to arbitrate the matter. We are pursuing both of these opportunities and have notified the Fund of our intent to proceed to arbitration, which we expect to occur in 2014.

Under our sale agreements with AIP, we have agreed to indemnify AIP with respect to a portion (not to exceed \$10.0 million) of any potential withdrawal liability that may be incurred by AIP in the event of a withdrawal by AIP from the Fund, but such indemnities only apply in the event that the sale of assets transaction itself did not trigger withdrawal liability.

A charge of \$7.5 million was recorded during the third quarter of 2013 within Discontinued Operations (due to the association with the divestiture of the cabinets business). As of December 31, 2013, we have recorded a liability of \$7.2 million relative to this matter. Adjustments to our liability could be recorded based upon completion of our actuarial analysis of unfunded vested plan benefits and the arbitration process. We do not believe that the ultimate disposition of this matter will have a material adverse effect on our financial condition, liquidity or results of operations.

Prior to the cabinets business divestiture, we made contributions of \$0.8 million to the Fund during 2012.

**ANTIDUMPING AND COUNTERVAILING DUTY CASES**

In October 2010, a coalition of U.S. producers of multilayered wood flooring (not including Armstrong) filed petitions seeking antidumping ( AD ) and countervailing duties ( CVD ) with the United States Department of Commerce ( DOC ) and the United States International Trade Commission ( ITC ) against imports of multilayered hardwood flooring from China. The AD petition requested duties of up to 269% on imports of multilayered hardwood flooring, which it claimed were needed to offset unfair pricing from Chinese imports that injure the U.S. industry. The CVD petition requested an unspecified level of duties be imposed on importers to offset alleged unfair subsidies provided by the Chinese government.

We produce multilayered wood flooring domestically and import multilayered wood flooring from third party suppliers in China. We also have a plant in Kunshan China ( Armstrong Kunshan ) that manufactures multilayered wood flooring for export to the U.S. We were specifically mentioned in the AD and CVD petitions as an importer. Under the U.S. AD and CVD laws, a U.S. importer may be responsible for the payment of any antidumping and countervailing duties.

In response to the petitions, the DOC conducted investigations and issued CVD and AD orders on December 8, 2011. Pursuant to the orders, Armstrong Kunshan's final rates were 1.5% (CVD) and 3.31% (AD). These rates became effective in the form of additional duty deposits and applied retroactively as of April 6, 2011 (CVD) and May 26, 2011 (AD).

Following the issuance of the CVD and AD orders, appeals were filed by several parties challenging various aspects of the determinations by both the DOC and the ITC, including certain aspects that may impact the validity of the orders and the applicable rates. Armstrong is participating in two of these appeals, which are currently ongoing and are expected to conclude in 2014.

Additionally, the DOC is currently conducting annual administrative reviews of the CVD and AD final rates. In 2013, Armstrong Kunshan was selected for individual review as a mandatory respondent. As part of that review process, which is scheduled to conclude in 2014, Armstrong Kunshan's original CVD and AD rates may be

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changed and applied retroactively to the DOC's preliminary determinations in the original investigation. On November 25, 2013, the DOC issued a preliminary AD rate of 8.87% for Armstrong Kunshan as part of the first annual administrative review of the AD rates. On January 16, 2014, the DOC issued a preliminary CVD rate of 0.9% for Armstrong Kunshan as part of the first annual administrative review of the CVD rates. These preliminary review rates are estimates only and the final AD and CVD review rates are expected to be issued in March and May 2014, respectively. While we are unable to predict the final review rates, based on the preliminary review rates we do not expect that this will have a material impact on our financial condition, results of operations or cash flows.

**OTHER CLAIMS**

We are involved in various lawsuits, claims, investigations and other legal matters from time to time that arise in the ordinary course of conducting business, including matters involving our products, intellectual property, relationships with suppliers, distributors, relationships with competitors, employees and other matters. While complete assurance cannot be given to the outcome of these proceedings, we do not believe that any of these matters, individually or in the aggregate, will have a material adverse effect on our financial condition, liquidity or results of operations.

**NOTE 31. EARNINGS PER SHARE**

Earnings per share components may not add due to rounding.

The following table is a reconciliation of net earnings to net earnings attributable to common shares used in our basic and diluted EPS calculations for the years ended December 31, 2013, 2012, and 2011:

	2013	2012	2011
Earnings from continuing operations	\$ 100.5	\$ 144.4	\$ 112.8
Earnings allocated to participating non-vested share awards	(0.5)	(1.0)	(0.8)
<b>Earnings from continuing operations attributable to common shares</b>	<b>\$ 100.0</b>	<b>\$ 143.4</b>	<b>\$ 112.0</b>

The following table is a reconciliation of basic shares outstanding to diluted shares outstanding for the years ended December 31, 2013, 2012, and 2011 (shares in millions):

	2013	2012	2011
Basic shares outstanding	57.8	58.9	58.3
Dilutive effect of stock option awards	0.6	0.6	0.5



Diluted shares outstanding	58.4	59.5	58.8
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Options to purchase 181,041, 26,610 and 218,765 shares of common stock were outstanding as of December 31, 2013, 2012, and 2011, respectively, but not included in the computation of diluted earnings per share, because the options were anti-dilutive.

#### NOTE 32. SPECIAL CASH DIVIDEND

On March 23, 2012, our Board of Directors declared a special cash dividend in the amount of \$8.55 per share, or \$508 million in the aggregate, of which \$502.9 million was paid on April 10, 2012 to the shareholders of record as of April 3, 2012. Payment of an additional \$1.5 million was made during the remainder of 2012. Approximately \$0.5 million was paid during 2013, when employee shares and units vested. The unpaid portion of the dividend at December 31, 2013 relates to unvested employee and director shares and units and is reflected in current liabilities (\$2.6 million) and other long term liabilities (\$0.6 million). The dividends will be paid when the underlying employee awards vest, while vested director awards will be paid upon their separation from service on the Board of Directors. The dividend was funded in part by existing cash and in part by the proceeds of additional debt issued under our Term Loan B. The dividend was recorded as a reduction of retained earnings to the extent that retained earnings were available at the dividend declaration date. Dividends in excess of retained earnings were recorded as a reduction of capital in excess of par value.

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**ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE**

Not applicable.

**ITEM 9A. CONTROLS AND PROCEDURES**

Our management, with the participation of our chief executive officer and our chief financial officer, performed an evaluation of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934 ( Exchange Act )) as of December 31, 2013. Our chief executive officer and our chief financial officer have concluded that our disclosure controls and procedures were effective insofar as they are designed to provide reasonable assurance that information required to be disclosed by us in the reports we file or submit under the Exchange Act is (i) recorded, processed, summarized and reported, within the time periods specified in the Commission's rules and forms, and (ii) accumulated and communicated to our management, including our principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure. We believe that a controls system, no matter how well designed and operated, cannot provide absolute assurance that the objectives of the controls system are met, and no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within a company have been detected.

There have been no changes in our internal control over financial reporting that occurred during the quarter ended December 31, 2013 that have materially affected or are reasonably likely to materially affect our internal control over financial reporting.

Management's Report on Internal Control over Financial Reporting and the Report of Independent Registered Public Accounting Firm are incorporated by reference to Item 8.

Table of ContentsPART IIIITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE**Executive Officers of the Company (as of February 24, 2014):**

<b>Name</b>	<b>Age</b>	<b>Present Position and Business Experience During the Last Five Years*</b>
Matthew J. Espe	55	<p>Armstrong World Industries, Inc.</p> <p>President &amp; CEO; Director since August 2010</p> <p>Ricoh Americas Corporation</p> <p>Chairman &amp; CEO (2008)</p>
Victor D. Grizzle	52	<p>Armstrong World Industries, Inc.</p> <p>Executive Vice President &amp; CEO, Armstrong Building Products since January 2011</p> <p>Valmont Industries</p> <p>Group President, Global Structures, Coatings and Tubing (2005)</p>
Mark A. Hershey	44	<p>Armstrong World Industries, Inc.</p> <p>Senior Vice President, General Counsel &amp; Secretary since July 2011</p> <p>Chief Compliance Officer since February 2012</p> <p>Ricoh Americas Corporation</p> <p>Senior Vice President, General Counsel, Chief Compliance Officer &amp; Secretary (2008)</p>
Donald R. Maier	49	<p>Armstrong World Industries, Inc.</p> <p>Senior Vice President, Global Operations Excellence since January 2010</p> <p>TPG Capital</p> <p>Operational Consultant, several TPG portfolio companies (2008)</p> <p>Director of Operational Excellence, Freescale Semiconductors (2008)</p>
Thomas B. Mangas	46	<p>Armstrong World Industries, Inc.</p> <p>Executive Vice President &amp; CEO, Armstrong Floor Products since November 2013</p> <p>Senior Vice President, CFO (2010)</p>

		Procter & Gamble Company
		Vice President & CFO, Beauty & Grooming (2008)
Stephen F. McNamara	47	Armstrong World Industries, Inc.
		Vice President, Controller since July 2008
Ellen R. Romano	52	Armstrong World Industries, Inc.
		Senior Vice President, Human Resources since July 2013
		Vice President, Human Resources, Armstrong Building Products (2009)
David S. Schulz	48	Armstrong World Industries, Inc.
		Senior Vice President, Chief Financial Officer since November 2013
		Vice President, Armstrong Building Products (June 2011)
		Procter & Gamble Company
		Associate Director & CFO, Americas Snacks (2009)
		J.M. Smucker Company
		Finance Director, Coffee Strategic Business Area (2008)

\* *Information in parentheses indicates the year in which service in the position began.*

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All executive officers are elected by the Board of Directors to serve in their respective capacities until their successors are elected and qualified or until their earlier resignation or removal.

## **Code of Ethics**

We have adopted a Code of Business Conduct that applies to all employees, executives and directors, specifically including our Chief Executive Officer, our Chief Financial Officer and our Controller. We have also adopted a Code of Ethics for Financial Professionals (together with the Code of Business Conduct, the Codes of Ethics ) that applies to all professionals in our finance and accounting functions worldwide, including our Chief Financial Officer and our Controller.

The Codes of Ethics are intended to deter wrongdoing and to promote:

honest and ethical conduct, including the ethical handling of actual or apparent conflicts of interest between personal and professional relationships;

full, fair, accurate, timely and understandable public disclosures;

compliance with applicable governmental laws, rules and regulations;

the prompt internal reporting of violations of the Codes of Ethics; and

accountability for compliance with the Codes of Ethics.

The Codes of Ethics are available at <http://www.armstrong.com/corporate/codes-policies.html> and in print free of charge. Any waiver of the Company's Code of Business Conduct, particularly its conflicts-of-interest provisions, which may be proposed to apply to any director or executive officer, must be reviewed in advance by the Nominating and Governance Committee of the Board of Directors, which would be responsible for making a recommendation to the Board of Directors for approval or disapproval. The Board of Directors' decision on any such matter would be disclosed publicly in compliance with applicable legal standards and the rules of the New York Stock Exchange. We intend to satisfy these requirements by making disclosures concerning such matters available on the For Investors page of our website. There were no waivers or exemptions from the Code of Business Conduct in 2013 applicable to any director or executive officer.

Other information required by Item 10 is incorporated by reference to the sections entitled Election of Directors, Corporate Governance, and Section 16(a) Beneficial Ownership Reporting Compliance in the Company's proxy statement for its 2014 annual meeting of shareholders to be filed no later than April 30, 2014.

## **ITEM 11. EXECUTIVE COMPENSATION**

The information required by Item 11 is incorporated by reference to the sections entitled Compensation Discussion and Analysis, Compensation Committee Report, Summary Compensation Table, Grants of Plan-Based Awards, Outstanding Equity Awards at Fiscal Year-End, Option Exercises and Stock Vested, Pension Benefits, Nonqualified

Deferred Compensation, Potential Payments Upon Termination or Change in Control, Board of Directors Board's Role in Risk Management Oversight, Compensation Committee Interlocks and Insider Participation and Compensation of Directors in the Company's proxy statement for its 2014 annual meeting of shareholders to be filed no later than April 30, 2014.

**ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS**

The information required by Item 12 is incorporated by reference to the sections entitled Security Ownership of Certain Beneficial Owners, Security Ownership of Management, and Equity Compensation Plan Information in the Company's proxy statement for its 2014 annual meeting of shareholders to be filed no later than April 30, 2014.

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**ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE**

The information required by Item 13 is incorporated by reference to the sections entitled Certain Relationships and Related Transactions and Director Independence in the Company's proxy statement for its 2014 annual meeting of shareholders to be filed no later than April 30, 2014.

**ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES**

The information required by Item 14 is incorporated by reference to the sections entitled Audit Committee Report and Relationship with Independent Auditors in the Company's proxy statement for its 2014 annual meeting of shareholders to be filed no later than April 30, 2014.

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**PART IV**

**ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES**

(a) Listing of Documents

1. The financial statements and schedule of Armstrong World Industries, Inc. filed as a part of this 2013 Annual Report on Form 10-K is listed in the Index to Financial Statements and Schedules on Page 40.
2. The financial statements required to be filed pursuant to Item 15 of Form 10-K are: Worthington Armstrong Venture consolidated financial statements for the years ended December 31, 2013, 2012, and 2011 (filed herewith as Exhibit 99.1).
3. The following exhibits are filed as part of this 2013 Annual Report on Form 10-K:

Exhibit No.	Description
2	Armstrong World Industries, Inc.'s Fourth Amended Plan of Reorganization dated May 23, 2003 (as modified by modifications filed with the Bankruptcy Court on October 17, 2003, November 10, 2003, December 3, 2004 and February 21, 2006) is incorporated by reference from the Annual Report on Form 10-K, filed on February 24, 2006, wherein it appeared as Exhibit 2.3.
3.1	Amended and Restated Certificate of Incorporation of Armstrong World Industries, Inc. is incorporated by reference from the Current Report on Form 8-K filed on October 2, 2006, wherein it appeared as Exhibit 3.1.
3.2	Bylaws of Armstrong World Industries, Inc. as amended, are incorporated by reference from the Current Report on Form 8-K filed on August 6, 2010, wherein they appeared as Exhibit 3.1.
10.1	Amended and Restated Credit Agreement dated, March 15, 2013, among Armstrong World Industries, Inc. and Armstrong Wood Products, Inc., as borrowers, the guarantors identified therein and Bank of America, N.A., as administrative agent and collateral agent, is incorporated by reference from the Current Report on Form 8-K filed on March 18, 2013, wherein it appeared as Exhibit 10.1.
10.2	Amended and Restated Security Agreement dated, March 15, 2013, by and among Armstrong World Industries, Inc., the grantors named therein and Bank of America, N.A., as collateral agent, is incorporated by reference from the Current Report on Form 8-K filed on March 18, 2013, wherein it appeared as Exhibit 10.2.
10.3	Amended and Restated Pledge Agreement dated, March 15, 2013, by and among Armstrong World Industries, Inc., the pledgors named therein and Bank of America, N.A., as collateral agent, is incorporated by reference from the Current Report on Form 8-K filed on March 18, 2013, wherein it appeared as Exhibit 10.3.



- 10.4 Amended and Restated Canadian Pledge Agreement dated, March 15, 2013, by and among Armstrong World Industries, Inc. and Bank of America, N.A., as collateral agent, is incorporated by reference from the Current Report on Form 8-K filed on March 18, 2013, wherein it appeared as Exhibit 10.4.

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- 10.5 Receivables Purchase Agreement dated as of December 10, 2010, by and among Armstrong World Industries, Inc., as initial servicer and collection agent, Armstrong Receivables Company LLC, as seller, Atlantic Asset Securitization LLC, as conduit purchaser, and Credit Agricole Corporate and Investment Bank, as administrative agent, an issuer of letters of credit and related committed purchaser, is incorporated by reference from the Current Report on Form 8-K filed on December 14, 2010, wherein it appeared as Exhibit 10.1.
- 10.6 Purchase and Sale Agreement dated as of December 10, 2010, by and among Armstrong World Industries, Inc., as originator and as initial servicer, Armstrong Hardwood Flooring Company, as originator, and Armstrong Receivables Company LLC, is incorporated by reference from the Current Report on Form 8-K filed on December 14, 2010, wherein it appeared as Exhibit 10.2.
- 10.7 Omnibus Amendment to Receivables Purchase Agreement and Purchase and Sale Agreement dated as of August 1, 2011, by and among Armstrong World Industries, Inc., Armstrong Receivables Company LLC, Armstrong Hardwood Flooring Company, Atlantic Asset Securitization LLC, and Credit Agricole Corporate and Investment Bank, is incorporated by reference from the Annual Report on Form 10-K filed on February 27, 2012, wherein it appeared as Exhibit 10.9.
- 10.8 Second Omnibus Amendment to Receivables Purchase Agreement and Purchase and Sale Agreement dated as of December 21, 2011, by and among Armstrong World Industries, Inc., Armstrong Receivables Company LLC, as seller, Armstrong Hardwood Flooring Company, as originator, Atlantic Asset Securitization LLC, as resigning conduit purchaser, Credit Agricole Corporate and Investment Bank, as resigning administrative agent, resigning related committed purchaser and resigning LC bank, The Bank of Nova Scotia, as successor administrative agent, successor related committed purchaser and successor LC bank, and Liberty Street Funding LLC, as successor conduit purchaser, is incorporated by reference from the Annual Report on Form 10-K filed on February 27, 2012, wherein it appeared as Exhibit 10.10.
- 10.9 Third Omnibus Amendment Agreement, dated as of March 28, 2013, by and among Armstrong Receivables Company, LLC, Armstrong World Industries, Inc., Armstrong Hardwood Flooring Company, The Bank of Nova Scotia, and Liberty Street Funding LLC, is incorporated by reference from the Quarterly Report on Form 10-Q filed on April 29, 2013, wherein it appeared as Exhibit 10.1.
- 10.10 Armstrong World Industries, Inc. Asbestos Personal Injury Settlement Trust Agreement dated as of October 2, 2006, by and among Armstrong World Industries, Inc. and trustees, is incorporated by reference from the Current Report on Form 8-K filed on October 2, 2006, wherein it appeared as Exhibit 10.2.
- 10.11 Stockholder and Registration Rights Agreement, dated as of October 2, 2006, by and between Armstrong World Industries, Inc. and the Armstrong World Industries, Inc. Asbestos Personal Injury Settlement Trust is incorporated by reference from the Current Report on Form 8-K filed on October 2, 2006, wherein it appeared as Exhibit 10.3.
- 10.12 Stipulation and Agreement with Respect to Claims of Armstrong Holdings, Inc. and Armstrong Worldwide, Inc.; and Motion for Order Approving Stipulation and Agreement are incorporated by reference from the Current Report on Form 8-K filed on February 27, 2007, wherein they appeared as Exhibits 99.2 and 99.3, respectively.
- 10.13 Non-Disclosure Agreement, dated July 30, 2009, between Armstrong World Industries, Inc. and TPG Capital, L.P. is incorporated by reference from the Schedule 13D filed by TPG Advisors VI, Inc., TPG Advisors V, Inc., David Bonderman and James G. Coulter on August 11, 2009, wherein it appeared as Exhibit 3.



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- 10.14 Undertaking Letter from TPG Capital L.P., dated August 10, 2009, to Armstrong World Industries, Inc. is incorporated by reference from the Schedule 14D-9 filed by Armstrong World Industries, Inc. on September 15, 2009, wherein it appeared as Exhibit (e)(4).
- 10.15 Joint Venture Agreement, dated March 23, 1992 between Armstrong Ventures, Inc. and Worthington Ventures, Inc., is incorporated by reference from the Annual Report on Form 10-K filed on February 27, 2013, wherein it appeared as Exhibit 10.18.
- 10.16 Management Achievement Plan for Key Executives, effective as of November 28, 1983, as amended April 30, 2007, December 8, 2008, and June 24, 2011, is incorporated by reference to Armstrong World Industries, Inc.'s Definitive Proxy Statement on Schedule 14A for the Armstrong World Industries, Inc. 2011 Annual Meeting of Shareholders held on June 24, 2011, filed on April 28, 2011, wherein it appeared as Exhibit B.\*
- 10.17 2006 Long-Term Incentive Plan, as amended February 23, 2009, is incorporated by reference from the Annual Report on Form 10-K, filed on February 26, 2009, wherein it appeared as Exhibit 10.13.\*
- 10.18 Form of Stock Option Agreement under 2006 Long-Term Incentive Plan is incorporated by reference from the Current Report on Form 8-K filed on October 2, 2006, wherein it appeared as Exhibit 10.5.\*
- 10.19 Form of Restricted Stock Award Agreement under 2006 Long-Term Incentive Plan is incorporated by reference from the Current Report on Form 8-K filed on October 2, 2006, wherein it appeared as Exhibit 10.6.\*
- 10.20 Form of Restricted Stock and/or Option Award under 2006 Long-Term Incentive Plan is incorporated by reference from the Current Report on Form 8-K filed on October 2, 2006, wherein it appeared as Exhibit 10.7.\*
- 10.21 Form of Restricted Stock Award under the 2006 Long-Term Incentive Plan is incorporated by reference from the 2007 Annual Report on Form 10-K, filed on February 29, 2008, wherein it appeared as Exhibit 10.35.\*
- 10.22 Form of Stock Option Award under the 2006 Long-Term Incentive Plan is incorporated by reference from the Quarterly Report on Form 10-Q for the quarter ended March 31, 2008, filed on May 1, 2008, wherein it appeared as Exhibit 10.37.\*
- 10.23 Stock Option Award under the 2006 Long-Term Incentive Plan to Thomas B. Mangas is incorporated by reference from the Current Report on Form 8-K filed on April 6, 2010, wherein it appeared as Exhibit 10.1.\*
- 10.24 Form of Stock Option Award under the 2006 Long-Term Incentive Plan used in connection with award to Mr. McNamara is incorporated by reference from the Current Report on Form 8-K filed on April 6, 2010, wherein it appeared as Exhibit 10.2.\*
- 10.25 Stock Option and Performance Restricted Stock Unit Awards under the 2006 Long-Term Incentive Plan to Donald R. Maier dated September 7, 2010, is incorporated by reference from the Annual Report on Form 10-K filed on February 27, 2012, wherein it appeared as Exhibit 10.25.\*
- 10.26 Form of Stock Option and Restricted Stock Unit Award under the 2006 Long-Term Incentive Plan used in connection with awards to Mr. Grizzle in connection with new hire grant, is incorporated by reference from the Annual Report on Form 10-K filed on February 27, 2012, wherein it appeared as Exhibit 10.26.\*

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- 10.27 Forms of Stock Option and Performance Restricted Stock Unit Award under the 2006 Long-Term Incentive Plan used in connection with March 2011 grants to officers (except Donald R. Maier) and new hire grant for Mark A. Hershey, is incorporated by reference from the Annual Report on Form 10-K filed on February 27, 2012, wherein it appeared as Exhibit 10.27.\*
- 10.28 2011 Long-Term Incentive Plan, effective as of June 24, 2011, is incorporated by reference to Armstrong World Industries, Inc.'s Definitive Proxy Statement on Schedule 14A for the Armstrong World Industries, Inc. 2011 Annual Meeting of Shareholders held on June 24, 2011 filed on April 28, 2011, wherein it appeared as Exhibit A.\*
- 10.29 Form of 2011 Long-Term Incentive Plan Terms and Conditions (Grant of Nonqualified Stock Options – U.S. (Executive Officer)), is incorporated by reference from the Quarterly Report on Form 10-Q filed on April 30, 2012, wherein it appeared as Exhibit 10.1.\*
- 10.30 Form of 2011 Long-Term Incentive Plan Terms and Conditions (Grant of Nonqualified Stock Options – U.S.), is incorporated by reference from the Quarterly Report on Form 10-Q filed on April 30, 2012, wherein it appeared as Exhibit 10.2.\*
- 10.31 Form of 2011 Long-Term Incentive Plan Terms and Conditions (Grant of Nonqualified Stock Options – Non-U.S. (Executive Officer)), is incorporated by reference from the Quarterly Report on Form 10-Q filed on April 30, 2012, wherein it appeared as Exhibit 10.3.\*
- 10.32 Form of 2011 Long-Term Incentive Plan Terms and Conditions (Grant of Time-Based Restricted Stock Units – U.S.), is incorporated by reference from the Quarterly Report on Form 10-Q filed on April 30, 2012, wherein it appeared as Exhibit 10.4.\*
- 10.33 Form of 2011 Long-Term Incentive Plan Terms and Conditions (Grant of Time-Based Restricted Stock Units – Payable in Cash – Non-U.S.), is incorporated by reference from the Quarterly Report on Form 10-Q filed on April 30, 2012, wherein it appeared as Exhibit 10.5.\*
- 10.34 Form of 2011 Long-Term Incentive Plan Terms and Conditions (Grant of Time-Based Restricted Stock Units – Payable in Shares – Non-U.S.), is incorporated by reference from the Quarterly Report on Form 10-Q filed on April 30, 2012, wherein it appeared as Exhibit 10.6.\*
- 10.35 Form of 2011 Long-Term Incentive Plan Terms and Conditions (Grant of Performance-Based Restricted Stock Units – Payable in Shares – U.S. (Executive Officer)), is incorporated by reference from the Quarterly Report on Form 10-Q filed on April 30, 2012, wherein it appeared as Exhibit 10.7.\*
- 10.36 Form of 2011 Long-Term Incentive Plan Terms and Conditions (Grant of Performance-Based Restricted Stock Units – Payable in Shares – U.S.), is incorporated by reference from the Quarterly Report on Form 10-Q filed on April 30, 2012, wherein it appeared as Exhibit 10.8.\*
- 10.37 Form of 2011 Long-Term Incentive Plan Terms and Conditions (Grant of Performance-Based Restricted Stock Units – Payable in Cash – Non-U.S.), is incorporated by reference from the Quarterly Report on Form 10-Q filed on April 30, 2012, wherein it appeared as Exhibit 10.9.\*
- 10.38 Form of 2011 Long-Term Incentive Plan Terms and Conditions (Grant of Performance-Based Restricted Stock Units – Payable in Shares – Non-U.S. (Executive Officer)), is incorporated by reference from the Quarterly Report on Form 10-Q filed on April 30, 2012, wherein it appeared as Exhibit 10.10.\*
- 10.39 Form of 2011 Long-Term Incentive Plan Terms and Conditions, as amended for 2013 (Grant of Nonqualified Stock Options – U.S. (Executive Officer)), is incorporated by reference from the Quarterly Report on Form 10-Q filed on April 29, 2013, wherein it appeared as Exhibit 10.2.\*



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- 10.40 Form of 2011 Long-Term Incentive Plan Terms and Conditions, as amended for 2013 (Grant of Nonqualified Stock Options U.S.), is incorporated by reference from the Quarterly Report on Form 10-Q filed on April 29, 2013, wherein it appeared as Exhibit 10.3.\*
- 10.41 Form of 2011 Long-Term Incentive Plan Terms and Conditions, as amended for 2013 (Grant of Nonqualified Stock Options Non-U.S.), is incorporated by reference from the Quarterly Report on Form 10-Q filed on April 29, 2013, wherein it appeared as Exhibit 10.4.\*
- 10.42 Nonqualified Deferred Compensation Plan effective January 2005, as amended July 23, 2010, is incorporated by reference from the Annual Report on Form 10-K, filed on February 28, 2011, wherein in appeared as Exhibit 10.4.\*
- 10.43 Bonus Replacement Retirement Plan, effective as of January 1, 1998, as amended January 1, 2007, is incorporated by reference from the Annual Report on Form 10-K, filed on February 29, 2008, wherein it appeared as Exhibit 10.9.\*
- 10.44 Retirement Benefit Equity Plan, effective January 1, 2005, as amended October 29, 2007 and December 8, 2008, is incorporated by reference from the Annual Report on Form 10-K, filed on February 26, 2009, wherein it appeared as Exhibit 10.2.\*
- 10.45 2006 Phantom Stock Unit Plan, as amended December 8, 2008, is incorporated by reference from the 2008 Annual Report on Form 10-K, filed on February 26, 2009, wherein it appeared as Exhibit 10.18.\*
- 10.46 2006 Phantom Stock Unit Agreement is incorporated by reference from the Current Report on Form 8-K filed on October 26, 2006, wherein it appeared as Exhibit 10.3. A Schedule of Participating Directors is incorporated by reference from the 2006 Annual Report on Form 10-K, filed on March 30, 2007, wherein it appeared as Exhibit 10.36.\*
- 10.47 2007 Award under the 2006 Phantom Stock Unit Agreement and the Schedule of Participating Directors are incorporated by reference from the Current Report on Form 8-K filed on October 23, 2007, wherein they appeared as Exhibits 10.1 and 10.2, respectively.\*
- 10.48 Schedule of Armstrong World Industries, Inc. Nonemployee Directors Compensation Summary is incorporated by reference from the Quarterly Report on Form 10-Q, filed on July 29, 2013, wherein it appeared as Exhibit 10.3.\*
- 10.49 The 2008 Directors Stock Unit Plan, as amended December 8, 2008, November 30, 2010 and June 24, 2011 is incorporated by reference to the Current Report on Form 8-K filed on June 13, 2011, wherein it appeared as Exhibit 99.2.\*
- 10.50 Form of 2009 Award under the 2008 Director Stock Unit Plan, as amended, is incorporated by reference from the Quarterly Report on Form 10-Q for the quarter ended September 30, 2009, filed on October 28, 2009, wherein it appeared as Exhibit 10.27.\*
- 10.51 Form of 2010 Award under the 2008 Directors Stock Unit Plan, as amended, is incorporated by reference from the Quarterly Report on Form 10-Q for the quarter ended September 30, 2009, filed on October 28, 2009, wherein it appeared as Exhibit 10.27.\*
- 10.52 Form of 2011, 2012 and 2013 Award under the 2008 Directors Stock Unit Plan, as amended, is incorporated by reference from the Annual Report on Form 10-K filed on February 27, 2012, wherein it appeared as Exhibit 10.40.\*
- 10.53 Employment Agreement with Matthew J. Espe dated June 24, 2010, is incorporated by reference from the Current Report filed on Form 8-K filed on June 25, 2010, wherein it appeared as Exhibit 10.1.\*





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- 10.54 Letter Agreement with Matthew J. Espe dated December 31, 2012, is incorporated by reference from the Current Report filed on Form 8-K filed on January 4, 2013, wherein it appeared as Exhibit 10.4.\*
- 10.55 Offer Letter to Thomas B. Mangas dated December 23, 2009, is incorporated by reference from the Current Report on Form 8-K filed on January 8, 2010, wherein it appeared as Exhibit 99.2.\*
- 10.56 Offer Letter to Victor D. Grizzle dated January 4, 2011, is incorporated by reference from the Current Report on Form 8-K filed on January 10, 2011, wherein it appeared as Exhibit 99.2.\*
- 10.57 Offer Letter to Mark A. Hershey dated April 21, 2011, is incorporated by reference from the Current Report on Form 8-K filed on April 27, 2011, wherein it appeared as Exhibit 99.1.\*
- 10.58 Offer Letter to Donald R. Maier dated January 19, 2010, as amended by a Letter Agreement dated January 17, 2013, is incorporated by reference from the Annual Report on Form 10-K filed on February 27, 2013, wherein it appeared as Exhibit 10.61.\*
- 10.59 Change in Control Agreement with Matthew Espe dated June 24, 2010, is incorporated by reference from the Current Report on Form 8-K filed on June 25, 2010, wherein it appeared as Exhibit 10.2.\*
- 10.60 Amendment to Change in Control Agreement with Matthew Espe dated December 31, 2012, is incorporated by reference from the Current Report filed on Form 8-K filed on January 4, 2013, wherein it appeared as Exhibit 10.3.\*
- 10.61 Form of Change in Control Agreement with Victor D. Grizzle, Mark A. Hershey, Donald R. Maier, Thomas B. Mangas, and Stephen F. McNamara, is incorporated by reference from the Current Report on Form 8-K filed on July 6, 2010, wherein it appeared as Exhibit 10.1.\*
- 10.62 Form of Amendment to Change in Control Agreement with Victor D. Grizzle, Mark A. Hershey, Donald R. Maier, Thomas B. Mangas, and Stephen F. McNamara, is incorporated by reference from the Current Report filed on Form 8-K filed on January 4, 2013, wherein it appeared as Exhibit 10.1.\*
- 10.63 Form of Change in Control Agreement with Ellen R. Romano and David S. Schulz, the terms of which are substantially identical to the terms included in the forms in Exhibits 10.61 and 10.62.\*
- 10.64 Form of Indemnification Agreement for Officers and Directors of Armstrong World Industries, Inc. is incorporated by reference from the Report on Form 8-K filed on June 4, 2010, wherein it appeared as Exhibit 10.1.
- 10.65 Schedule of Directors and Officers who have entered into the form of Indemnification Agreement with Armstrong World Industries, Inc. filed as Exhibit 10.1 to the Current Report on Form 8-K filed on June 4, 2010.
- 10.66 Separation of Employment and General Release Agreement dated as of November 5, 2013 by and between the Company and Frank J. Ready, is incorporated by reference from the Current Report on Form 8-K filed on December 2, 2013, wherein it appeared as Exhibit 10.1.
- 11 Computation of Earnings Per Share.
- 12 Computation of Ratio of Earnings to Fixed Charges.

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- 14 The Armstrong Code of Business Conduct, revised as of July 29, 2011, is incorporated by reference from the Current Report on Form 8-K filed on August 1, 2011, wherein it appeared as Exhibit 14.1.
- 21 Armstrong World Industries, Inc. s Subsidiaries.
- 23.1 Consent of Independent Registered Public Accounting Firm.
- 23.2 Consent of Independent Auditors.
- 31.1 Certification of Chief Executive Officer required by Rule 13a-15(e) or 15d-15(e) of the Securities Exchange Act.
- 31.2 Certification of Chief Financial Officer required by Rule 13a-15(e) or 15d-15(e) of the Securities Exchange Act.
- 32.1 Certification of Chief Executive Officer required by Rule 13a and 18 U.S.C. Section 1350 (furnished herewith).
- 32.2 Certification of Chief Financial Officer required by Rule 13a and 18 U.S.C. Section 1350 (furnished herewith).
- 99.1 Worthington Armstrong Venture consolidated financial statements as of December 31, 2011 and 2012 and for the years ended December 31, 2011, 2012 and 2013.
- 99.2 Shareholders Agreement, dated as of August 28, 2009, by and among Armor TPG Holdings LLC and Armstrong World Industries, Inc. Asbestos Personal Injury Settlement Trust (incorporated by reference to Exhibit (d)(3) of the Schedule TO filed on September 3, 2009, by TPG Advisors VI, Inc., Armor TPG Holdings LLC and others with respect to Armstrong World Industries, Inc.).
- 99.3 Waiver Agreement, dated as of November 5, 2012, by and between Armstrong World Industries, Inc. Asbestos Personal Injury Settlement Trust and Armor TPG Holdings LLC, is incorporated by reference from the Current Report filed on Form 8-K filed on November 6, 2012, wherein it appeared as Exhibit 99.2.
- 101 Interactive Data Files
- \* Management Contract or Compensatory Plan.  
Filed herewith.

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SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) 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.

ARMSTRONG WORLD INDUSTRIES, INC.  
(Registrant)

By: /s/ Matthew J. Espe  
President and Chief Executive Officer  
Date: February 24, 2014

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, this Report has been signed below by the following persons on behalf of the registrant Armstrong and in the capacities and on the dates indicated.

Directors and Principal Officers of the registrant AWI:

Name	Title
Matthew J. Espe	President and Chief Executive Officer (Principal Executive Officer)
David S. Schulz	Senior Vice President and Chief Financial Officer (Principal Financial Officer)
Stephen F. McNamara	Vice President and Controller (Principal Accounting Officer)
Stanley A. Askren	Director
Kevin R. Burns	Director
James J. Gaffney	Director
Tao Huang	Director
Michael F. Johnston	Director
Jeffrey Liaw	Director
Larry S. McWilliams	Director
James C. Melville	Director
James J. O Connor	Director
John J. Roberts	Director
Richard E. Wenz	Director

By: /s/ Matthew J. Espe

(Matthew J. Espe)  
As of February 24, 2014

By: /s/ David S. Schulz  
(David S. Schulz)  
As of February 24, 2014

By: /s/ Stephen F. McNamara  
(Stephen F. McNamara)  
As of February 24, 2014

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## Armstrong World Industries, Inc., and Subsidiaries

## Valuation and Qualifying Reserves of Accounts Receivable

(dollar amounts in millions)

	2013	2012	2011
<u>Provision for Losses</u>			
Balance at beginning of period	\$ 6.7	\$ 8.3	\$ 8.8
Additions charged to earnings	2.7	4.4	6.5
Deductions	(3.8)	(5.8)	(7.1)
Divestitures/Acquisitions		(0.2)	0.1
Balance at end of period	\$ 5.6	\$ 6.7	\$ 8.3
<u>Provision for Discounts and Warranties</u>			
Balance at beginning of period	\$ 28.9	\$ 31.1	\$ 33.0
Additions charged to earnings	129.9	127.9	135.9
Deductions	(136.4)	(130.0)	(137.8)
Divestitures/Acquisitions		(0.1)	
Balance at end of period	\$ 22.4	\$ 28.9	\$ 31.1