

PPG INDUSTRIES INC
Form 10-K
February 15, 2018

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, 2017
Commission File Number 1-1687

PPG INDUSTRIES, INC.

(Exact name of registrant as specified in its charter)

Pennsylvania

(State or other jurisdiction of incorporation or organization)

25-0730780

(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:

412-434-3131

Securities Registered Pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common Stock – Par Value \$1.66 ² / ₃	New York Stock Exchange
0.000% Notes due 2019	New York Stock Exchange
0.875% Notes due 2022	New York Stock Exchange
0.875% Notes due 2025	New York Stock Exchange
1.400% Notes due 2027	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, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ☒

Accelerated filer ☐

Non-accelerated filer ☐

Smaller reporting company ☐

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(Do not check if a smaller reporting company) Emerging growth company ☐

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

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

The aggregate market value of common stock held by non-affiliates as of June 30, 2017, was \$28,173 million.

As of January 31, 2018, 249,880,613 shares of the Registrant's common stock, with a par value of \$1.66²/₃ per share, were outstanding. As of that date, the aggregate market value of common stock held by non-affiliates was \$29,638 million.

DOCUMENTS INCORPORATED BY REFERENCE

Document	Incorporated By Reference In Part No.
Portions of PPG Industries, Inc. Proxy Statement for its 2018 Annual Meeting of Shareholders	III
2017 PPG ANNUAL REPORT AND FORM 10-K	7

PPG 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.

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Note on Incorporation by Reference

Throughout this report, various information and data are incorporated by reference from the Company’s 2017 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.

FINANCIAL HIGHLIGHTS

Below are our key financial results from continuing operations for the fiscal year ended December 31, 2017:

Net sales were \$14.8 billion, up 3% from the prior year, driven primarily by higher sales volumes and acquisition-related sales.

Cost of sales, exclusive of depreciation and amortization increased 7% to \$8.2 billion, driven primarily by raw material cost inflation, higher sales volumes and higher cost of sales from acquired businesses.

Selling, general and administrative expenses of \$3.6 billion were slightly lower compared to the prior year.

Income before income taxes was \$2,008 million up \$1.2 billion year-over-year, due to the absence of pension settlement charges related to the purchase of group annuity contracts and a business restructuring charge.

Net income from continuing operations was \$1,371 million and earnings per diluted share was \$5.32.

Adjusted net income from continuing operations was \$1,513 million and adjusted earnings per diluted share was \$5.87.

Cash and short-term investments were approximately \$1.5 billion at year-end.

Cash from operating activities - continuing operations was \$1,556 million.

Capital expenditures for modernization, productivity and regulatory improvements was \$360 million.

Cash used for business acquisitions (net of cash acquired), was \$325 million.

The Company raised the per-share dividend by 13%, paid approximately \$434 million in dividends and also repurchased \$813 million of its outstanding common stock.

The Company expects to deploy at least \$3.5 billion for acquisitions and share repurchases during 2017 and 2018 combined, with \$1.1 billion deployed in 2017.

The 2017 effective tax rate was 30.7%, which includes a \$134 million net charge related to the enactment of the U.S.

Tax Cuts and Jobs Act. This net charge is \$37 million higher than the net charge included in PPG's fourth quarter earnings release and Form 8-K furnished on January 18, 2018, primarily due to new IRS regulations issued and refinements of the Company's estimates. While the Company has made a preliminary assessment of the new legislation's impact on PPG, U.S. regulatory agencies will be issuing further regulations and clarifying interpretations over 2018 which could alter the Company's conclusions regarding the impact of the new law. Further, PPG may continue to refine its estimates to incorporate new or better information as it comes available. The Company's adjusted effective tax rate was 24.4%.

For further information and a full discussion and analysis of business performance for the years ended December 31, 2017, 2016, and 2015 and a reconciliation of non-GAAP financial measures, see Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations" of this Form 10-K.

Part I

Item 1. Business

PPG Industries, Inc., manufactures and distributes a broad range of paints, coatings and specialty materials. PPG was incorporated in Pennsylvania in 1883. PPG's vision is to be the world's leading coatings company by consistently delivering high-quality, innovative and sustainable solutions that customers trust to protect and beautify their products and surroundings. PPG's business is comprised of two reportable business segments: Performance Coatings and Industrial Coatings.

In September 2017, PPG completed the sale of its North American fiber glass business, which represents the culmination of a multi-year strategic shift in the Company's business portfolio, resulting in the exit of all glass operations. Accordingly, all historical information has been recast to present the Glass segment as discontinued operations and assets held for sale. Refer to Note 2, "Acquisitions and Divestitures" under Item 8 of this Form 10-K for further information relating to this transaction.

Performance Coatings and Industrial Coatings

PPG is a major global supplier of coatings. The Performance Coatings and Industrial Coatings reportable business segments supply coatings and specialty materials to customers in a wide array of end-use markets, including industrial equipment and components, packaging material; aircraft and marine equipment; automotive original equipment ("automotive OEM"); automotive refinishing; as well as for other industrial and consumer products. 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 several 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.

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PERFORMANCE COATINGS

Strategic Business Unit	Products	Primary End-use Markets	Main Distribution Methods	Brands
Refinish Coatings	Coatings, solvents, adhesives, sundries, software	Automotive and commercial transport/fleet repair and refurbishing, light industrial coatings and specialty coatings for signs.	Independent distributors and direct to customers	PPG®
Aerospace Coatings	Coatings, sealants, transparencies, transparent armor, packaging and chemical management services for the aerospace industry	Commercial, military, regional jet and general aviation aircraft	Direct to customers and company-owned distribution network	PPG®
Protective and Marine Coatings	Coatings and finishes for the protection of metals and structures	Metal fabricators, heavy duty maintenance contractors and manufacturers of ships, bridges and rail cars	Company-owned architectural coatings stores, independent distributors, concessionaires and direct to customers	PPG®
Architectural Coatings Americas and Asia Pacific				PPG®, GLIDDEN®, COMEX®, OLYMPIC®, DULUX® (in Canada), SIKKENS®, PPG PITTSBURGH PAINTS®, MULCO®, FLOOD®, LIQUID NAILS®, SICO®, CIL®, RENNER®, TAUBMANS®, WHITE KNIGHT®, BRISTOL®, HOMAX® among others.
Architectural Coatings Europe, Middle East and Africa (EMEA)	Coatings and purchased sundries	Painting and maintenance contractors and consumers for decoration and maintenance of residential and commercial building structures	Company-owned stores, home centers and other regional or national consumer retail outlets, paint dealers, concessionaires, independent distributors and direct to customers	SIGMA®, HISTOR®, SEIGNEURIE®, GUITTET®, PEINTURES GAUTHIER®, RIPOLIN®, JOHNSTONE'S®, LEYLAND®, PRIMALEX®, DEKORAL®, TRILAK®, PROMINENT PAINTS®, GORI®, BONDEX®, and DANKE!® among others.
Major Competitive Factors	Product performance, technology, quality, technical and customer service, price, customer productivity, distribution, and brand recognition			
Global Competitors	Akzo Nobel N.V., Axalta Coating Systems Ltd., BASF Corporation, Benjamin Moore, Hempel A/S, the Jotun Group, Masco Corporation, Materis Paints, Nippon Paint; RPM International			

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Average Number of Employees in 2017	Inc, the Sherwin-Williams Company and Tikkurila Oyj 28,200
Principal Manufacturing and Distribution Facilities	Amsterdam, Netherlands; Birstall, United Kingdom; Budapest, Hungary; Clayton, Australia; Delaware, Ohio; Dover, Del.; Gonfreville, France; Huntsville, Ala.; Huron, Ohio; Kunshan, China; Little Rock, Ark.; Mexico City, Mexico; Milan, Italy; Mojave, Calif.; Moreuil, France; Shildon, United Kingdom; Sylmar, Calif.; Soborg, Denmark; Stowmarket, United Kingdom; Tepexpan, Mexico and Wroclaw, Poland.

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INDUSTRIAL COATINGS

Strategic Business Unit	Products	Primary End-use Markets	Main Distribution Methods	Brands
Automotive OEM Coatings		Automotive original equipment manufacturer (OEM)		PPG®
Industrial Coatings	Specifically formulated coatings, adhesives and sealants and metal pretreatments	Appliances, agricultural and construction equipment, consumer electronics, automotive parts and accessories, building products (including residential and commercial construction), transportation vehicles and numerous other finished products.		PPG®
Packaging Coatings	Specifically formulated coatings	Widely used for the protection, performance and decoration of metal cans, closures, plastic tubes, industrial packaging, and promotional and specialty packaging.	Direct to manufacturing companies and various coatings applicators	PPG®
Specialty Coatings and Materials	Amorphous precipitated silicas, TESLIN® substrate, Organic Light Emitting Diode (OLED) materials, optical lens materials and photochromic dyes	SILICA - Tire, battery separator and other end-use markets; TESLIN - used in applications such as radio frequency identification (RFID) tags and labels, e-passports, drivers' licenses and identification cards; OLED - for use in displays and lighting; Lens materials - for optical lenses and color-change products.		PPG®
Coatings Services ^(a)	Services and coatings application	On-site coatings services within several customer manufacturing locations as well as at regional service centers. Customers ship parts to service centers where they are treated to enhance paint adhesion and painted with electrocoat, powder or liquid coatings. Coated parts are then shipped to the customer's next stage of assembly.	On site at customer locations or at our company-owned service centers	PPG®

(a) Effective January 1, 2018, the coating services business unit has been merged into the industrial coatings business unit to achieve operational efficiencies and to realign management teams and operations to better deliver our total value proposition and provide optimal solutions to our customers.

Technology / Alliances	PPG's automotive OEM coatings business was the first to introduce breakthrough automotive coating technologies such as cathodic electrocoat, powder clearcoat, compact paint systems and factory-applied spray-in bedliners, and the Company has a continued focus on innovation leadership. PPG has established alliances with Kansai Paints to serve Japanese-based automotive OEM customers in North America and Europe and Asian Paints Ltd. to serve certain aftermarket customers and automotive OEM customers in India.			
Major Competitive Factors	Product performance, technology, quality, technical and customer service, price, customer productivity and distribution.			
Global Competitors	Akzo Nobel N.V., Axalta Coating Systems Ltd., BASF Corporation, Kansai Paints, Nippon Paint and the Sherwin-Williams Company			
2017 Strategic Acquisitions	The Crown Group (Crown) - Refer to Note 2, "Acquisitions and Divestitures" under Item 8 of this Form 10-K for more information.			
Average Number of Employees in 2017	14,800			

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Principal Manufacturing and Distribution Facilities	Barberton, Ohio; Busan, South Korea; Cieszyn, Poland; Cleveland, Ohio; Lake Charles, La.; Oak Creek, Wis.; Quattordio, Italy; San Juan del Rio, Mexico; Sumaré, Brazil; Tianjin, China, and Zhangjiagang, China
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Research and Development

(\$ in millions)

	2017	2016	2015
Research and development costs, including depreciation of research facilities	\$474	\$479	\$484
% of annual net sales	3.2 %	3.4 %	3.4 %

Technology innovation has been a hallmark of PPG's success throughout its history. 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. We have obtained government funding for a small portion of the Company's research efforts, and we will continue to pursue government funding where appropriate.

PPG owns and operates several facilities to conduct research and development for new and improved products and processes. In addition to the Company's centralized principal research and development centers (See Item 2. "Properties" of this Form 10-K), operating segments manage their development 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.

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 and sand and soda ash for the specialty coatings and materials business. Coatings raw materials, which include both organic, primarily petroleum based, materials and inorganic materials, including titanium dioxide, comprise between 70% and 80% of the Company's cost of sales, excluding depreciation and amortization, in most coatings formulations and represent PPG's single largest production cost component.

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. Our products use both petroleum-derived and bio-based materials as part of a product renewal strategy. While prices for these raw materials typically fluctuate with energy prices, such fluctuations are impacted by the fact that the manufacture of our raw materials is several steps downstream from crude oil and natural gas.

The Company is continuing its aggressive sourcing initiatives to 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, adding on-site resin production at certain manufacturing locations and a reduction in the amount of titanium dioxide used in our product formulations.

Our global efforts to reduce titanium dioxide consumption have been successful to date and are expected to continue. Titanium dioxide is a raw material widely used in the paint and coatings industry as a pigment to provide hiding, durability and whiteness characteristics. PPG purchases both sulfate-grade and chloride-grade titanium dioxide from suppliers for use in coatings formulations. The Company has undertaken a strategic initiative to secure and enhance PPG's supply of titanium dioxide, as well as to minimize PPG's use of this raw material. PPG possesses intellectual property and expertise in the production and finishing of titanium dioxide pigment. PPG intends to continue to leverage this technology and intends to develop innovative supply solutions through technical collaborations, joint ventures and licensing arrangements with other interested parties.

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 (U.S.), 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.

Given the recent volatility in certain energy-based input costs and foreign currencies, the Company is not able to predict with certainty the 2018 full year impact of related changes in raw material pricing; however, PPG currently expects overall coatings raw material costs to increase a mid-single-digit percentage in the first half of 2018, with impacts varied by region and commodity. Further, given the distribution nature of many of our businesses, logistics and distribution costs are sizable, as are wages and benefits but to a lesser degree. PPG typically experiences fluctuating prices for energy and raw materials

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driven by various factors, including changes in supplier feedstock costs and inventories, global industry activity levels, foreign currency exchange rates, government regulation, and global supply and demand factors. In aggregate, average raw material cost inflation rose by a mid-single-digit percentage in 2017 versus 2016, driven mostly by supply related factors including an unusually high number of supplier force majeure events in Europe, Chinese environmental regulation enforcement and severe hurricanes in the U.S. In addition, oil prices moved much higher in the second half of 2017 also contributing to raw material inflation.

Patents

(\$ in millions)

2017 2016 2015

Revenue earned from royalties and the sale of technical know-how \$11 \$12 \$15

PPG considers patent protection to be important; however, the Company's operating segments are not materially dependent upon any single patent or group of related patents.

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 on PPG's total net sales and income from continuing operations. 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. During 2017, favorable foreign currency translation increased net sales by approximately \$55 million and decreased income from continuing operations by \$7 million.

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

(\$ in millions)

Net Sales 2017 2016