

PPG INDUSTRIES INC  
Form 10-K  
February 20, 2014  
Table of Contents

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

FORM 10-K

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

For the fiscal year ended December 31, 2013

Commission File Number 1-1687

PPG INDUSTRIES, INC.

(Exact name of registrant as specified in its charter)

Pennsylvania

25-0730780

(State or other jurisdiction of  
incorporation or organization)

(I.R.S. Employer  
Identification No.)

One PPG Place, Pittsburgh, Pennsylvania  
(Address of principal executive offices)

15272  
(Zip code)

Registrant's telephone number, including area code:  
Securities Registered Pursuant to Section 12(b) of the Act:

412-434-3131

Title of each class

Name of each exchange on  
which registered

Common Stock – Par Value \$1.66<sup>2</sup>/<sub>3</sub>

New York Stock Exchange

Securities Registered Pursuant to Section 12(g) of the Act: None

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 checkmark 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 period that the registrant was required to submit and post such files). YES ☒ NO ☐

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 ☐

(Do not check if a smaller

reporting company)

Indicate by check mark whether the Registrant is a shell company (as defined by Rule 12b-2 of the Act). YES ☐ NO ☒

The aggregate market value of common stock held by non-affiliates as of June 30, 2013, was \$20,847 million.

As of January 31, 2014, 138,511,337 shares of the Registrant's common stock, with a par value of \$1.66<sup>2</sup>/<sub>3</sub> per share, were outstanding. As of that date, the aggregate market value of common stock held by non-affiliates was \$25,169 million.

DOCUMENTS INCORPORATED BY REFERENCE

Document

Portions of PPG Industries, Inc. Proxy Statement for its 2014 Annual Meeting of Shareholders

Incorporated By  
Reference In Part No.

III

2013 PPG ANNUAL REPORT AND FORM 10-K 7

---

Table of ContentsPPG INDUSTRIES, INC.  
AND CONSOLIDATED SUBSIDIARIES

As used in this report, the terms “PPG,” “Company,” “Registrant,” “we,” “us” and “our” refer to PPG Industries, Inc., and its subsidiaries, taken as a whole, unless the context indicates otherwise.

## TABLE OF CONTENTS

	Page
Part I	
Item 1. <u>Business</u>	9
Item 1A. <u>Risk Factors</u>	14
Item 1B. <u>Unresolved Staff Comments</u>	16
Item 2. <u>Properties</u>	16
Item 3. <u>Legal Proceedings</u>	16
Item 4. <u>Mine Safety Disclosures</u>	17
Part II	
Item 5. <u>Market for the Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities</u>	18
Item 6. <u>Selected Financial Data</u>	18
Item 7. <u>Management’s Discussion and Analysis of Financial Condition and Results of Operations</u>	18
Item 7A. <u>Quantitative and Qualitative Disclosures About Market Risk</u>	30
Item 8. <u>Financial Statements and Supplementary Data</u>	32
Item 9. <u>Changes in and Disagreements With Accountants on Accounting and Financial Disclosure</u>	75
Item 9A. <u>Controls and Procedures</u>	75
Item 9B. <u>Other Information</u>	75
Part III	
Item 10. <u>Directors, Executive Officers and Corporate Governance</u>	76
Item 11. <u>Executive Compensation</u>	76
Item 12. <u>Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters</u>	76
Item 13. <u>Certain Relationships and Related Transactions, and Director Independence</u>	76
Item 14. <u>Principal Accounting Fees and Services</u>	76
Part IV	
Item 15. <u>Exhibits, Financial Statement Schedules</u>	77
<u>Signatures</u>	81

## Note on Incorporation by Reference

Throughout this report, various information and data are incorporated by reference from the Company’s 2013 Annual Report (hereinafter referred to as “the Annual Report”). Any reference in this report to disclosures in the Annual Report shall constitute incorporation by reference only of that specific information and data into this Form 10-K.



Table of Contents

Part I

Item 1. Business

PPG Industries, Inc., manufactures and distributes a broad range of coatings, optical and specialty materials and glass products. The Company, incorporated in Pennsylvania in 1883, is comprised of five reportable business segments: Performance Coatings, Industrial Coatings, Architectural Coatings – EMEA (Europe, Middle East and Africa), Optical and Specialty Materials and Glass. Each of the business segments in which PPG operates is highly competitive. The Company's diversification of product lines and worldwide markets served tends to minimize the impact on PPG's total net sales and income from continuing operations from changes in demand either for a particular product line or in a particular geographic area. Refer to Note 21, "Reportable Business Segment Information" under Item 8 of this Form 10-K for financial information relating to our reportable business segments.

On January 28, 2013, PPG completed the separation of its commodity chemicals business and the merger of the subsidiary holding the PPG commodity chemicals business with a subsidiary of the Georgia Gulf Corporation ("Georgia Gulf"). Refer to Note 22, "Separation and Merger Transaction" under Item 8 of this Form 10-K for financial information relating to this transaction.

On April 1, 2013, PPG finalized the acquisition of the North American architectural coatings business of Akzo Nobel N.V., Amsterdam, the Netherlands ("North American architectural coatings acquisition"). The acquisition further extends PPG's architectural coatings business in the United States, Canada and the Caribbean. With this acquisition, PPG has expanded its reach in all three major North American architectural coatings distribution channels, including home centers, independent paint dealers and company-owned paint stores. Refer to Note 2, "Acquisitions and Divestitures" under Item 8 of this Form 10-K for further information regarding this acquisition.

Performance Coatings, Industrial Coatings and Architectural Coatings – EMEA

PPG is a major global supplier of coatings. The Performance Coatings, Industrial Coatings and Architectural Coatings – EMEA reportable segments supply coatings for customers in a wide array of end-use markets, including industrial equipment, appliances and packaging; factory-finished aluminum extrusions and steel and aluminum coils; marine and aircraft equipment; automotive original equipment; and other industrial and consumer products. In addition to supplying coatings to the automotive original equipment market ("OEM"), PPG supplies refinishes to the automotive aftermarket. PPG also serves commercial and residential new build and maintenance markets by supplying coatings to painting and maintenance contractors and directly to consumers for decoration and maintenance. The coatings industry is highly competitive and consists of a few large firms with global presence and many smaller firms serving local or regional markets. PPG competes in its primary markets with the world's largest coatings companies, most of which have global operations, and many smaller regional coatings companies. Product development, innovation, distribution,

quality and technical and customer service have been stressed by PPG and have been significant factors in developing an important supplier position by PPG's coatings businesses comprising the Performance Coatings, Industrial Coatings and Architectural Coatings – EMEA reportable segments.

The Performance Coatings reportable segment is comprised of the refinish, aerospace, protective and marine and architectural – Americas and Asia Pacific coatings businesses.

Price, product performance, technology, quality, distribution and technical and customer service are major competitive factors in the following three coatings businesses.

The refinish coatings business supplies coatings products for automotive and commercial transport/fleet repair and refurbishing, light industrial coatings for a wide array of markets and specialty coatings for signs. These products are sold primarily through independent distributors.

The aerospace coatings business supplies sealants, coatings, maintenance cleaners and transparencies for commercial, military, regional jet and general aviation aircraft and transparent armor for specialty applications and also provides chemical management for the aerospace industry. PPG supplies products to aircraft manufacturers and maintenance

and aftermarket customers around the world both on a direct basis and through a company-owned distribution network.

The protective and marine coatings business supplies coatings and finishes for the protection of metals and structures to metal fabricators, heavy duty maintenance contractors and manufacturers of ships, bridges and rail cars. These products are sold through company-owned architectural coatings stores, independent distributors and directly to customers.

The architectural coatings-Americas and Asia Pacific business primarily produces coatings used by painting and maintenance contractors and by consumers for decoration and maintenance of residential and commercial building structures. These coatings are sold under a number of brands, including PPG®, GLIDDEN®, OLYMPIC®, DULUX® (in Canada), SIKKENS®, PPG PITTSBURGH PAINTS®, MULCO®, FLOOD®, LIQUID NAILS®, SICO®, CIL®, RENNER®, TAUBMANS®, WHITE KNIGHT®, and BRISTOL®. Architectural coatings – Americas and Asia Pacific products are also sold through a combination of company-owned stores, home centers and other regional or national consumer retail outlets, paint dealers, and independent distributors and directly to customers. Price, product performance, quality, distribution and brand recognition are key competitive factors for these architectural coatings businesses. At the end of 2013, the architectural coatings-Americas and Asia Pacific business operated about 870 company-owned stores in North America, of which 526 stores, net of redundant store closures, were added as a result of the North American architectural coatings acquisition. This business also operates about 40 company-owned stores in Australia.

## Table of Contents

The major global competitors of the Performance Coatings reportable segment are Akzo Nobel N.V., Axalta Coating Systems, BASF Corporation, Hempel A/S, the Jotun Group, Masco Corporation, the Sherwin-Williams Company, Valspar Corporation and RPM International Inc. The average number of persons employed by the Performance Coatings reportable segment during 2013 was about 14,300.

The Industrial Coatings reportable segment is comprised of the automotive OEM, industrial and packaging coatings businesses. Industrial, automotive OEM and packaging coatings are formulated specifically for the customers' needs and application methods.

The industrial and automotive OEM coatings businesses sell directly to a variety of manufacturing companies. PPG also supplies adhesives and sealants for the automotive industry and metal pretreatments and related chemicals for industrial and automotive applications. PPG has established alliances with Kansai Paints and Helios Group to serve certain automotive original equipment manufacturers in various regions of the world. PPG owns a 60% interest in PPG Kansai Finishes to serve Japanese-based automotive OEM customers in North America and Europe and PPG owns a 60% interest in PPG Helios Ltd. to serve Russian-based automotive OEM customers in Russia and the Ukraine. The packaging coatings business supplies coatings to the manufacturers of aerosol, food, and beverage containers.

Price, product performance, technology, cost effectiveness, quality and technical and customer service are major competitive factors in the industrial coatings businesses. The major global competitors of the Industrial Coatings reportable segment are Akzo Nobel N.V., Axalta Coating Systems, BASF Corporation, Valspar Corporation and Nippon Paint. The average number of persons employed by the Industrial Coatings reportable segment during 2013 was about 9,500.

The Architectural Coatings – EMEA business supplies a variety of coatings and purchased sundries to painting contractors and consumers in Europe, the Middle East and Africa. The coatings are sold under a number of brands, including SIGMA®, HISTOR®, SEIGNEURIE®, GUITTET®, PEINTURES GAUTHIER®, RIPOLIN®, JOHNSTONE'S®, LEYLAND®, PRIMALEX®, DEKORAL®, TRILAK®, PROMINENT PAINTS®, GORI®, and BONDEX®. Architectural Coatings – EMEA products are sold through a combination of about 660 company-owned stores, regional home centers, paint dealers, and independent distributors and directly to customers. Price, product performance, quality, distribution and brand recognition are key competitive factors for this business. The major competitors of the Architectural Coatings – EMEA reportable segment are Akzo Nobel N.V., Materis Paints and a variety of regional and national competitors in each country in Europe, the Middle East and Africa. The average number of persons employed by the Architectural Coatings – EMEA reportable segment during 2013 was about 7,900.

## Optical and Specialty Materials

PPG's Optical and Specialty Materials reportable segment is comprised of the optical products and silicas businesses. The primary Optical and Specialty Materials products are TRANSITIONS® lenses, optical lens materials and high performance sunlenses; amorphous precipitated silicas for tire, battery separator and other end-use markets; and TESLIN® substrate used in such applications as radio frequency identification (RFID) tags and labels, e-passports, drivers' licenses and identification cards. Transitions lenses are processed and distributed by Transitions Optical, PPG's 51% owned joint venture with Essilor International ("Essilor"). In the Optical and Specialty Materials businesses, product quality and performance, branding, distribution and technical service are the most critical competitive factors. On July 29, 2013, PPG entered into an agreement to divest its 51% ownership interest in the Transitions Optical joint venture and 100% of PPG's optical sunlens business to Essilor. Transitions Optical is a global supplier of photochromic lenses and a consolidated subsidiary of PPG. The transaction reflects an enterprise value of approximately \$3.4 billion, with PPG receiving cash at closing of \$1.73 billion pretax or approximately \$1.5 billion after-tax. Essilor will also enter into multi-year agreements with PPG for continuing supply of photochromic materials and research and development services. The transaction is expected to close in the first half of 2014, subject to satisfaction of customary closing conditions, including receipt of regulatory approvals. Upon receipt of all required regulatory approvals, PPG expects to report Transitions Optical as discontinued operations.

The major global competitors of the Optical and Specialty Materials reportable segment are Vision-Ease Lens, Carl Zeiss AG, Corning, Inc., Hoya Corporation, Mitsui Chemicals, Inc., Solvay Group, J.M. Huber and Evonik Industries, A.G. The average number of persons employed by the Optical and Specialty Materials reportable segment during 2013 was about 2,900.

#### Glass

The Glass reportable business segment is comprised of the flat glass and fiber glass businesses. PPG is a producer of flat glass in North America and a global producer of continuous-strand fiber glass. PPG's major markets are commercial and residential construction and the wind energy, energy infrastructure, transportation and electronics industries. Most glass products are sold directly to manufacturing companies. PPG manufactures flat glass by the float process and fiber glass by the continuous-strand process.

Price, quality, technology and customer service are the key competitive factors in the glass businesses. The Company competes with several major producers of flat glass, including Asahi Glass Company, Cardinal Glass Industries, Guardian Industries and NSG Pilkington, and many major producers of fiber glass throughout the world, including Owens Corning, Jushi Group, Johns Manville Corporation, CPIC Fiberglass, AGY, NEG, 3B and Taishan Fiberglass. The average number of persons employed by the Glass reportable segment during 2013 was about 3,100.



## Table of Contents

### Raw Materials and Energy

The effective management of raw materials and energy is important to PPG's continued success. The Company's most significant raw materials are epoxy and other resins, titanium dioxide and other pigments, and solvents in the coatings businesses; lenses, sand and soda ash in the Optical and Specialty Materials segment; and sand, clay and soda ash in the Glass segment. Coatings raw materials, which include both organic, primarily petroleum based, materials and inorganic materials, including titanium dioxide, generally comprise between 70% and 80% of cost of goods sold in most coatings formulations and represent PPG's single largest production cost component.

Energy is a significant production cost in the Glass segment, and our primary energy source is natural gas. With the separation of the commodity chemicals business, PPG's consumption of natural gas decreased significantly. Natural gas is expected to remain a competitive fuel source when compared to alternatives, especially on a global basis. We will continue to use competitive sourcing and consumption reduction initiatives to manage natural gas costs.

Most of the raw materials and energy used in production are purchased from outside sources, and the Company has made, and plans to continue to make, supply arrangements to meet the planned operating requirements for the future. Supply of critical raw materials and energy is managed by establishing contracts, multiple sources, and identifying alternative materials or technology whenever possible. The Company is continuing its aggressive sourcing initiatives to effectively broaden our supply of high quality raw materials. These initiatives include qualifying multiple and local sources of supply, including suppliers from Asia and other lower cost regions of the world and a reduction in the amount of titanium dioxide used in our product formulations. Our products use both petroleum-derived and bio-based materials as part of a product renewal strategy. Our global efforts to reduce titanium dioxide consumption resulted in a 4% reduction and an additional 2% reduction in 2012 and 2013, respectively.

The Company also has undertaken a strategic initiative to secure and enhance PPG's supply of titanium dioxide, as well as to add to the global supply of this raw material. PPG possesses intellectual property and expertise in the production and finishing of titanium dioxide pigment and has and intends to continue to leverage this and engage potential parties to develop innovative supply solutions through technical collaborations, joint ventures, licensing or other commercial initiatives.

In 2012, PPG signed a license agreement with Henan Billions Chemicals Co., Ltd. ("Billions"), by which PPG will license certain chloride-based titanium dioxide technologies to Billions for use at Billions' titanium dioxide refinement facilities in China. In addition, PPG has signed a long-term purchase agreement for titanium dioxide with Billions. PPG intends to use the chloride-based titanium dioxide manufactured by Billions for various end-use paint and coatings applications. Billions is also able to sell its chloride-based titanium dioxide to third parties.

In 2013, PPG signed a purchase and supply agreement as well as a research services agreement with Argex Titanium Inc. ("Argex") whereby PPG is providing technical support to Argex in connection with their efforts to develop a unique and low cost process to manufacture pigment grade titanium dioxide.

We are subject to existing and evolving standards relating to the registration of chemicals which could potentially impact the availability and viability of some of the raw materials we use in our production processes. Our ongoing global product stewardship efforts are directed at maintaining our compliance with these standards. Changes to chemical registration regulations have been proposed or implemented in the EU and many other countries, including China, Canada, the United States, and Korea. Because implementation of many of these programs has not been finalized, the financial impact cannot be estimated at this time. We anticipate that the number of chemical registration regulations will continue to increase globally, and we have implemented programs to track and comply with these regulations.

For 2014, the Company currently expects overall coatings raw material prices to increase modestly, with varied results by region and commodity type. Natural gas pricing remains volatile, although increased output and infrastructure development from shale gas should continue to play a role in muting long-term changes in natural gas pricing.

### Research and Development

Technology innovation has been a hallmark of PPG's success throughout its history. Research and development costs, including depreciation of research facilities, were \$505 million, \$468 million and \$443 million during 2013, 2012 and

2011, respectively. These costs totaled approximately 3% of annual sales in 2013, 2012 and 2011, respectively. We have obtained government funding of a small portion of the Company's research efforts, and we will continue to pursue government funding.

PPG owns and operates several facilities to conduct research and development relating to new and improved products and processes. In addition to the Company's centralized principal research and development centers (See Item 2 of this Form 10-K), our operating segments manage their development regionally through centers of excellence. As part of our ongoing efforts to manage our formulations and raw material costs effectively, we operate a global competitive sourcing laboratory in China. Because of the Company's broad array of products and customers, PPG is not materially dependent upon any single technology platform.

The Company seeks to optimize its investment in research and development to create new products to drive profitable growth. We align our product development with the macro trends in the end-use markets we serve and leverage core technology platforms to develop products for unmet market needs. Our history of successful technology introductions is based on a commitment to an efficient and effective innovation process and disciplined portfolio management.

Table of Contents**Patents**

PPG considers patent protection to be important; however, the Company's reportable business segments are not materially dependent upon any single patent or group of related patents. PPG earned \$48 million in 2013, \$51 million in 2012 and \$55 million in 2011 from royalties and the sale of technical know-how.

**Backlog**

In general, PPG does not manufacture its products against a backlog of orders. Production and inventory levels are geared primarily to projections of future demand and the level of incoming orders.

**Global Operations**

PPG has a significant investment in non-U.S. operations. This broad geographic footprint serves to lessen the significance of economic impacts occurring in any one region. As a result of our expansion outside the U.S., we are subject to certain inherent risks, including economic and political conditions in international markets and fluctuations in foreign currency exchange rates.

Our net sales in the developed and emerging regions of the world for the years ended December 31<sup>st</sup> are summarized below:

(millions)	Net Sales		
	2013	2012	2011
United States, Canada, Western Europe	\$10,977	\$9,437	\$9,213
Latin America, Eastern Europe, Middle East, Africa, Asia Pacific	4,131	4,075	3,940
Total	\$15,108	\$13,512	\$13,153

Refer to Note 21 "Reportable Business Segment Information" under Item 8 of this Form 10-K for geographic information related to PPG's property, plant and equipment, and for additional geographic information pertaining to sales.

**Seasonality**

PPG's income from continuing operations have typically been greater in the second and third quarters and cash flow from operations has been greatest in the fourth quarter due to end-use market seasonality, primarily in PPG's architectural coatings businesses, the magnitude of which increased in 2013 due to the size of the acquired North American architectural coatings business. Demand for PPG's architectural coatings products is typically strongest in the second and third quarters due to higher home improvement, maintenance and construction activity during the spring and summer months in North America and Europe. This higher activity level results in higher outstanding receivables that are collected in the fourth quarter generating higher fourth quarter cash flow.

**Employee Relations**

The average number of persons employed worldwide by PPG during 2013 was about 41,400. The Company has numerous collective bargaining agreements throughout the world. We observe local customs, legislation and practice in labor relations when negotiating collective bargaining agreements. There were no significant work stoppages in 2013. While we have experienced occasional work stoppages as a result of the collective bargaining process and may experience some work stoppages in the future, we believe we will be able to negotiate all labor agreements on satisfactory terms. To date, these work stoppages have not had a significant impact on PPG's operating results. Overall, the Company believes it has good relationships with its employees.

**Environmental Matters**

PPG is subject to existing and evolving standards relating to protection of the environment. PPG is negotiating with various government agencies concerning 132 current and former manufacturing sites and offsite waste disposal locations, including 24 sites on the National Priority List. While PPG is not generally a major contributor of wastes to these offsite waste disposal locations, each potentially responsible party may face governmental agency assertions of joint and several liability. Generally, however, a final allocation of costs is made based on relative contributions of wastes to the site. There is a wide range of cost estimates for cleanup of these sites, due largely to uncertainties as to the nature and extent of their condition and the methods that may have to be employed for their remediation. The Company has established reserves for onsite and offsite remediation of those sites where it is probable that a liability has been incurred and the amount can be reasonably estimated.

The Company's experience to date regarding environmental matters leads it to believe that it will have continuing expenditures for compliance with provisions regulating the protection of the environment and for present and future remediation efforts at waste and plant sites. Management anticipates that such expenditures will occur over an extended period of time.

In addition to the \$310 million currently reserved for environmental remediation efforts, we may be subject to loss contingencies related to environmental matters estimated to be approximately \$100 million to \$200 million. These reasonably possible unreserved losses relate to environmental matters at a number of sites, including about one third each related to: i) additional costs at a former chromium manufacturing plant site and associated sites in Jersey City, N.J. ("New Jersey Chrome") ii) legacy glass sites and iii) a number of other sites, including legacy chemical manufacturing sites. The loss contingencies related to these sites include significant unresolved issues such as the nature and extent of contamination at these sites and the methods that may have to be employed to remediate them. Capital expenditures for environmental control projects were \$22 million, \$12 million and \$15 million in 2013, 2012 and 2011, respectively. It is expected that expenditures for such projects in 2014 will be in the range of \$15 million to

## Table of Contents

\$20 million. Although future capital expenditures are difficult to estimate accurately because of constantly changing regulatory standards and policies, it can be anticipated that environmental control standards will become increasingly stringent and the cost of compliance will increase.

In management's opinion, the Company operates in an environmentally sound manner, is well positioned, relative to environmental matters, within the industries in which it operates and the outcome of these environmental contingencies will not have a material adverse effect on PPG's financial position or liquidity; however, any such outcome may be material to the results of operations of any particular period in which costs, if any, are recognized. See Note 14, "Commitments and Contingent Liabilities," under Item 8 of this Form 10-K for additional information related to environmental matters and our accrued liability for estimated environmental remediation costs.

Public and governmental concerns related to climate change continue to grow, leading to efforts to limit the greenhouse gas ("GHG") emissions believed to be responsible. While PPG has operations in many countries, a substantial portion of PPG's GHG emissions are generated by locations in the U.S., where considerable legislative and regulatory activity has been taking place. PPG has, and will continue to, annually report our global GHG emissions to the voluntary Carbon Disclosure project.

Energy prices and availability of supply continue to be a concern for major energy users. Since PPG's GHG emissions arise principally from combustion of fossil fuels, PPG has for some time recognized the desirability of reducing energy consumption and GHG generation. Effective energy management practices implemented over the 2006 to 2011 time period led to a 10% reduction in PPG's GHG emissions at the end of 2011. PPG's total annual energy consumption and GHG emissions was significantly reduced as a result of the separation of its commodity chemicals business in January 2013.

PPG participates in the U.S. Department of Energy ("DOE") SAVE ENERGY NOW, BETTER BUILDINGS®, BETTER PLANTS® Program reinforcing the company's voluntary efforts to significantly reduce its industrial energy intensity. In September 2011, the DOE changed its approach to energy efficiency in the industrial sector and initiated the Better Buildings, Better Plants program. PPG is currently participating in this new program, which sets energy savings targets and provides a suite of educational, training, and technical resources to help meet those targets. Recognizing the continuing importance of this matter, PPG has a senior management group with a mandate to guide the Company's progress in this area.

In December 2012, the USEPA issued its final Clean Air Act emissions standards for large and small boilers and incinerators that burn fossil fuels known as the Boiler Maximum Achievable Control Technology ("Boiler MACT") regulations. These regulations are aimed at controlling emissions of air toxics requiring that covered facilities achieve compliance within three years. At the time the rules were issued, the principal financial impact to PPG was related to

operations within its former commodity chemicals business which was separated in January 2013. The remaining 12 PPG facilities that are subject to these regulations have natural gas-fired boilers, which are subject to minimal regulatory oversight requiring only changes to workplace practices and no capital expenditures for pollution control equipment. The cost impact for PPG's remaining affected facilities is expected to be minimal.

PPG's public disclosure on energy security and climate change can be viewed in our Sustainability Report at [www.ppg.com/sustainability](http://www.ppg.com/sustainability) or at the Carbon Disclosure Project [www.cdproject.net](http://www.cdproject.net).

### Available Information

The Company's website address is [www.ppg.com](http://www.ppg.com). The Company posts, and shareholders may access without charge, the Company's recent filings and any amendments thereto of its annual reports on Form 10-K, quarterly reports on Form 10-Q and its proxy statements as soon as reasonably practicable after such reports are filed with the Securities and Exchange Commission ("SEC"). The Company also posts all financial press releases, including earnings releases, to its website. All other reports filed or furnished to the SEC, including reports on Form 8-K, are available via direct link on PPG's website to the SEC's website, [www.sec.gov](http://www.sec.gov). Reference to the Company's and SEC's websites herein does not incorporate by reference any information contained on those websites and such information should not be considered part of this Form 10-K.



## Table of Contents

### Item 1A. Risk Factors

As a global manufacturer of coatings, optical and specialty materials and glass products, we operate in a business environment that includes risks. These risks are not unlike the risks we have faced in the recent past nor are they unlike risks faced by our competitors. Each of the risks described in this section could adversely affect our operating results, financial position and liquidity. While the factors listed here are considered to be the more significant factors, no such list should be considered to be a complete statement of all potential risks and uncertainties. Unlisted factors may present significant additional obstacles which may adversely affect our businesses and our results of operations.

Increases in prices and declines in the availability of raw materials could negatively impact our financial results.

Our financial results are significantly affected by the cost of raw materials. Coatings raw materials, which include both organic, primarily petroleum based, materials and inorganic materials, including titanium dioxide, generally comprise between 70% and 80% of cost of goods sold in most coatings formulations and represent PPG's single largest production cost component.

We also import raw materials and intermediates, particularly for use at our manufacturing facilities in the emerging regions of the world. In most cases, those imports are priced in the currency of the supplier and, therefore, if that currency strengthens against the currency of our manufacturing facility, our margins are at risk of being lowered.

Most of the raw materials used in production are purchased from outside sources, and the Company has made, and plans to continue to make, supply arrangements to meet the planned operating requirements for the future. Supply of critical raw materials is managed by establishing contracts, procuring from multiple sources, and identifying alternative materials or technology whenever possible. The Company is continuing its aggressive sourcing initiatives to effectively broaden our supply of high quality raw materials. These initiatives include qualifying multiple and local sources of supply, including suppliers from Asia and other lower cost regions of the world and a reduction in the amount of titanium dioxide used in our product formulations. Our products use both petroleum-derived and bio-based materials as part of a product renewal strategy.

An inability to obtain critical raw materials would adversely impact our ability to produce products. Increases in the cost of raw materials may have an adverse effect on our income from continuing operations or cash flow in the event we are unable to offset these higher costs in a timely manner.

The pace of economic growth and level of uncertainty could have a negative impact on our results of operations and cash flows.

During 2012 and 2013, overall economic trends remained mixed among the major global economies, with major coatings end-use markets also experiencing similar variations. Given these economic conditions, overall aggregate PPG

global sales volume for 2013 was flat with the prior year. Entering 2014, we expect modest global growth. We anticipate growth will be the broadest in the U.S. economy, spanning across several coatings end-use markets as favorable market conditions continue in automotive OEM, architectural coatings and aerospace. We expect emerging regions growth to remain mixed, but we expect PPG to post solid growth based on the end-markets the Company supplies. In Europe, economies appear to be improving but remain fragile.

PPG provides products and services to a variety of end-use markets and in many geographies. This broad end-use market exposure and expanded geographic presence lessens the significance of any significant or rapid decrease in activity levels; nonetheless, lower demand levels may result in lower sales, which would result in reduced income from continuing operations and cash flows.

We are subject to existing and evolving standards relating to the protection of the environment.

Environmental laws and regulations control, among other things, the discharge of pollutants into the air and water, the handling, use, treatment, storage and clean-up of hazardous and non-hazardous wastes, the investigation and remediation of soil and groundwater affected by hazardous substances, and regulate various health and safety matters. The environmental laws and regulations we are subject to, including those in the U.S. as well as in other countries in which we operate, impose liability for the costs of, and damages resulting from, cleaning up current sites, past spills, disposals and other releases of hazardous substances. Violations of these laws and regulations can also result in fines

and penalties. Future environmental laws and regulations may require substantial capital expenditures or may require or cause us to modify or curtail our operations, which may have a material adverse impact on our business, financial condition and results of operations.

As described in Note 14, "Commitments and Contingent Liabilities," under Item 8 of this Form 10-K, we are currently undertaking environmental remediation activities at a number of our facilities and properties, the cost of which is substantial. In addition to the amounts currently reserved, we may be subject to loss contingencies related to environmental matters estimated to be as much as \$100 million to \$200 million. Such unreserved losses are reasonably possible but are not currently considered to be probable of occurrence.

We are involved in a number of lawsuits and claims, and we may be involved in future lawsuits and claims, in which substantial monetary damages are sought.

PPG is involved in a number of lawsuits and claims, both actual and potential in which substantial monetary damages are sought. Those lawsuits and claims relate to contract, patent, environmental, product liability, antitrust and other matters arising out of the conduct of PPG's current and past business activities. Any such claims, whether with or without merit, could be time consuming, expensive to defend and could divert management's attention and resources. We maintain insurance against some, but not all, of these potential claims, and the levels of insurance we do maintain may not be adequate to fully cover any and all losses. We believe that, in the aggregate, the outcome of all current lawsuits and claims



Table of Contents

involving PPG, including asbestos-related claims in the event the settlement described in Note 14, “Commitments and Contingent Liabilities” under Item 8 of this Form 10-K does not become effective, will not have a material effect on PPG’s consolidated financial position or liquidity; however, such outcome may be material to the results of operations of any particular period in which costs, if any, are recognized. Nonetheless, the results of any future litigation or claims are inherently unpredictable, but such outcomes could have a material adverse effect on our results of operations, cash flow or financial condition.

For over 30 years, we have been a defendant in lawsuits involving claims alleging personal injury from exposure to asbestos.

Most of our potential exposure relates to allegations by plaintiffs that PPG should be liable for injuries involving asbestos containing thermal insulation products manufactured by Pittsburgh Corning Corporation (“PC”). PPG is a 50% shareholder of PC. Although we have entered into a settlement arrangement with several parties concerning these asbestos claims as discussed in Note 14, “Commitments and Contingent Liabilities,” under Item 8 of this Form 10-K, the arrangement remains subject to court proceedings and, if not approved, the outcome could be material to the results of operations of any particular period.

We are subject to a variety of complex U.S. and non-U.S. laws and regulations which could increase our compliance costs.

We are subject to a wide variety of complex U.S. and non-U.S. laws and regulations, and legal compliance risks, including securities laws, tax laws, environmental laws, employment and pension-related laws, competition laws, U.S. and foreign export and trading laws, and laws governing improper business practices, including bribery. We are affected by new laws and regulations and changes to existing laws and regulations, including interpretations by courts and regulators. These laws and regulations effectively expand our compliance obligations and potential enforcement actions by governmental authorities or litigation related to them.

New laws and regulations or changes in existing laws or regulations or their interpretation could increase our compliance costs. For example, regulations concerning the composition, use and transport of chemical products continue to evolve. Developments concerning these regulations could potentially impact (i) the availability or viability of some of the raw materials we use in our product formulations and/or (ii) our ability to supply certain products to some customers or markets. Import/export regulations also continue to evolve and could result in increased compliance costs, slower product movements or additional complexity in our supply chains.

Our international operations expose us to additional risks and uncertainties that could affect our financial results. PPG has a significant investment in global operations. This broad geographic footprint serves to lessen the significance of economic impacts occurring in any one region. Notwithstanding the benefits of geographic diversification, our ability to achieve and maintain profitable growth in international markets is subject to risks related to the differing legal, political, social and regulatory requirements and

economic conditions of many countries. As a result of our expansion outside the U.S., we are subject to certain inherent risks, including political and economic uncertainty, inflation rates, exchange rates, trade protection measures, local labor conditions and laws, restrictions on foreign investments and repatriation of earnings, and weak intellectual property protection. Our percentage of sales generated in 2013 by products sold outside the U.S. was approximately 59%.

Fluctuations in foreign currency exchange rates could affect our financial results.

We earn revenues, pay expenses, own assets and incur liabilities in countries using currencies other than the U.S. dollar. Because our consolidated financial statements are presented in U.S. dollars, we must translate revenues and expenses into U.S. dollars at the average exchange rate during each reporting period, as well as assets and liabilities into U.S. dollars at exchange rates in effect at the end of each reporting period. Therefore, increases or decreases in the value of the U.S. dollar against other major currencies will affect our net revenues, operating income and the value of balance sheet items denominated in foreign currencies. We use derivative financial instruments to reduce our net exposure to currency exchange rate fluctuations related to foreign currency transactions. However, fluctuations in foreign currency exchange rates, particularly the strengthening of the U.S. dollar against major currencies, could materially affect our financial results.

Business disruptions could have a negative impact on our results of operations and financial condition.

Unexpected events, including supply disruptions, temporary plant and/or power outages, work stoppages, natural disasters and severe weather events, computer system disruptions, fires, war or terrorist activities, could increase the cost of doing business or otherwise harm the operations of PPG, our customers and our suppliers. It is not possible for us to predict the occurrence or consequence of any such events. However, such events could reduce demand for our products or make it difficult or impossible for us to receive raw materials from suppliers or to deliver products to customers.

Failure to successfully integrate acquired businesses into our existing operations could adversely affect our financial results.

Part of the Company's strategy is growth through acquisitions, and we will likely acquire additional businesses and enter into additional joint ventures in the future. Growth through acquisitions and the formation of joint ventures involve risks, including:

- difficulties in assimilating acquired companies and products into our existing business;
- delays in realizing the benefits from the acquired companies or products;
- diversion of our management's time and attention from other business concerns;
- difficulties due to lack of or limited prior experience in any new markets we may enter;
- unforeseen claims and liabilities, including unexpected environmental exposures or product liability;
- unexpected losses of customers or suppliers of the acquired or existing business;

## Table of Contents

difficulty in conforming the acquired business' standards, processes, procedures and controls to those of our operations; and

difficulties in retaining key employees of the acquired businesses.

Our failure to address these risks or other problems encountered in connection with our past or future acquisitions and joint ventures could cause us to fail to realize the anticipated benefits of such acquisitions or joint ventures and could adversely affect our results of operations, cash flow or financial condition.

Our ability to understand our customers' specific preferences and requirements, and to innovate, develop, produce and market products that meet customer demand is critical to our business results.

Our business relies on continued global demand for our brands and products. To achieve business goals, we must develop and sell products that appeal to customers. This is dependent on a number of factors, including our ability to produce products that meet the quality, performance and price expectations of our customers and our ability to develop effective sales, advertising and marketing programs. Future growth will depend on our ability to continue to innovate our existing products and to develop and introduce new products. If we fail to keep pace with product innovation on a competitive basis or to predict market demands for our products, our business, financial condition and results of operations could be adversely affected.

The industries in which we operate are highly competitive.

With each of our businesses, an increase in competition may cause us to lose market share, lose a large regional or global customer, or compel us to reduce prices to remain competitive, which could result in reduced margins for our products. Competitive pressures may not only impair our margins but may also impact our revenues and our growth which could adversely affect our results of operations.

The security of our information technology systems could be compromised, which could adversely affect our ability to operate.

Increased global information technology security requirements, threats and sophisticated and targeted computer crime pose a risk to the security of our systems, networks and the confidentiality, availability and integrity of our data. Despite our efforts to protect sensitive information and confidential and personal data, our facilities and systems may be vulnerable to security breaches. This could lead to negative publicity, theft, modification or destruction of proprietary information or key information, manufacture of defective products, production downtimes and operational disruptions, which could adversely affect our reputation, competitiveness and results of operations.

### Item 1B. Unresolved Staff Comments

None.

### Item 2. Properties

The Company's corporate headquarters is located in Pittsburgh, Pa. The Company's manufacturing facilities, sales offices, research and development centers and distribution centers are located throughout the world. As of February 20, 2014, the Company operated 139 manufacturing facilities in 47 countries, and the principal manufacturing and distribution facilities were as follows:

Performance Coatings:	Carrollton, Texas; Clayton, Australia; Delaware, Ohio; Dover, Del.; Huntsville, Ala.; Huron, Ohio; Irvine, Calif.; Kunshan, China; Little Rock, Ark.; Milan, Italy; Mojave, Calif.; Oakwood, Georgia; Stowmarket, United Kingdom; Sylmar, Calif.; about 870 company-owned stores in North America and about 40 company-owned stores in Australia
Industrial Coatings:	Cieszyn, Poland; Cleveland, Ohio; Oak Creek, Wis.; Sumaré, Brazil; Tianjin, China; Zhangjiagang, China; Quattordio, Italy; San Juan del Rio, Mexico; and Busan, South Korea
Architectural Coatings—EMEA:	

## Edgar Filing: PPG INDUSTRIES INC - Form 10-K

Soborg, Denmark; Moreuil, France; Budapest, Hungary; Amsterdam, Netherlands; Wroclaw, Poland; Birstall, United Kingdom and nearly 660 company-owned stores, including 211 stores in France and 188 stores in the United Kingdom

Optical and Specialty Materials: Barberton, Ohio; Bangkok, Thailand; Lake Charles, La. and Manila, Philippines

Glass: Carlisle, Pa.; Hoogezand, Netherlands; Lexington, N.C.; Shelby, N.C. and Wichita Falls, Texas

Including the principal manufacturing facilities noted above, the Company has manufacturing facilities in the following geographic areas:

United States:	38 manufacturing facilities in 20 states.
Other Americas:	14 manufacturing facilities in 5 countries.
EMEA:	58 manufacturing facilities in 29 countries.
Asia:	29 manufacturing facilities in 12 countries.

The Company's principal research and development centers are located in Allison Park, Pa.; Harmarville, Pa.; Monroeville, Pa.; Shelby, NC; and Burbank, Ca.

The Company's headquarters, certain distribution centers and substantially all company-owned paint stores are located in facilities that are leased while the Company's other facilities are generally owned. Our facilities are considered to be suitable and adequate for the purposes for which they are intended and overall have sufficient capacity to conduct business in the upcoming year.

### Item 3. Legal Proceedings

PPG is involved in a number of lawsuits and claims, both actual and potential, including some that it has asserted against others, in which substantial monetary damages are sought. These lawsuits and claims, the most significant of which are described below, relate to contract, patent, environmental, product liability, antitrust and other matters arising out of the conduct of PPG's current and past business activities. To the extent that these lawsuits and claims involve personal injury and property damage, PPG believes it has adequate insurance; however, certain of PPG's insurers are contesting coverage with respect to some of these claims, and other insurers, as they had prior to the asbestos settlement described below, may contest coverage with respect to some of the asbestos claims if the settlement is not implemented. PPG's lawsuits and claims

Table of Contents

against others include claims against insurers and other third parties with respect to actual and contingent losses related to environmental, asbestos and other matters.

The results of any future litigation and claims are inherently unpredictable. However, management believes that, in the aggregate, the outcome of all lawsuits and claims involving PPG, including asbestos-related claims in the event the settlement does not become effective, will not have a material effect on PPG's consolidated financial position or liquidity; however, such outcome may be material to the results of operations of any particular period in which costs, if any, are recognized.

For over 30 years, PPG has been a defendant in lawsuits involving claims alleging personal injury from exposure to asbestos. For a description of asbestos litigation affecting the Company and the terms and status of the proposed asbestos settlement arrangement, see Note 14, "Commitments and Contingent Liabilities" under Item 8 of this Form 10-K.

In the past, the Company and others have been named as defendants in several cases in various jurisdictions claiming damages related to exposure to lead and remediation of lead-based coatings applications. PPG has been dismissed as a defendant from most of these lawsuits and has never been found liable in any of these cases.

#### Executive Officers of the Company

Set forth below is information related to the Company's executive officers as of February 20, 2014.

Name	Age	Title
Charles E. Bunch	64	Chairman and Chief Executive Officer since July 2005
Michael H. McGarry <sup>(a)</sup>	55	Executive Vice President since September 2012
Viktoras R. Sekmakas <sup>(b)</sup>	53	Executive Vice President since September 2012
Frank S. Sklarsky <sup>(c)</sup>	57	Executive Vice President and Chief Financial Officer since August 2013
Glenn E. Bost II <sup>(d)</sup>	62	Senior Vice President and General Counsel since July 2010
David B. Navikas <sup>(e)</sup>	63	Senior Vice President, Strategic Planning and Corporate Development since August 2013
Richard C. Elias <sup>(f)</sup>	60	Senior Vice President, Optical and Specialty Materials since July 2008
Cynthia A. Niekamp <sup>(g)</sup>	54	Senior Vice President, Automotive Coatings since August 2010

Mr. McGarry is responsible for leading the Architectural Coatings EMEA (Europe, Middle East and Africa) segment, the architectural coatings Americas and Asia Pacific businesses, the flat glass business and the Europe, Middle East and Africa (EMEA) region. His responsibilities continue to include the global Information Technology, Environmental Health and Safety and Corporate Quality functions. From September 2012 until (a) February 2013, he was responsible for the global aerospace and automotive refinish businesses. Mr. McGarry led the Commodity Chemicals segment from July 2008 until the separation of that business on January 28, 2013. He was appointed Executive Vice President in September 2012 and held the position of Senior Vice President, Commodity Chemicals from July 2008 until August 2012. Mr. McGarry previously served as Vice President, coatings, Europe and Managing Director, PPG Europe from July 2006 through June 2008.

Mr. Sekmakas is responsible for leading the industrial coatings, packaging coatings and protective and marine coatings businesses. In February 2013, he became responsible for the fiber glass business, the Asia Pacific region and the Purchasing and Logistics function. From September 2012 until February 2013, he was responsible for the EMEA region. He was appointed Executive Vice President in September 2012. Previously, he held the following (b) leadership positions: Senior Vice President, industrial coatings and President, Europe from September 2011 until August 2012; Senior Vice President, industrial coatings and President, Asia Pacific coatings from August 2010 until September 2011; Vice President industrial coatings and President, Asia Pacific coatings from March 2010 until August 2010; President PPG Asia Pacific from July 2008 until March 2010; and Vice President and Managing Director Asia Pacific from July 2006 until July 2008.

- Mr. Sklarsky was appointed Executive Vice President, Finance, in April 2013 when he joined PPG. Prior to joining PPG, Mr. Sklarsky was Executive Vice President and Chief Financial Officer of Tyco International, Ltd. from (c) December 2010 until September 2012 and was Executive Vice President and Chief Financial Officer of Eastman Kodak Company from November 2006 until December 2010.
- (d) Mr. Bost held the position of Vice President and Associate General Counsel from July 2006 through June 2010.
- (e) Mr. Navikas held the position of Senior Vice President, Finance and Chief Financial Officer from June 2011 until August 2013. From March 2000 until June 2011, he held the position of Vice President and Controller.
- (f) Mr. Elias held the position of Vice President, Optical Products from April 2000 until June 2008.
- Ms. Niekamp is responsible for the automotive OEM coatings business and the Latin America regions. Ms. Niekamp was appointed Vice President, Automotive Coatings in January 2009 when she joined PPG from (g) BorgWarner, Inc. She previously served as President of BorgWarner's TorqTransfer Systems business from 2004 until 2008.

Item 4. Mine Safety Disclosures

Not Applicable.

Table of Contents

## Part II

## Item 5. Market for the Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

The information required by Item 5 regarding market information, including stock exchange listings and quarterly stock market prices, dividends and holders of common stock is included in Exhibit 13.1 filed with this Form 10-K and is incorporated herein by reference. This information is also included in the PPG Shareholder Information on page 5 of the Annual Report to shareholders.

Directors who are not also officers of the Company receive common stock equivalents pursuant to the PPG Industries, Inc., Deferred Compensation Plan for Directors ("PPG Deferred Compensation Plan for Directors"). Common stock equivalents are hypothetical shares of common stock having a value on any given date equal to the value of a share of common stock. Common stock equivalents earn dividend equivalents that are converted into additional common stock equivalents but carry no voting rights or other rights afforded to a holder of common stock. The common stock equivalents credited to directors under this plan are exempt from registration under Section 4(2) of the Securities Act of 1933 as private offerings made only to directors of the Company in accordance with the provisions of the plan. Under the PPG Deferred Compensation Plan for Directors, each director may elect to defer the receipt of all or any portion of the compensation paid to such director for serving as a PPG director. All deferred payments are held in the form of common stock equivalents. Payments out of the deferred accounts are made in the form of common stock of the Company (and cash as to any fractional common stock equivalent). The directors, as a group, were credited with 16,770; 30,491; and 20,575 common stock equivalents in 2013, 2012 and 2011, respectively, under this plan. The values of the common stock equivalents, when credited, ranged from \$138.55 to \$183.92 in 2013, \$85.12 to \$124.55 in 2012 and \$68.68 to \$94.64 in 2011.

## Issuer Purchases of Equity Securities

Month	Total Number of Shares Purchased	Avg. Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Programs <sup>(1)</sup>	Max. Number of Shares That May Yet Be Purchased Under the Programs
October 2013 Repurchase program	626,438	\$176.18	626,438	5,229,404
November 2013 Repurchase program	2,986,238	\$190.55	2,986,238	2,243,166
December 2013 Repurchase program	—	\$—	—	2,243,166
Total quarter ended December 31, 2013				
Repurchase program	3,612,676	\$188.06	3,612,676	2,243,166

<sup>(1)</sup> These shares were repurchased under a 10 million share repurchase program approved in October 2011. This repurchase program has no expiration date.

No shares were withheld or certified in satisfaction of the exercise price and/or tax withholding obligation by holders of employee stock options who exercised options granted under the Company's equity compensation plans in the fourth quarter of 2013.

#### Item 6. Selected Financial Data

The information required by Item 6 regarding the selected financial data for the five years ended December 31, 2013 is included in Exhibit 13.2 filed with this Form 10-K and is incorporated herein by reference. This information is also reported in the Five-Year Digest on page 86 of the Annual Report to shareholders.

#### Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

Separation of PPG's commodity chemicals business and acquisition of the North American architectural coatings business of Akzo Nobel N.V.

In 2013, PPG completed two additional steps in its strategic transformation into a more focused coatings and specialty materials company.

PPG completed the first step on January 28, 2013 with the separation of its commodity chemicals business and the merger of the subsidiary holding the PPG commodity chemicals business with a subsidiary of the Georgia Gulf Corporation ("Georgia Gulf"). Refer to Note 22, "Separation and Merger Transaction" under Item 8 of this Form 10-K for financial information relating to this transaction.

The second step was completed on April 1, 2013 with the completion of the acquisition of the North American architectural coatings business of Akzo Nobel N.V.. The acquisition included the purchase of a number of leading brands and 526 paint stores, net of redundant store closures, in the U.S., Canada and the Caribbean. Refer to Note 2, "Acquisitions and Divestitures" under Item 8 of this Form 10-K for financial information relating to this transaction.

#### Performance in 2013 compared with 2012

##### Performance Overview

Net sales increased \$1,596 million, or 12% from the prior year, to \$15,108 million primarily due to sales of acquired businesses, which increased net sales by approximately 10%. The AkzoNobel North American architectural coatings business acquired in April 2013 contributed approximately \$1,165 million in net sales while the acquisitions of Deft, an aerospace coatings business acquired in May 2013, and the Spraylat coatings business acquired in December 2012, contributed approximately \$166 million combined.

Overall sales volumes, excluding acquisitions, were level with the prior year as sales volume growth in the Industrial Coatings, Optical and Specialty Materials and Glass segments as well as the aerospace business was offset by volume declines in the remaining segments and other businesses. Sales volumes were inconsistent by region. The U.S. and Canada and the Latin America regions' sales volumes were up nearly 3% year over



## Table of Contents

year. Growth occurred in many end-use markets in Asia Pacific, although total sales volumes for the region were nearly level year over year due to declines stemming from lower marine new-build end-use market demand. Sales volumes in Europe were down 4% year over year due to weak demand that occurred in the first half of the year. The 2013 volume decline in Europe continued the trend experienced since the recession began in 2009. Aggregate PPG coatings volumes in that region have declined over 20% versus year 2008 pre-recession levels. Whereas combined PPG coatings volumes in the remaining regions are higher in comparison to year 2008 pre-recession levels, as growth in emerging regions of nearly 20% has been partially offset by a 5% decline in the U.S. and Canada. Higher selling prices added just over 1% to net sales which included the carryover impact from 2012 price increases to offset current year inflation in certain cost components, including increases in transportation, energy and labor costs. The impact of foreign currency translation on net sales was flat for the year, although results were mixed by currency.

Cost of sales, exclusive of depreciation and amortization, increased \$731 million, or 9% from the prior year, to \$8,636 million primarily due to the inclusion of cost of sales from acquired businesses partially offset by lower manufacturing costs. Cost of sales as a percentage of sales in 2013 was 57.2% compared to 58.5% in 2012. This decrease is largely due to shifts in sales margin mix related to the businesses acquired.

Selling, general and administrative expenses increased by \$499 million, or 16% from the prior year, to \$3,699 million principally related to the inclusion of acquired businesses and overhead cost inflation partly offset by the impact of our continued focus on cost management, including savings from restructuring actions initiated in 2012. As a percent of sales, selling, general and administrative expenses increased slightly to 24.5% in 2013 from 23.7% in 2012 primarily due to the addition of acquired businesses which have higher distribution related costs.

Depreciation expense increased \$44 million, or 14% from the prior year, to \$356 million primarily due to the depreciation of the acquired businesses.

The restructuring charge of \$98 million relates to a restructuring plan approved in the third quarter of 2013 focused on achieving cost synergies, through improved productivity and efficiency, related to the acquired North American architectural coatings business, but also includes smaller targeted actions for PPG's legacy architectural business, as well as other businesses where market conditions remain very challenging, most notably protective and marine coatings and certain European businesses such as architectural coatings and fiber glass.

Other charges decreased \$34 million, or 15% from the prior year, to \$190 million primarily due to lower legacy environmental remediation charges in 2013. In 2013, the largest charge included in other charges relates to a pretax charge of \$89 million for the environmental remediation at a former chromium manufacturing plant and associated sites in New Jersey and a pretax charge of \$12 million related to environmental remediation at a legacy chemical manufacturing site. The 2012 other charges included a pretax charge of \$159 million, related primarily to the environmental remediation at the former

chromium manufacturing plant and associated sites in New Jersey.

Other income decreased \$8 million, or 6% from the prior year, to \$131 million primarily due to lower equity earnings, primarily from our Asian fiber glass joint ventures as a result of a decline in demand in the personal computer market and lower licensing earnings in the Glass segment.

The effective tax rate on income before income taxes was 22% and 21% in 2013 and 2012, respectively. See the Regulation G reconciliation below for details of PPG's adjusted effective tax rate from continuing operations.

Diluted earnings-per-share for 2013 were \$22.27 per-share, comprised of net income from continuing operations of \$7.13 per-share and discontinued operations, net of tax of \$15.14 per-share. The increase in diluted earnings-per-share resulted from higher net income and a reduction in the number of shares outstanding as a result of the 10.8 million PPG shares tendered to the Company in the exchange offer in connection with the separation and merger of the Company's former commodity chemicals business as well as the approximately 5.7 million shares repurchased during 2013. For more information about the separation and merger of the Company's former commodity chemicals business, see Note 22, "Separation and Merger Transaction," under Item 8 of this Form 10-K.

### Regulation G Reconciliation - Results from Operations

PPG Industries believes investors' understanding of the Company's operating performance is enhanced by the disclosure of income before income taxes, PPG's effective tax rate, tax expense, net income from continuing

operations and earnings per diluted share adjusted for nonrecurring charges. PPG's management considers this information useful in providing insight into the company's ongoing operating performance because it excludes the impact of items that cannot reasonably be expected to recur on an ongoing basis. Income before income taxes, the effective tax rate, tax expense, net income from continuing operations and earnings per diluted share adjusted for these items are not recognized financial measures determined in accordance with U.S. generally accepted accounting principles ("GAAP") and should not be considered a substitute for income before income taxes, the effective tax rate, tax expense, net income from continuing operations or earnings per diluted share or other financial measures as computed in accordance with U.S. GAAP. In addition, adjusted income before income taxes, adjusted effective tax rate, adjusted tax expense, adjusted net income from continuing operations and adjusted earnings per diluted share from continuing operations may not be comparable to similarly titled measures as reported by other companies.

2013 PPG ANNUAL REPORT AND FORM 10-K 19

---

Table of Contents

Income before income taxes is reconciled to adjusted income before income taxes below:

Years-ended December 31	2013	2012
(Millions, except per share amounts)		
Income before income taxes	\$1,489	\$1,057
Income before income taxes includes:		
Charges related to business restructuring	98	208
Charges related to environmental remediation	101	159
Charges related to business acquisitions	42	11
Legacy pension settlement costs	18	
Adjusted income before income taxes	\$1,748	\$1,435

The effective tax rate from continuing operations is reconciled to the adjusted effective tax rate from continuing operations below:

Year-ended December 31, 2013

(Millions, except per share amounts)	Income Before Income Taxes	Tax Expense	Effective Tax Rate	
Effective tax rate, continuing operations	\$1,489	\$333	22.4	%
Includes:				
Charges related to environmental remediation	101	37	36.6	%
Charges related to business restructuring	98	25	25.5	%
Charges related to business acquisitions	42	14	33.3	%
Legacy pension settlement costs	18	5	27.8	%
U.S. tax law changed enacted in 2013		10		
Adjusted effective tax rate, continuing operations, excluding certain charges	\$1,748	\$424	24.3	%

Year-ended December 31, 2012

(Millions, except per share amounts)	Income Before Income Taxes	Tax Expense	Effective Tax Rate	
Effective tax rate, continuing operations	\$1,057	\$221	20.9	%
Includes:				
Charges related to business restructuring	208	45	21.6	%
Charges related to environmental remediation	159	60	37.7	%
Charges related to business acquisitions	11	4	36.4	%
Adjusted effective tax rate, continuing operations, excluding certain charges	\$1,435	\$330	23.0	%

Net income (attributable to PPG) and earnings per share – assuming dilution (attributable to PPG) are reconciled to adjusted net income (attributable to PPG) and adjusted earnings per share – assuming dilution below:

Year-ended December 31, 2013

(Millions, except per share amounts)	\$	EPS
Net income from continuing operations (attributable to PPG)	\$1,034	\$7.13
Net income from continuing operations (attributable to PPG) includes:		
Charges related to business restructuring	73	0.50
Charges related to environmental remediation	64	0.44
Charges related to business acquisitions	28	0.19
Legacy pension settlement costs	13	0.09
U.S. tax law change enacted in 2013	(10)	(0.07)
Adjusted net income from continuing operations (attributable to PPG)	\$1,202	\$8.28

Edgar Filing: PPG INDUSTRIES INC - Form 10-K

Year-ended December 31, 2012

(Millions, except per share amounts)	\$	EPS
Net income from continuing operations (attributable to PPG)	\$726	\$4.69
Net income from continuing operations (attributable to PPG) includes:		
Charges related to business restructuring	163	1.06
Charges related to environmental remediation	99	0.64
Charges related to business acquisitions	7	0.05
Adjusted net income from continuing operations (attributable to PPG)	\$995	\$6.44

Results of Reportable Business Segments

(Millions)	Net sales		Segment income	
	2013	2012	2013	2012
Performance Coatings	\$5,872	\$4,752	\$858	\$744
Industrial Coatings	4,845	4,379	724	590
Architectural Coatings –EMEA	2,062	2,147	184	145
Optical and Specialty Materials	1,262	1,202	368	348
Glass	1,067	1,032	56	63

Performance of Reportable Business Segments

Performance Coatings net sales increased \$1,120 million, or 24% from the prior year, to \$5,872 million primarily due to net sales from businesses acquired (25%) and modestly higher pricing partially offset by lower sales volumes (4%). Sales volumes remained varied by region and business. Volume growth continued in the aerospace coatings business where industry demand remains strong. Automotive refinish volumes were level with the prior year as growth in the Asia Pacific and Latin American regions offset volume declines in Europe, while the North American refinish volumes were consistent with 2012. Offsetting the segment sales volume gains was a decline in volume in the protective and marine coatings business due to further, notable weakness in the Asian marine new-build market reflecting lower global demand. U.S. and Canada architectural coatings sales volume declined by low-single-digit percentages with mid-to-high single digit percentage same store growth in company-owned stores, lower sales in national retail accounts

202013 PPG ANNUAL REPORT AND FORM 10-K

---

Table of Contents

and lower sales in the independent dealer channel. The lower sales volume in the national account channel was due to a previously disclosed change in products sold to a large retail customer. Segment income was \$858 million for 2013, an increase of \$114 million, or 15%, compared to the prior year primarily due to the income from acquired businesses, lower overhead and manufacturing costs stemming from prior restructuring actions and ongoing cost management, offset partially by the negative impact on segment income from the lower sales volumes.

Looking ahead to the first quarter of 2014, we expect aerospace growth to continue, despite more difficult comparisons following several consecutive years of solid growth. We also anticipate global refinish continued growth, as initial European demand recovery supplements growth in emerging regions. We expect marine new-build demand to remain weak, but less negative year-over-year than in 2013 as marine new-build demand levels off.

North American architectural coatings industry market conditions are expected to remain solid, and we expect growth to occur in all three distribution channels. At the beginning of 2014, PPG implemented mid-single-digit percentage price increases in company-owned stores. We anticipate normal architectural coatings seasonality to result in higher first quarter sales versus the recently completed fourth quarter. We expect first quarter 2014 segment results to benefit from the acquired-business sales and income from continuing operations, including a higher level of cost synergies.

Industrial Coatings net sales increased \$466 million, or 11% from the prior year, to \$4,845 million primarily due to volume growth (6%) and net sales from acquired businesses (4%). In 2013, PPG's global automotive OEM coatings sales volumes grew 10%, outpacing global industry auto production growth of about 3% year-over-year. The industrial coatings business experienced varied sales volume results by region compared with the prior year, as strong improvements across emerging regions and modestly higher volumes in North America were offset by weak demand in Europe. Packaging coatings sales volumes grew modestly in Asia Pacific and Latin America, were down low-single-digits year-over-year in Europe and essentially flat in North America. Segment income increased \$134 million, or 23% from the prior year, to \$724 million primarily due to the impact from the higher sales coupled with ongoing cost management initiatives and the benefits from the Company's restructuring actions initiated in 2012.

Looking ahead to the first quarter of 2014, we expect global growth in general industrial activity to continue, including solid North American growth, continuing growth in emerging regions and improved European demand.

Similarly, we expect growth in global automotive OEM production to be consistent with recent quarters, with forecasted growth in all major regions. We expect our automotive OEM business to deliver above-market growth.

Architectural Coatings – EMEA net sales decreased \$85 million, or 4% from the prior year, to \$2,062 million primarily due to lower sales volumes (7%) as economic conditions worsened in most European countries. However, market demand improved somewhat in the second half of the year but remained negative overall and mixed across the region.

Poor

weather conditions in the first half of 2013 were also a contributor to the decline in sales volumes. The decline in sales volumes was partially offset by the impacts of favorable pricing and foreign currency translation (2%). Despite the year-over-year volume decline, segment income was \$184 million in 2013, an increase of \$39 million, or 27% from the prior year, primarily due to lower costs, including discretionary cost management coupled with the structural cost improvements stemming from the restructuring actions initiated in 2012, partially offset by the impact of lower net sales on income from continuing operations.

Looking ahead, year-over-year segment income for 2013 was greatly aided by cost savings stemming from restructuring actions that are substantially completed. Accordingly, 2014 results will be more dependent on the pace of regional volume demand. We anticipate normal seasonal architectural coatings sales growth in the first quarter of 2014. We expect demand in the region to continue to stabilize in comparison to negative year-over-year market results in 2013, and results will likely remain mixed by end-use market. Based on current exchange rates, currency translation will aid first quarter net sales but remain inconsequential to segment income.

Optical and Specialty Materials net sales increased \$60 million, or 5% from the prior year, to \$1,262 million primarily due to an increase in sales volumes (3%) and higher pricing (2%). The increase in sales was driven by strong demand at the end of 2013 as volumes were aided by initial customer inventory stocking ahead of the January 2014 North American introduction of Transitions Generation VII. This brought year-to-date sales above prior year levels as sales in this segment had been lower versus a strong first half of 2012 that was aided by the optical industry recovery from

the fourth quarter 2011 Thailand flooding and related inventory restocking. The silicas business achieved higher year over year volumes in both the U.S. and Europe as a result of solid demand growth. Segment income was \$368 million, an increase of \$20 million, or 6% from the prior year, primarily due to an increase in sales and lower full-year selling and marketing costs.

Looking ahead, optical demand is typically higher seasonally during the first quarter versus the fourth quarter. The Transitions new product was launched last year in Europe, and the launch is now underway in North America. The first quarter of 2014 will likely include modestly higher selling costs, including support for the product launch. We expect silica demand growth to continue.

Glass segment net sales increased \$35 million, or 3% from the prior year, to \$1,067 million primarily due to higher fiber glass sales volumes. Sales volumes in fiber glass increased modestly, reflecting higher global demand in various end-use markets. Segment income was \$56 million, a decrease of \$7 million, or 11% from the prior year, primarily due to input cost inflation, including higher natural gas costs, lower licensing income and lower fiber glass equity earnings stemming from weaker personal computer production activity in Asia. These negative factors more than offset reductions in manufacturing costs.

Looking ahead to the first quarter of 2014, market demand for the fiber glass and flat glass businesses is expected to improve versus weak prior year results. Increased flat glass

## Table of Contents

pricing has been announced and varies based on product, geography and end-use market. A significant, scheduled flat glass tank maintenance project is underway, with an anticipated first quarter negative impact on segment income of about \$10 million and a modest impact to the second quarter of 2014. Also, we expect natural gas unit costs and transportation costs to be higher year-over-year, based on current market pricing.

### Review and Outlook

During 2013, overall economic conditions remained mixed among the main global economies, with major coatings end-use markets also experiencing similar variations. These economic trends were an important factor in PPG's aggregate sales volume being flat compared to the previous year.

PPG increased volumes in North America in 2013, with volume growth adding to strong prior year gains and broad-based improvements across most end-use markets. North America remains PPG's largest region representing 46% of sales. Regional industrial activity continued to improve aided by low energy costs stemming from shale energy production, and due to continued demand and production increases in several industries, including automotive OEM and aerospace. Regional recovery continued in construction spending, aided by higher U.S. housing starts and initial improvement in the residential remodeling market, while non-residential construction demand remained suppressed. Although smaller in size, demand in the Canadian construction market was also subdued. Growth in the region and various end-use markets was also somewhat tempered by reduced U.S. federal and state government spending. Throughout the year, U.S. unemployment rates improved and consumer spending expanded, supporting expectations for additional regional growth prospects for PPG entering 2014.

The pace of European economic activity remained challenging during 2013, with the region continuing to face high unemployment and weak growth in industrial production and gross domestic product. Regional demand was extremely weak early in the year, with PPG year-over-year volumes declining by about 10% in comparison with a weak first quarter of 2012. During the remainder of 2013, the pace of decline in PPG's aggregate year-over-year coatings volumes lessened with each successive quarter, ending with fourth quarter volume flat with the prior year. Although the level of demand improvement was not consistent across the various countries in the region, overall regional economic activity continued to stabilize throughout the year. Europe remains a very large region for PPG, representing about one-third of PPG's sales. Overall Company volumes in the region are down about 20% in comparison to 2008 pre-recession levels, reflecting the multi-year weakness experienced throughout most of the region. While most of the regional economies remain fragile, we see prospects for initial demand recovery in certain markets as we head into 2014.

In the aggregate, emerging region economies continued to expand during 2013; however, growth rates were more modest versus prior years. Growth also varied considerably by individual country, and by industry within countries. The emerging markets regions of Asia and Latin America represent 22% of PPG's sales, with Asia the largest emerging region representing sales of \$2.6 billion. China is now PPG's second

largest individual country from a sales perspective, and demand in China and overall Asia expanded for PPG products in most industrial markets, including higher automotive production. Offsetting these improvements was decreased global demand in a few end-use markets, including personal computers and marine new-build, as the majority of the global production in these markets occurs in Asia. Demand in the Latin American economies remained erratic due to a variety of factors, including high inflation rates. PPG's Latin American volumes were slightly favorable for the year, with differences by end-use market. Heading into 2014, PPG anticipates overall Company volume growth in emerging regions, supported by continued economic growth in China and the absence of large volume declines in certain end-use markets like marine new-build.

Looking ahead to 2014, we expect modest global growth to continue. We anticipate growth will remain the broadest in the U.S. economy, spanning across several coatings end-use markets as favorable market conditions continue in automotive OEM, architectural coatings and aerospace. We expect emerging regions growth to remain mixed, but we expect PPG to post solid aggregate growth based on the various end-markets the Company supplies. In Europe, economies appear to be improving but remain fragile. We anticipate modest growth in that region in 2014, and we expect solid segment income accretion benefits from the higher sales, due to the actions taken the past two years to significantly reduce PPG's cost structure in that region.

In 2012, PPG initiated a restructuring program to improve its productivity and efficiency, primarily focused on Europe, with targeted annual savings of \$140 million. Throughout 2012 and 2013, PPG continued to execute actions relating to this program and substantially completed all the actions by the end of 2013 achieving the targeted annual savings level of about \$140 million on a run-rate basis. Incremental annual savings of about \$80 million annually were realized in 2013, in addition to the savings achieved during 2012.

PPG intends to remain proactive in managing our costs. PPG's Board of Directors approved a separate restructuring program resulting in a pretax charge of \$98 million in the third quarter of 2013. The restructuring program targets an additional \$100 million in annual cost savings. The primary focus of this program is to capture cost synergies, through improved productivity and efficiency, related to PPG's North American architectural coatings acquisition along with separate, targeted actions relating to several other PPG businesses where business conditions remain challenging, including protective and marine coatings, fiber glass and architectural coatings EMEA. Actions related to this program began in late 2013 and are expected to be substantially complete by the end of 2014, with cost savings of between \$75 million and \$90 million in 2014.

Raw materials are a significant input cost in the manufacture of coatings, and PPG typically experiences fluctuating prices for energy and raw materials driven by factors, including supply/demand imbalances, global industrial activity levels and changes in supplier feedstock costs and inventories. For 2014, the Company currently expects overall coatings raw material prices



## Table of Contents

to increase modestly, with results varied by region and commodity type.

In an effort to offset the adverse impact of cost inflation on income from continuing operations, the Company implemented higher coatings selling prices in 2011 and 2012. In 2013, additional targeted pricing was implemented in several businesses. Selling prices in Glass improved modestly during 2013, reflecting efforts to offset higher input, energy and logistics costs. Selective pricing actions are planned in 2014, with actions expected to differ by business and region.

Pension and postretirement benefit costs, excluding curtailments and special termination benefits, were \$177 million in 2013, down \$56 million from \$233 million in 2012. This decline was due, in part, to a reorganization of certain Company pension plans, which occurred as a part of separation activities of the former commodity chemicals business. In 2014, we expect pension and other postretirement benefit costs to decline roughly \$15 million due to strong pension asset performance and a higher discount rate as measured at year-end 2013. During 2013, PPG's cash contributions to defined benefit pension plans totaled \$174 million, including voluntary contributions to the U.S. pension plans of \$50 million. Cash contributions in 2012 and 2011 were \$80 million and \$113 million, respectively. We anticipate 2014 contributions will be in the range of \$10 million to \$25 million.

We expect our ongoing tax rate in 2014 to be in the range of 24.5% to 25.5%. Because of the differences in the tax rates in the countries in which we operate, a shift in the geographic mix of earnings will impact our overall ongoing tax rate.

Over the past four years, the Company used \$2.5 billion of cash to repurchase about 25 million shares of stock, and the Company ended the year with approximately 2.2 million shares available for repurchase under the current authorization from the Board of Directors. In January 2014, the Company announced that it expects PPG's strong balance sheet and cash position to be supplemented by continued strong free cash flow in 2014, along with the receipt of about \$1.5 billion in after-tax proceeds from the pending sale of its ownership interest in the Transitions Optical joint venture. PPG also announced its intention to deploy between \$3.0 billion and \$4.0 billion of incremental cash over an 18 to 24 month period beginning in January 2014. The focus of this cash deployment is related to incremental earnings accretion initiatives, including return of cash to shareholders.

### Accounting Standards Adopted in 2013

Note 1, "Summary of Significant Accounting Policies," under Item 8 describes the Company's recently adopted accounting pronouncements.

### Accounting Standards to be Adopted in Future Years

Note 1, "Summary of Significant Accounting Policies," under Item 8 describes accounting pronouncements that have been promulgated prior to December 31, 2013 but are not effective until a future date.

## Performance in 2012 compared with 2011

### Performance Overview

Net sales in 2012 increased \$359 million, or 3% from the prior year, to \$13,512 million primarily due to higher selling prices (3%), higher sales volumes (1%) and sales from acquired businesses (2%) partially offset by unfavorable foreign currency impact (3%). Sales volumes varied significantly by region, with volume growth in North America of nearly 6% and modest growth in emerging regions. European volumes declined 4% versus the prior year period with every coatings business except aerospace experiencing sluggish end-use market conditions. Improved selling prices were achieved in each of the three coatings segments and Optical and Specialty Materials. In our coatings segments, higher selling prices were in response to persistent raw material and other cost inflation. The unfavorable currency impact was primarily driven by the U.S. dollar strengthening against the Euro and Latin American currencies. Increased demand was driven by stronger industrial production activity, which aided many of our businesses. The global industrial recovery varied by region and end-use market in 2012. North American growth was led by strength in the automotive OEM, aerospace and architectural coatings businesses. Automotive OEM coatings volumes were up year over year outpacing growth in industry demand. Aerospace coatings end-use market growth has remained strong. U.S. architectural coatings growth has been supported by improvement in construction spending, as U.S. residential construction improved throughout the year following several anemic years. Mild weather early in 2012 also aided U.S. architectural coatings volumes. Sluggish end-use market conditions in Europe were largely offset by incremental sales

from acquired businesses in the region. Growth rates in Asia in 2012 were reduced by the low level of marine original-equipment new ship builds; however, aiding growth in Asia was strength in China auto production and the packaging business as well as the absence of the Thailand floods, which particularly impacted optical products in late 2011. Higher selling prices in every coatings reportable segment and the Optical and Specialty Materials segment in 2012 were somewhat offset by pricing declines in the Glass reportable segment. In our coatings segments, prices were increased in response to persistent raw material cost inflation. The Glass segment's pricing was down, reflecting weaker global fiber glass demand.

Cost of sales, exclusive of depreciation and amortization, increased by \$40 million, or 0.5% from the prior year, to \$7,905 million primarily due to the cost of sales of acquired businesses, the cost of sales associated with the sales volume growth and the negative impact of inflation. These increases were largely offset by the impact of currency translation and lower manufacturing costs. Cost of sales as a percentage of sales for 2012 was 58.5% down from 59.8% in 2011.

Selling, general and administrative expenses increased by \$78 million, or 2.5% from the prior year, to \$3,200 million primarily due to increases from acquired businesses, overhead inflation partially offset by the reduction in costs due to the favorable impact of currency translation and the benefit of our restructuring actions. These expenses remained flat as a percent of sales at 23.7% in both 2012 and 2011, reflecting the benefits

Table of Contents

of our continuing effort to aggressively manage our costs even as our sales volume increases.

The 2012 business restructuring charge of \$208 million represents the costs associated with a restructuring plan focused on further reducing PPG's global cost structure. The actions included in the restructuring plan delivered pretax cost savings in the second half of 2012 of approximately \$50 million.

Other charges increased by \$161 million from the prior year to \$224 million largely due to the \$159 million environmental remediation charge recorded in the first quarter of 2012 related primarily to costs at a former chromium manufacturing plant and associated sites in Jersey City, New Jersey.

Other income decreased by \$13 million, or 9% from the prior year, to \$139 million primarily due to \$27 million of lower equity earnings, primarily from our Asian fiber glass joint ventures, reflecting demand decline in the consumer electronics market.

The effective tax rate on income before income taxes was approximately 21% in 2012 and 2011. See the Regulation G reconciliation below for details of PPG's adjusted effective tax rate from continuing operations.

Diluted earnings-per-share for 2012 were \$6.06, comprised of net income from continuing operations of \$4.69 per diluted share, and net income from discontinued operations of \$1.37 per diluted share. The 2011 diluted earnings-per-share of \$6.87 was comprised of net income from continuing operations of \$5.40 per diluted share and net income from discontinued operations of \$1.47 per diluted share. The increase in diluted earnings-per-share from continuing operations resulted primarily from higher adjusted income before income taxes and a reduction in the shares outstanding as a result of share repurchases in the second half of 2011 and first quarter of 2012.

#### Regulation G Reconciliation - Results from Operations

PPG Industries believes investors' understanding of the Company's operating performance is enhanced by the disclosure of income before income taxes, PPG's effective tax rate, tax expense, net income from continuing operations and earnings per diluted share adjusted for nonrecurring charges. PPG's management considers this information useful in providing insight into the company's ongoing operating performance because it excludes the impact of items that cannot reasonably be expected to recur on an ongoing basis. Income before income taxes, the effective tax rate, tax expense, net income from continuing operations and earnings per diluted share adjusted for these items are not recognized financial measures determined in accordance with U.S. generally accepted accounting principles ("GAAP") and should not be considered a substitute for income before income taxes, the effective tax rate, tax expense, net income from continuing operations or earnings per diluted share or other financial measures as computed in accordance with U.S. GAAP. In addition, adjusted income before income taxes, adjusted effective tax rate, adjusted tax expense, adjusted net income from continuing operations and adjusted earnings per diluted share from continuing operations may not be comparable to similarly titled measures as reported by other companies.

Income before income taxes is reconciled to adjusted income before income taxes below:

Year-ended December 31, 2012	Income Before
(Millions, except per share amounts)	Income Taxes
Income before income taxes	\$1,057
Income before income taxes includes:	
Charges related to business restructuring	208
Charges related to environmental remediation	159
Charges related to business acquisitions	11
Adjusted income before income taxes	\$1,435

The effective tax rate from continuing operations is reconciled to the adjusted effective tax rate from continuing operations below:

Year-ended December 31, 2012	Income Before		Effective Tax	
(Millions, except per share amounts)	Income Taxes	Tax Expense	Rate	
Effective tax rate, continuing operations	\$1,057	\$221	20.9	%
Includes:				
Charges related to business restructuring	208	45	21.6	%

Edgar Filing: PPG INDUSTRIES INC - Form 10-K

Charges related to environmental remediation	159	60	37.7	%
Charges related to business acquisition costs	11	4	36.4	%
Adjusted effective tax rate, continuing operations, excluding certain charges	\$ 1,435	\$ 330	23.0	%

Year-ended December 31, 2011

(Millions, except per share amounts)	Income Before Income Taxes	Tax Expense	Effective Tax Rate	
Effective tax rate, continuing operations	\$ 1,222	\$ 260	21.3	%
Includes:				
Benefit from favorable tax audit settlement		12		
Adjusted effective tax rate, continuing operations, excluding certain charges	\$ 1,222	\$ 272	22.3	%

242013 PPG ANNUAL REPORT AND FORM 10-K

---

Table of Contents

Net income from continuing operations (attributable to PPG) and earnings per share from continuing operations – assuming dilution (attributable to PPG) are reconciled to adjusted net income from continuing operations (attributable to PPG) and adjusted earnings per share from continuing operations – assuming dilution below:

Year-ended December 31, 2012	Net Income	
(Millions, except per share amounts)	\$	EPS
Net income from continuing operations (attributable to PPG)	\$726	\$4.69
Net income from continuing operations (attributable to PPG) includes:		
Charges related to business restructuring	163	1.06
Charges related to environmental remediation	99	0.64
Charges related to acquisition-related costs	7	0.05
Adjusted net income from continuing operations (attributable to PPG)	\$995	\$6.44

## Results of Reportable Business Segments

(Millions)	Net sales		Segment income	
	2012	2011	2012	2011
Performance Coatings	\$4,752	\$4,626	\$744	\$673
Industrial Coatings	4,379	4,158	590	438
Architectural Coatings –EMEA	2,147	2,104	145	123
Optical and Specialty Materials	1,202	1,204	348	326
Glass	1,032	1,061	63	97

For Performance Coatings, 2012 net sales increased \$126 million, or 3% from the prior year, to \$4,752 million primarily due to higher pricing (4%) and sales from acquired businesses (1%), partially offset by unfavorable foreign currency translation (2%). Higher pricing was achieved by all the businesses in the segment reflecting continuing efforts to offset significant inflationary impacts over the past two years. Year-over-year segment sales volumes were nearly flat in 2012 with aerospace and architectural coatings business volume growth being offset by automotive refinish and protective and marine coatings business volume declines. Sales volume in the aerospace business continued to benefit from excellent end-use market growth despite increasingly difficult prior year comparable periods. U.S. architectural coatings were aided by early signs of a construction market recovery in the U.S. and mild weather early in 2012, offset by the absence of elevated sales in the prior year from the introduction of a new product in the national account channel. Volumes declined in the automotive refinish coatings business, particularly in Europe, and in the protective and marine coatings business as lower marine new build volume was somewhat offset by higher volume in protective coatings. Segment income was \$744 million, an increase of \$71 million, or 11%, from the prior year. Segment income improved as lower costs, relating to benefits from PPG's restructuring and other cost management actions, coupled with the effect from the higher net sales were partly offset by inflation, higher selling costs and the negative impact of foreign currency translation.

The Industrial Coatings segment's net sales increased \$221 million, or 5% from the prior year, to \$4,379 million primarily due to higher pricing (3%), higher sales volumes (4%) and net sales from acquired businesses (1%) partially offset by

unfavorable foreign currency translation (3%). The segment sales volume growth of 4% was driven by automotive OEM coatings growth especially in North America, due in part to the recovery from the 2011 Japanese tsunami as well as continued strength in China, offset by European economic weakness. The current year volume gains by our automotive OEM coatings business outpaced industry growth. Industrial and packaging coatings volumes were mixed by region. Europe was weaker in both businesses. U.S. industrial coatings improved while emerging region demand varied by end-use with markets aligned with construction activity being down in Asia and Argentina being impacted by import restrictions. The consumer electronics market in Asia was slower, but packaging volumes in Asia improved. Emerging region sales were supplemented by sales from acquired businesses and the reorganization of our joint venture in India. Segment income of \$590 million increased \$152 million, or 35% from the prior year, as the impact of higher pricing, sales volume growth and manufacturing cost savings overcame the adverse impact of inflation and

higher overhead costs incurred to support growth. Restructuring related cost savings also aided segment income in 2012.

Architectural Coatings – EMEA segment net sales increased \$43 million, or 2% from the prior year, to \$2,147 million primarily due to the acquisition of Dyrup in January 2012 (8%) partially offset by the unfavorable impact of foreign currency translation (7%). Pricing increased net sales mid-single digit percents which was substantially offset by volume declines due to market weakness throughout the region. Segment income increased \$22 million, or 18% from the prior year, to \$145 million primarily due to lower costs stemming from aggressive ongoing cost management and supplemented by the cost benefits from PPG's restructuring actions and higher pricing. These income improvements were reduced by the impact of lower sales volumes and cost inflation. In addition, an unfavorable currency translation impact of \$13 million was largely offset by the absence of a \$9 million charge in the prior year related to a customer bankruptcy.

Optical and Specialty Materials segment net sales were \$1,202 million, essentially flat with the prior year. An unfavorable impact of foreign currency translation (3%) was offset by a price increase (1%) and sales volume growth (2%). Optical products achieved sales volume growth with the majority due to higher Transitions lens market penetration. Volumes were also aided by the absence of the prior year negative impacts from extensive Thailand flooding that disrupted optical customers and supply chains in the fourth quarter 2011. Silicas volumes were down modestly year over year. Segment income increased by \$22 million, or 7% from the prior year, to \$348 million as income improved in both businesses primarily due to higher sales volumes, overhead and manufacturing cost improvements, including restructuring cost savings, and higher pricing. Segment income was reduced by unfavorable foreign currency translation and inflation.

Glass segment 2012 net sales decreased \$29 million, or 3% from the prior year, to \$1,032 million primarily due to lower price (3%) and unfavorable currency translation (1%), partially offset by higher sales volumes (1%). Improved flat glass volumes as a result of increased demand in the commercial and solar markets were substantially offset by lower fiber glass

## Table of Contents

volume. Fiber glass volumes have declined due to weak demand in Europe versus a strong prior year comparable period. Lower pricing in both businesses and the unfavorable impact of currency translation drove the net sales decline. Segment income declined \$34 million, or 35% from the prior year, to \$63 million. Lower pricing, cost inflation, as well as lower equity earnings, primarily related to our fiber glass joint venture selling to the consumer electronics industry, contributed to the income decline. These factors were only partially offset with improved flat glass volumes and improved manufacturing cost performance in fiber glass.

See Note 21, "Reportable Business Segment Information," under Item 8 of this Form 10-K for further information related to the Company's operating segments and reportable business segments.

### Commitments and Contingent Liabilities, including Environmental Matters

PPG is involved in a number of lawsuits and claims, both actual and potential, including some that it has asserted against others, in which substantial monetary damages are sought. See Item 3, "Legal Proceedings" and Note 14, "Commitments and Contingent Liabilities," under Item 8 of this Form 10-K for a description of certain of these lawsuits, including a description of the proposed asbestos settlement.

As discussed in Item 3 and Note 14, although the result of any future litigation of such lawsuits and claims is inherently unpredictable, management believes that, in the aggregate, the outcome of all lawsuits and claims involving PPG, including asbestos-related claims in the event the proposed asbestos settlement described in Note 14 does not become effective, will not have a material effect on PPG's consolidated financial position or liquidity; however, any such outcome may be material to the results of operations of any particular period in which costs, if any, are recognized.

It is PPG's policy to accrue expenses for environmental contingencies when it is probable that a liability has been incurred and the amount of loss can be reasonably estimated. Reserves for environmental contingencies are exclusive of claims against third parties and are generally not discounted. In management's opinion, the Company operates in an environmentally sound manner and the outcome of the Company's environmental contingencies will not have a material effect on PPG's financial position or liquidity; however, any such outcome may be material to the results of operations of any particular period in which costs, if any, are recognized. Management anticipates that the resolution of the Company's environmental contingencies will occur over an extended period of time.

As of December 31, 2013 and 2012, PPG had reserves for environmental contingencies totaling \$310 million and \$332 million, respectively, of which \$105 million and \$101 million, respectively, were classified as current liabilities. Pretax charges against income for environmental remediation costs in 2013, 2012 and 2011 totaled \$108 million, \$166 million and \$9 million, respectively, and are included in "Other charges" in the accompanying consolidated statement of income. Cash outlays related to environmental remediation retained by PPG were \$120

million, \$62 million, and \$48 million in 2013, 2012 and 2011, respectively.

In addition to the amounts currently reserved for environmental remediation, the Company may be subject to loss contingencies related to environmental matters now estimated to be approximately \$100 million to \$200 million which is lower than the estimate of \$100 million to \$275 million as of December 31, 2012 as a result of the additional environmental remediation charge recorded in the third quarter of 2013 explained below and the separation of the commodity chemicals business. Such unreserved losses are reasonably possible but are not currently considered to be probable of occurrence. These reasonably possible unreserved losses relate to environmental matters at a number of sites, including about one third each related to the following: i) additional costs at New Jersey Chrome ii) legacy glass sites and iii) a number of other sites, including legacy chemical manufacturing sites. The loss contingencies related to these sites include significant unresolved issues such as the nature and extent of contamination at these sites and the methods that may have to be employed to remediate them.

The Company continues to analyze, assess and remediate the environmental issues associated with New Jersey Chrome. During the third quarter of 2013, PPG completed an assessment of costs incurred to date versus current progress, and the potential cost impacts of recently acquired information, including but not limited to the extent of impacted soils, percentage of hazardous versus non-hazardous soils, daily soil excavation rates, and engineering, administrative and other associated costs. Based on this assessment, a reserve adjustment of \$89 million was recorded in the third quarter of 2013.

A charge of \$145 million was recorded in the first quarter of 2012 as a result of updated information the Company compiled about the sites that was used to develop a new estimate of the cost to remediate these sites. The updated information was compiled in connection with the preparation of a final draft soil remedial action work plan and cost estimate.

The charges for estimated environmental remediation costs in 2013 and 2012 were significantly higher than PPG's historical range. Excluding the charges related to the New Jersey Chrome sites, pretax charges against income for environmental remediation have ranged between \$10 million and \$30 million per year for the past 10 years.

There are currently no amounts for groundwater remediation in our environmental reserves as of December 31, 2013. Information will continue to be generated from the ongoing groundwater remedial investigation activities related to New Jersey Chrome and will be incorporated into a final draft remedial action work plan for groundwater expected to be submitted to NJDEP in 2014.

#### Liquidity and Capital Resources

During the past three years, we have had sufficient financial resources to meet our operating requirements, to fund our capital spending, share repurchases and pension plans and to pay increasing dividends to our shareholders.



Table of Contents

Cash from continuing operating activities was \$1,809 million, \$1,576 million, and \$1,176 million in 2013, 2012, and 2011, respectively. Cash from operations in 2013 compared to 2012 was aided by higher income from continuing operations which was driven by income from acquired businesses. Cash from operations in 2012 compared to 2011 was aided by cash received from a decrease in working capital.

Operating Working Capital is a subset of total working capital and represents (1) trade receivables-net of the allowance for doubtful accounts, plus (2) inventories on a first-in, first-out (“FIFO”) basis, less (3) trade creditors’ liabilities. See Note 3, “Working Capital Detail” under Item 8 of this Form 10-K for further information related to the components of the Company’s Operating Working Capital. We believe Operating Working Capital represents the key components of working capital under the operating control of our businesses. Operating Working Capital at December 31, 2013 and 2012 was \$2.7 billion and \$2.9 billion, respectively. A key metric we use to measure our working capital management is Operating Working Capital as a percentage of sales (fourth quarter sales annualized).

(Millions, except percentages)	2013	2012		
Trade Receivables, net	\$2,449	\$2,568		
Inventories, FIFO	2,019	1,930		
Trade Creditor's Liabilities	1,790	1,620		
Operating Working Capital	\$2,678	\$2,878		(a)
Operating Working Capital as % of Sales	18.1	% 19.7		%

(a) Inclusive of amounts related to PPG’s commodity chemicals business that was separated in January 2013.

Excluding the commodity chemicals business, operating working capital was \$2,634 or 20.3% at December 31, 2012.

Operating working capital at December 31, 2013 decreased \$200 million compared with the prior year end level.

Trade receivables from customers, net, as a percentage of fourth quarter sales, annualized, for 2013 was 16.5%, down slightly from 17.6% for 2012. Days sales outstanding was 57 days in 2013, a 4 day improvement from 2012.

Inventories on a FIFO basis as a percentage of fourth quarter sales, annualized, for 2013 was 13.6% up slightly from 13.2% in 2012. Inventory turnover was 4.5 times in 2013 and 4.8 times in 2012. Excluding the impact of currency, acquisitions, and divestitures, there was a reduction in all components of working capital, including inventory, resulting in a decrease of \$297 million from the prior year.

Total capital spending, including acquisitions, was \$1,498 million, \$485 million and \$357 million in 2013, 2012, and 2011, respectively. Spending related to modernization and productivity improvements, expansion of existing businesses and environmental control projects was \$515 million, \$363 million and \$326 million in 2013, 2012, and 2011, respectively, and is expected to be in the range of \$500 million to \$600 million during 2014. Capital spending, excluding acquisitions, as a percentage of sales was 3.4%, 2.7% and 2.5% in 2013, 2012 and 2011, respectively.

Capital spending related to business acquisitions amounted to \$983 million, \$122 million, and \$31 million in 2013, 2012 and 2011, respectively. A

primary focus for the Company in 2014 will continue to be prudent cash deployment focused on profitable income growth, including pursuing opportunities for additional strategic acquisitions.

In April 2013, the Company acquired the North American architectural coatings business of Akzo Nobel, N.V., Amsterdam. In May 2013, the Company completed the acquisition of certain assets of Deft Incorporated, a privately-owned U.S. based specialty coatings company. The total cost of 2013 acquisitions was \$983 million.

In December 2012, the Company acquired Spraylat Corp., a privately-owned U.S. based industrial coatings company based in Pelham, N.Y. In January 2012, the Company completed the previously announced acquisitions of Colpisa, a Colombian producer of automotive OEM and refinish coatings, and Dyrup, a European architectural coatings company. The total cost of 2012 acquisitions, including assumed debt, was \$288 million.

In January 2013, PPG received \$900 million in cash proceeds in connection with the closing of the separation of its commodity chemicals business and subsequent merger of the subsidiary holding the PPG commodity chemicals business with a subsidiary of Georgia Gulf. Refer to Note 22, “Separation and Merger Transaction” for financial information regarding the separation of the commodity chemicals business.

In March 2013, PPG repaid its \$600 million 5.75% notes due March 15, 2013.

The Company's share repurchase activity in 2013, 2012 and 2011 was 5.7 million shares at a cost of \$1 billion, 1 million shares at a cost of \$92 million and 10.2 million shares at a cost of \$858 million, respectively. We anticipate completing additional share repurchases during 2014. The Company has approximately 2.2 million shares remaining under the current authorization from the Board of Directors, which was approved in 2011.

In addition, about 10.8 million shares were added to treasury stock as a result of the January 2013 exchange transaction that was part of the separation of the commodity chemicals business.

Dividends paid to shareholders totaled \$345 million, \$358 million and \$355 million in 2013, 2012 and 2011, respectively. PPG has paid uninterrupted annual dividends since 1899, and 2013 marked the 42nd consecutive year of increased annual per-share dividend payments to shareholders.

We did not have a mandatory contribution to our U.S. defined benefit pension plans in 2013. We made a voluntary contribution of \$50 million to these plans in 2013 and 2011, of which \$7 million of the 2011 voluntary contribution related to the commodity chemicals business. We did not make a voluntary contribution to these plans in 2012. We do not expect to have a mandatory contribution to our U.S. defined benefit pension plans in 2014. We made contributions to our non-U.S. defined benefit pension plans of \$124 million, \$80 million and \$70 million for 2013, 2012 and 2011, respectively, some of which were required by local funding requirements. We expect

Table of Contents

to make mandatory contributions to our non-U.S. plans in 2014 in the range of approximately \$10 million to \$25 million.

In September 2012, PPG entered into a five-year credit agreement (the "Credit Agreement") with several banks and financial institutions as further discussed in Note 8, "Debt and Bank Credit Agreements and Leases". The Credit Agreement provides for a \$1.2 billion unsecured revolving credit facility. In connection with entering into this Credit Agreement, the Company terminated its \$1.2 billion credit facility that was scheduled to expire in August 2013. There was no outstanding amount due under the revolving facility at the time of its termination. The Company has the ability to increase the size of the Credit Agreement by up to an additional \$300 million, subject to the receipt of lender commitments and other conditions. The Credit Agreement will terminate and all amounts outstanding thereunder will be due and payable on September 12, 2017.

On July 31, 2012, PPG completed a public offering of \$400 million in aggregate principal amount of its 2.70% Notes due 2022 (the "2022 Notes"). The 2022 Notes were offered by the Company pursuant to its existing shelf registration statement. The proceeds of this offering of \$397 million, net of discount and issuance costs, were used to repay a portion of the \$600 million of 5.75% notes in March 2013 (the "2013 Notes"). The discount and issuance costs related to the 2022 Notes, which totaled \$3 million, are being amortized to interest expense over the life of the 2022 Notes.

Also during the year ended December 31, 2012 the Company assumed \$120 million of debt in the Dyrup acquisition; repaid \$119 million of that debt, and repaid the \$71 million of 6.875% notes upon their maturity.

In June 2011, the Company repaid a \$400 million three year unsecured term loan, which had a scheduled maturity date of June 2012. There was no prepayment penalty.

The ratio of total debt, including capital leases, to total debt and equity was 41% at December 31, 2013 down from 50% in 2012.

The Company has \$3,900 million and \$3,476 million of undistributed earnings of non-U.S. subsidiaries as of December 31, 2013 and December 31, 2012, respectively. These amounts relate to approximately 200 subsidiaries in more than 60 taxable jurisdictions. Substantially no deferred U.S. income taxes have been provided on these earnings as they are considered to be reinvested for an indefinite period of time or will be repatriated when it is tax effective to do so. The Company estimates repatriation of undistributed earnings of non-U.S. subsidiaries as of December 31, 2013 and December 31, 2012 would have resulted in a U.S. tax cost of approximately \$250 million and \$110 million, respectively.

We continue to believe that our cash and short term investments on hand, cash from operations and the Company's available debt capacity will continue to be sufficient to fund our operating activities, capital spending, including acquisitions, dividend payments, debt service, amounts due under the proposed asbestos settlement, share repurchases,

contributions to pension plans, and PPG's significant contractual obligations. These significant contractual obligations, along with amounts due under the proposed asbestos settlement are presented in the following table.

		Obligations Due In:			
(Millions)	Total	2014	2015- 2016	2017- 2018	Thereafter
Contractual Obligations					
Long-term debt	\$3,346	\$1	\$816	\$774	\$1,755
Short-term debt	30	30	—	—	—
Capital lease obligations	30	2	5	5	18
Operating leases	910	216	314	203	177
Interest payments <sup>(1)</sup>	1,432	166	294	222	750
Pension contributions <sup>(2)</sup>	25	25	—	—	—
Unconditional purchase commitments	325	163	93	26	43
Total	\$6,098	\$603	\$1,522	\$1,230	\$2,743
Asbestos Settlement <sup>(3)</sup>					
Aggregate cash payments	\$825	\$485	\$21	\$91	\$228

Edgar Filing: PPG INDUSTRIES INC - Form 10-K

PPG stock and other	278	278	—	—	—
Total	\$1,103				