

PPG INDUSTRIES INC
Form S-3ASR
August 01, 2016

As filed with the Securities and Exchange Commission on August 1, 2016
Registration No. 333-

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

FORM S-3

REGISTRATION STATEMENT
Under
the Securities Act of 1933

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.)
PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272
(412) 434-3131
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Glenn E. Bost II, Esq.
Senior Vice President and General Counsel
PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272
(412) 434-3131
(Name, address, including zip code, and telephone number, including area code, of agent for service)

With a Copy to:
Kristen L. Stewart, Esq.
Jeffrey W. Acre, Esq.
K&L Gates LLP
K&L Gates Center
210 Sixth Avenue
Pittsburgh, Pennsylvania 15222
(412) 355-6500

Approximate date of commencement of proposed sale to the public: From time to time after the effective date of this Registration Statement.
If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act of 1933, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act of 1933, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

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 (Do not check if a smaller reporting company) Smaller reporting company

CALCULATION OF REGISTRATION FEE

Title of each Class of Securities to be Registered	Amount to be Registered/Proposed Maximum Offering Price Per Unit/Proposed Maximum Aggregate Offering Price/Amount of Registration Fee (1)
Debt Securities	
Common Stock, par value	
\$1.66 2/3 per share	
Preferred Stock, without par value	
Warrants	
Depository Shares	
Purchase Contracts	
Units (2)	

An indeterminate aggregate initial offering price and amount of the securities of each identified class is being registered as may be offered and sold from time to time at indeterminate prices. Separate consideration may or may not be received for securities that are issuable upon exercise, conversion or exchange of other securities or that are issued in units or represented by depository shares. In accordance with Rules 456(b) and 457(r), the registrant is deferring payment of all of the registration fee required in connection with this registration statement.

(2) Any securities registered hereunder may be sold separately or as units with other securities registered hereunder.

Prospectus

PPG Industries, Inc.

Debt Securities

Common Stock

Preferred Stock

Warrants

Depositary Shares

Purchase Contracts

Units

We may offer to sell from time to time, in one or more classes or series, debt securities, common stock, preferred stock, warrants, depositary shares, purchase contracts or units, or any combination of these securities. The debt securities, warrants, purchase contracts and preferred stock may be convertible into or exercisable or exchangeable for our common stock, preferred stock or other securities or debt or equity securities of one or more other entities. Our common stock is listed on the New York Stock Exchange and trades under the ticker symbol "PPG." If we decide to seek a listing of any securities offered by this prospectus, we will disclose the exchange or market on which the securities will be listed, if any, or where we have made an application for listing, if any, in one or more supplements to this prospectus.

This prospectus describes some of the general terms that may apply to these securities and the general manner in which they may be offered. The specific terms of any securities to be offered and the specific manner in which they may be offered will be described in one or more supplements to this prospectus. This prospectus may not be used to sell securities unless it is accompanied by a prospectus supplement that contains a description of those securities.

We may offer and sell these securities to or through one or more underwriters, dealers or agents, or directly to other purchasers, on a continuous or delayed basis. If any offering involves underwriters, dealers or agents, arrangements with them will be described in a prospectus supplement relating to that offering.

You should consider carefully the "Risk Factors" described on page 3 and in any applicable prospectus supplement before investing in any of our securities offered by this prospectus or any prospectus supplement.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the accuracy or adequacy of this prospectus or determined if this prospectus is truthful and complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is August 1, 2016.

TABLE OF CONTENTS

SUMMARY	1
RISK FACTORS	3
FORWARD-LOOKING STATEMENTS	3
CONSOLIDATED RATIO OF EARNINGS TO FIXED CHARGES	4
USE OF PROCEEDS	4
DESCRIPTION OF DEBT SECURITIES	4
DESCRIPTION OF CAPITAL SECURITIES	16
DESCRIPTION OF OTHER SECURITIES	20
PLAN OF DISTRIBUTION	20
LEGAL MATTERS	22
EXPERTS	22
ABOUT THIS PROSPECTUS	

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, which we refer to in this prospectus as the SEC, utilizing a “shelf” registration process. Under this shelf registration process, we may sell from time to time any combination of the securities described in this prospectus in one or more offerings. This prospectus provides you with a general description of the securities we may offer. You should assume that the information appearing in this prospectus is accurate only as of the date of this prospectus. Our business, financial condition, results of operations and prospects may change after that date. Each time we sell securities under this prospectus, we will provide a prospectus supplement that will contain or incorporate by reference specific information about the terms of that offering. Each prospectus supplement also may add, update or change information contained in this prospectus. We urge you to read both this prospectus and any prospectus supplement, together with the additional information described below under “Where You Can Find More Information.”

No person has been authorized to give any information or to make any representations, other than as contained or incorporated by reference in this prospectus, and, if given or made, such information or representations must not be relied upon as having been authorized by us or any underwriter, agent, dealer or remarketing firm. Neither the delivery of this prospectus nor any sale made under this prospectus shall under any circumstances create any implication that there has been no change in our affairs since the date of this prospectus or that the information contained or incorporated by reference in this prospectus is correct as of any time subsequent to the date of such information. This prospectus does not constitute an offer to sell or a solicitation of an offer to buy any securities by anyone in any jurisdiction in which such offer or solicitation is not authorized or in which the person making such offer or solicitation is not qualified to do so or to any person to whom it is unlawful to make such offer or solicitation.

WHERE YOU CAN FIND MORE INFORMATION

Available Information

We file reports, proxy statements and other information with the SEC. Such reports, proxy statements and other information that we file with the SEC can be read and copied at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 to obtain further information on the operation of the Public Reference Room. The SEC maintains an Internet site that contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC, including us. The SEC's Internet address is <http://www.sec.gov>. In addition, our common stock is listed on the New York Stock Exchange, and our reports and other information can be inspected at the offices of the New York Stock Exchange, 20 Broad Street, New York, New York 10005. Our Internet address is <http://www.ppg.com>. The information on our Internet site is not a part of this prospectus.

Incorporation by Reference

The SEC allows us to "incorporate by reference" information that we file with it. This means that we can disclose important information to you by referring you to other documents. Any information we incorporate in this manner is considered part of this prospectus except to the extent updated and superseded by information contained in this prospectus and any prospectus supplement. Some information that we file with the SEC after the date of this prospectus and until we sell all of the securities covered by this prospectus will automatically update and supersede the information contained in this prospectus.

We incorporate by reference the following documents that we have filed with the SEC and any filings that we make with the SEC in the future under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), until we sell all of the securities covered by this prospectus, including between the date of this prospectus and the date on which the offering of the securities under this prospectus is terminated, except as noted in the paragraph below:

Our SEC Filings (File No. 1 01687)	Period for or Date of Filing
Annual Report on Form 10-K	Year Ended December 31, 2015
Quarterly Reports on Form 10-Q	Quarters Ended March 31 and June 30, 2016
Current Reports on Form 8-K	January 7, April 25, April 27, June 3, June 10, June 27 and July 22, 2016
Form 10	June 29, 1935

Pursuant to General Instruction B of Form 8-K, any information submitted under Item 2.02, Results of Operations and Financial Condition, or Item 7.01, Regulation FD Disclosure, of Form 8-K is not deemed to be "filed" for the purpose of Section 18 of the Exchange Act, and we are not subject to the liabilities of Section 18 with respect to information submitted under Item 2.02 or Item 7.01 of Form 8-K. We are not incorporating by reference any information submitted under Item 2.02 or Item 7.01 of Form 8-K into any filing under the Securities Act of 1933, as amended (the "Securities Act"), or the Exchange Act into this prospectus.

Statements contained in this prospectus as to the contents of any contract, agreement or other document referred to in this prospectus do not purport to be complete, and where reference is made to the particular provisions of that contract, agreement or other document, those references are qualified in

all respects by reference to all of the provisions contained in that contract, agreement or other document. For a more complete understanding and description of each such contract, agreement or other document, we urge you to read the exhibits to the registration statement of which this prospectus is a part.

Any statement contained in a document incorporated by reference, or deemed to be incorporated by reference, into this prospectus will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained herein or in any other subsequently filed document which also is incorporated by reference in this prospectus modifies or supersedes that statement. Any such statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

We will provide without charge, upon written or oral request, a copy of any or all of the documents that are incorporated by reference into this prospectus and a copy of any or all other contracts, agreements or documents which are referred to in this prospectus. Requests should be directed to: PPG Industries, Inc., One PPG Place, Pittsburgh, Pennsylvania 15272, Attention: Corporate Secretary; telephone number: (412) 434-3131. You also may review a copy of the registration statement and its exhibits at the SEC's Public Reference Room in Washington, D.C., as well as through the SEC's Internet site, <http://www.sec.gov>.

SUMMARY

This summary is a brief discussion of material information contained in, or incorporated by reference into, this prospectus, as further described above under “Where You Can Find More Information.” This summary does not contain all of the information that you should consider before investing in any securities being offered by this prospectus. We urge you to carefully read this entire prospectus, the documents incorporated by reference into this prospectus and the prospectus supplement relating to the securities that you propose to buy, especially any description of investment risks that we may include in the prospectus supplement or in documents incorporated by reference in this prospectus. References to “PPG,” the “registrant,” “we,” “our,” “us” and similar terms mean PPG Industries, Inc. and its consolidated subsidiaries, unless the context requires otherwise.

PPG Industries, Inc.

PPG Industries, Inc. manufactures and distributes a broad range of coatings, specialty materials and glass products. We are comprised of three reportable segments: Performance Coatings, Industrial Coatings and Glass. 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. Founded in 1883, PPG operates in approximately 70 countries around the world.

We are a Pennsylvania corporation with our principal executive offices located at One PPG Place, Pittsburgh, Pennsylvania 15272. Our telephone number is (412) 434-3131.

Performance Coatings and Industrial Coatings

PPG is a major global supplier of coatings. The Performance Coatings and Industrial Coatings reportable segments supply coatings and specialty materials 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 (“automotive OEM”); and other industrial and consumer products. In addition to supplying coatings to the automotive OEM market, 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 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. The primary specialty coatings and materials products produced are amorphous precipitated silicas for tire, battery separator and other end-use markets; TESLIN® substrate used in such applications as radio frequency identification (RFID) tags and labels, e-passports, drivers’ licenses and identification cards; Organic Light Emitting Diode (OLED) materials for use in displays and lighting; optical lens materials and photochromic dyes for optical lenses and color-change products.

Glass

The Glass reportable segment is comprised of the flat glass and fiber glass businesses. PPG is a producer of flat glass in North America and a producer of fiber glass in North America and Europe, as well as Asia through our partnership with Nan Ya Plastics Corp primarily to serve the electronics industry. 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.

On June 20, 2016, PPG announced that it has signed an agreement for the sale of its European fiber glass operations to glass manufacturer Nippon Electric Glass Co. Ltd. ("NEG"). The transaction is subject to completion of employee consultation processes, receipt of regulatory clearances and other customary closing conditions. PPG and NEG expect to close the transaction in the second half of 2016. On July 20, 2016, PPG signed a definitive agreement to sell the assets of its flat glass manufacturing and glass coatings operations to Vitro S.A.B. de C.V., a leading producer of flat glass and specialty products. The transaction is expected to close by the end of 2016, subject to customary closing conditions.

About This Prospectus

This prospectus is part of a registration statement that we filed with the SEC utilizing a "shelf" registration process. Under this shelf process, we may offer from time to time any of the securities described in this prospectus. This prospectus provides you with a general description of the securities that we may offer. Each time we offer securities under this prospectus, we will provide you with a prospectus supplement that contains the specific amounts, prices and terms of the securities being offered. The prospectus supplement may also add, update or change information contained or incorporated by reference in this prospectus. We also may provide important information in one or more reports filed by us with the SEC from time to time pursuant to the Exchange Act that are incorporated by reference in this prospectus. You should read the documents we have referred to you in "Where You Can Find More Information" for additional information about us, including our financial statements.

RISK FACTORS

Investing in our securities involves risks. Before deciding whether to purchase any of our securities, you should carefully consider the risks involved in an investment in our securities, as set forth in Item 1A, Risk Factors, in our Annual Report on Form 10-K for our fiscal year ended December 31, 2015, as updated in our Quarterly Reports on Form 10-Q, and the other risks described in any prospectus supplement or in any of the documents incorporated by reference in this prospectus.

FORWARD-LOOKING STATEMENTS

In this prospectus, statements that are not reported financial results or other historical information are “forward-looking statements” within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act.

Forward-looking statements give current expectations or forecasts of future events and are not guarantees of future performance. They are based on our management’s expectations that involve a number of business risks and uncertainties, any of which could cause actual results to differ materially from those expressed in or implied by the forward-looking statements.

You can identify these forward-looking statements by the fact that they do not relate strictly to historic or current facts. They use words such as “anticipates,” “believes,” “estimates,” “expects,” “would,” “should,” “will,” “will likely result,” “outlook,” “projects” and similar expressions in connection with any discussion of future operating or financial performance. Any forward-looking statement speaks only as of the date on which such statement is made, and we undertake no obligation to update any forward looking statement, whether as a result of new information, future events or otherwise. You are advised, however, to consult any further disclosures we make on related subjects in our reports to the SEC.

Many factors could cause actual results to differ materially from our forward-looking statements. Such factors include global economic conditions, increasing price and product competition by foreign and domestic competitors, fluctuations in cost and availability of raw materials, the ability to maintain favorable supplier relationships and arrangements, difficulties in integrating acquired businesses and achieving expected synergies therefrom, economic and political conditions in international markets, the ability to penetrate existing, developing and emerging foreign and domestic markets, foreign exchange rates and fluctuations in such rates, fluctuations in tax rates, the impact of future legislation, the impact of environmental regulations, unexpected business disruptions, the unpredictability of existing and possible future litigation. However, it is not possible to predict or identify all such factors. Consequently, while the list of factors presented here, in any prospectus supplement and in Item 1A, Risk Factors, in our Annual Report on Form 10-K for our fiscal year ended December 31, 2015, as updated in our Quarterly Reports on Form 10-Q, are considered representative, no such list should be considered to be a complete statement of all potential risks and uncertainties. Unlisted factors may present significant additional obstacles to the realization of forward-looking statements.

Consequences of material differences in the results compared with those anticipated in the forward-looking statements could include, among other things, business disruption, operational problems, financial loss, legal liability to third parties, other factors set forth in the “Risk Factors” section of any prospectus supplement, Item 1A, Risk Factors, in our Annual Report on Form 10-K for our fiscal year ended December 31, 2015, as updated in our Quarterly Reports on Form 10-Q, and similar risks, any of which could have a material adverse effect on our consolidated financial condition, results of operations or liquidity.

CONSOLIDATED RATIO OF EARNINGS TO FIXED CHARGES

Our consolidated ratios of earnings to fixed charges for the six months ended June 30, 2016 and for the years ended December 31, 2015, 2014, 2013, 2012 and 2011 are as follows:

	Six Months					
	Ended June	Year Ended December 31,				
	30, 2016	2015	2014	2013	2012	2011
Ratios of earnings to fixed charges ...	11.2x	9.7x	5.4x	5.2x	3.9x	4.3x

For the purposes of this ratio, “earnings” consist of consolidated earnings before income taxes, plus fixed charges exclusive of capitalized interest and less undistributed income of unconsolidated affiliates carried on the equity basis. “Fixed charges” consist of interest, whether expensed or capitalized (including amortization of debt discount and debt expense), and that portion of rentals which is representative of interest. We did not declare any preferred stock dividends for any of the periods presented.

USE OF PROCEEDS

We intend to use the net proceeds from the sale of the securities for general corporate purposes, unless otherwise indicated in the applicable prospectus supplement relating to a specific issuance of securities. Our general corporate purposes include, but are not limited to, repayment, redemption or refinancing of debt, capital expenditures, investments in or loans to subsidiaries and joint ventures, funding of possible acquisitions, working capital, contributions to one or more of our pension plans, satisfaction of other obligations and repurchase of our outstanding debt or equity securities. Pending any such use, the net proceeds from the sale of the securities may be invested in short-term, investment grade, interest-bearing instruments. We will include a more detailed description of the use of proceeds of any specific offering in the applicable prospectus supplement relating to an offering of securities under this prospectus.

DESCRIPTION OF DEBT SECURITIES

The following is a general description of the debt securities that we may offer from time to time under this prospectus. The financial terms and other specific terms of the debt securities being offered will be described in a prospectus supplement relating to the issuance of those securities. Those terms may vary from the terms described here. Although the debt securities that we may offer include debt securities

denominated in U.S. dollars, we also may choose to offer debt securities in any other currency, including the euro. The debt securities are governed by documents called “indentures.” The indentures are contracts between us and a financial institution acting as the trustee. The trustee has two main roles. First, the trustee can enforce your rights against us if we default. There are some limitations on the extent to which the trustee may act on your behalf, as described below under “ – Events of Default – Remedies If an Event of Default Occurs.” Second, the trustee performs certain administrative duties for us.

Because this section is a summary, it does not describe every aspect of the debt securities that we may offer pursuant to this prospectus. This summary also is subject to and qualified by reference to the description of the particular terms of the debt securities and the relevant indenture described in the related prospectus supplement, including definitions used in the relevant indenture. The particular terms of the debt securities that we may offer under this prospectus, the relevant indenture and any relevant supplemental indenture may vary from the terms described below.

General

The debt securities that we may offer under this prospectus will be either senior debt securities or subordinated debt securities. We may issue senior debt securities under one or more senior indentures between us and The Bank of New York Mellon Trust Company, N.A., as trustee, including an existing Indenture, dated as of March 18, 2008, which we refer to in this prospectus as the existing indenture. In this prospectus, we refer to any indenture pursuant to which senior debt securities offered under this prospectus may be issued, including the existing indenture, as any such indenture may be supplemented in connection with an offering of senior debt securities under this prospectus, as a senior indenture. We may issue subordinated debt securities under one or more subordinated indentures between us and The Bank of New York Mellon Trust Company, N.A., as trustee. In this prospectus, we refer to any indenture pursuant to which subordinated debt securities offered under this prospectus may be issued, as any such indenture may be supplemented in connection with an offering of subordinated debt securities under this prospectus, as a subordinated indenture. Senior indentures and subordinated indentures are sometimes referred to collectively in this prospectus as indentures.

The existing indenture is, and each other indenture will be, governed by New York law. Copies of the existing indenture and forms of a senior indenture and a subordinated indenture pursuant to which we may issue debt securities that are offered under this prospectus have been filed as exhibits to the registration statement of which this prospectus is a part. See “Where You Can Find More Information” for information on how to obtain copies of these indentures. We may offer the debt securities from time to time in as many distinct series as we may choose. All debt securities will be direct, unsecured obligations of ours. Any senior debt securities that we offer under this prospectus will have the same rank as all of our other unsecured and unsubordinated debt. Any subordinated debt securities that we offer under this prospectus will be subordinate in right of payment to our senior indebtedness. The existing indenture does not, and any other indenture will not, limit either the amount of debt that we may issue thereunder or the amount of other unsecured debt or other securities that we or our subsidiaries may issue.

Our primary sources of payment for our payment obligations under the debt securities will be revenues from our operations and investments and cash distributions from our subsidiaries. Our subsidiaries are separate and distinct legal entities and have no obligation whatsoever to pay any amounts due on debt securities issued by us or to make funds available to us. Our subsidiaries’ ability to pay

dividends or make other payments or advances to us will depend upon their operating results and will be subject to applicable laws and contractual restrictions. The existing indenture does not, and any other indenture will not, restrict our subsidiaries from entering into agreements that prohibit or limit their ability to pay dividends or make other payments or advances to us.

To the extent that we must rely on cash from our subsidiaries to pay amounts due on the debt securities, the debt securities will be effectively subordinated to all our subsidiaries' liabilities, including their trade payables. This means that our subsidiaries may be required to pay all of their creditors in full before their assets are available to us. Even if we are recognized as a creditor of our subsidiaries, our claims would be effectively subordinated to any security interests in their assets and also could be subordinated to some or all other claims on their assets and earnings.

Other than the restrictions described below or any restrictions described in an applicable prospectus supplement, the existing indenture does not, and any other indenture and the debt securities that we may offer under this prospectus will not, contain any covenants or other provisions designed to protect holders of the debt securities if we participate in a highly leveraged transaction. In addition, the existing indenture does not, and any other indenture and the debt securities that we may offer under this prospectus will not, contain provisions that give holders of debt securities the right to require us to repurchase their debt securities if our credit ratings decline due to a takeover, recapitalization or similar restructuring or otherwise.

You should look in the applicable prospectus supplement for the following terms of the debt securities being offered:

- the title of the debt securities;
- if other than U.S. currency, the currency in which the debt securities may be purchased and the currency in which principal, premium, if any, and interest will be paid;
- the total principal amount of the debt securities;
- the price at which the debt securities will be issued;
- the date or dates on which the debt securities will mature and the right, if any, to extend the maturity date or dates;
- the annual rate or rates, if any, at which the debt securities will bear interest, including the method of calculating interest if a floating rate is used;
- the date or dates from which the interest will accrue, the interest payment dates on which the interest will be payable
- or the manner of determination of the interest payment dates and the record dates for the determination of holders to whom interest is payable;
- the place or places where principal, premium, if any, and interest will be payable;
- any redemption, repayment or sinking fund provision;
- the application, if any, of defeasance provisions to the debt securities;

if other than the entire principal amount, the portion of the debt securities that would be payable upon acceleration of the maturity of the debt securities;

- any obligation we may have to redeem, purchase or repay the debt securities at the option of a holder upon the happening of any event and the terms and conditions of redemption, repurchase or repayment;
- the form of debt securities, including whether we will issue the debt securities in individual certificates to each holder or in the form of temporary or permanent global securities held by a depositary on behalf of holders;
- if the amount of payments of principal, premium, if any, or interest on the debt securities may be determined by reference to an index, the manner in which that amount will be determined;
- any additional covenants applicable to the debt securities;
- any additional events of default applicable to the debt securities;
- the terms of subordination, if applicable;
- the terms of conversion, if applicable;
- any material provisions described in this prospectus that do not apply to the debt securities; and
- any other material terms of the debt securities, including any additions, deletions or other changes to the terms described in this prospectus, and any terms which may be required by or advisable under applicable laws or regulations.

Debt securities bearing no interest or interest at a rate that is below the prevailing market rate may be sold at a discount below their stated principal amount. Special federal income tax and other special considerations applicable to any discounted debt securities, or to debt securities issued at face value which are treated as having been issued at a discount for federal income tax purposes, will be described in the applicable prospectus supplement.

In addition to the debt securities that we may offer pursuant to this prospectus, we may issue other debt securities in public or private offerings from time to time. These other debt securities may be issued under documentation that is not described in this prospectus, and those debt securities may contain provisions materially different from the provisions applicable to one or more issues of debt securities offered pursuant to this prospectus.

Restrictive Covenants

The existing indenture contains, and any other indenture will contain, certain covenants for the benefit only of holders of the debt securities governed by the applicable indenture. The covenants summarized below will apply to each series of debt securities issued pursuant to any of the indentures as long as any of those debt securities are outstanding, unless waived, amended or the applicable prospectus supplement states otherwise.

Payment. We will pay the principal of and premium, if any, and interest on the debt securities at the place and time described in the debt securities. Unless otherwise provided in the applicable prospectus

supplement, we will pay interest on any debt security to the person in whose name that security is registered at the close of business on the regular record date for that interest payment.

Subject to the requirements of any applicable abandoned property laws, any money deposited with the trustee or any paying agent for the payment of principal of or any premium, if any, or interest on any debt security that remains unclaimed for two years after that amount has become due and payable will be paid to us at our request. After this occurs, the holder of that debt security must look only to us for payment of that amount and not to the trustee or paying agent.

Merger and Consolidation. We will not merge or consolidate with any other entity or sell or convey all or substantially all of our assets to any person, firm, corporation or other entity, except that we may merge or consolidate with, or sell or convey all or substantially all of our assets to, any other entity if:

we are the continuing entity or the successor entity (if other than us) is organized and existing under the laws of the United States of America, a State thereof or the District of Columbia and the successor entity expressly assumes payment of the principal of and interest on all the debt securities, and the performance and observance of all of the covenants and conditions of the applicable indenture to be performed by us; and there is no default under the applicable indenture.

Upon such a succession, we will be relieved from any further obligations under the applicable indenture. For purposes of this subsection, “substantially all of our assets” means, at any date, a portion of the non-current assets reflected in our consolidated balance sheet as of the end of the most recent quarterly period that represents at least 66 2/3% of the total reported value of such assets.

Waiver of Certain Covenants. Unless otherwise provided in an applicable prospectus supplement, we may, with respect to the debt securities of any series, omit to comply with any covenant provided in the terms of those debt securities if, before the time for such compliance, holders of at least a majority in principal amount of the outstanding debt securities of that series waive such compliance in that instance or generally.

Events of Default

You will have special rights if an Event of Default occurs and is not cured, as described later in this subsection. Unless described otherwise in an applicable prospectus supplement, the term “Event of Default” means any of the following with respect to an issue of debt securities offered under this prospectus:

- we do not pay interest on an issue of debt securities within 30 days of the due date;
- we do not pay the principal of or premium, if any, on an issue of debt securities on the applicable due date;
- we do not pay any sinking fund installment on an issue of debt securities within 30 days of the due date;

we remain in breach of any other covenant or warranty in the debt securities of such series or in the applicable indenture for 90 days after we receive a notice of default stating that we are in breach, as provided in the applicable indenture;

• certain events of bankruptcy, insolvency or reorganization occur; or
• any other Event of Default described in the applicable prospectus supplement occurs.

Remedies If an Event of Default Occurs. Unless provided otherwise in an applicable prospectus supplement, if an Event of Default has occurred and continues with respect to an issue of debt securities, the trustee or the holders of not less than 25% in principal amount of the debt securities of the affected series may declare the entire principal amount of all of the debt securities of the affected series to be due and immediately payable. This is called a “declaration of acceleration of maturity.” Under some circumstances, a declaration of acceleration of maturity may be canceled by the holders of at least a majority in principal amount of the debt securities of that series.

The trustee under the existing indenture generally is not, and the trustee under any other indenture generally will not be, required to take any action under that indenture at the request of any holders unless one or more of the holders has provided to the trustee security or indemnity reasonably satisfactory to it.

If reasonable protection from expenses and liabilities is provided, the holders of a majority in principal amount of the outstanding debt securities of the relevant series may direct the time, method and place of conducting any lawsuit or other formal legal action seeking any remedy available to the trustee and to waive certain past defaults regarding the relevant series. The trustee may refuse to follow those directions in some circumstances.

If an Event of Default occurs and is continuing regarding a series of debt securities, the applicable trustee may use any sums that it holds under the relevant indenture for its own reasonable compensation and expenses incurred prior to paying the holders of debt securities of that series.

Before any holder of any series of debt securities may institute an action for any remedy, except payment on such holder’s debt security when due, the holders of not less than 25% in principal amount of the debt securities of that series outstanding must request the trustee to take action. Holders must also offer and give the trustee satisfactory security and indemnity against liabilities incurred by the trustee for taking such action.

“Street Name” and other indirect holders should consult their banks or brokers for information on how to give notice or direction to or make a request of the applicable trustee and to make or cancel a declaration of acceleration.

We will furnish every year to the trustee under each indenture a written statement of certain of our officers certifying that, to their knowledge, we are in compliance with that indenture and the debt securities offered pursuant to that indenture, or else specifying any default.

No Event of Default regarding one series of debt securities issued under an indenture is necessarily an Event of Default regarding any other series of debt securities issued under that indenture or otherwise.

Satisfaction and Discharge; Defeasance and Covenant Defeasance

The following discussion of satisfaction and discharge, defeasance and covenant defeasance will be applicable to a series of debt securities only if we choose to have them apply to that series. If we do so choose, we will state that in the applicable prospectus supplement.

Satisfaction and Discharge. Each indenture will be satisfied and discharged if:

• we deliver to the trustee all debt securities then outstanding under that indenture for cancellation; or
all debt securities under that indenture not delivered to the trustee for cancellation have become due and payable, are to become due and payable within one year or are to be called for redemption within one year and we deposit an amount sufficient to pay the principal, premium, if any, and interest to the date of maturity, redemption or deposit (in the case of debt securities that have become due and payable), as the case may be, provided that in any case we have paid all other sums payable under that indenture.

Defeasance and Covenant Defeasance. The existing indenture provides, and any other indenture will provide, if such provision is made applicable to the debt securities of a series issued under that indenture, that:

• we may elect either:

to defease and be discharged from any and all obligations with respect to any debt security of such series (except for the obligations to register the transfer or exchange of such debt security, to replace temporary or mutilated, destroyed, lost or stolen debt securities, to maintain an office or agency in respect of the debt securities and to hold moneys for payment in trust) (“defeasance”); or

to be released from our obligations with respect to the restrictions described above under “– Restrictive Covenants,” together with additional covenants that may be included for a particular series; and

the Events of Default described in the third, fourth and sixth bullets under “– Events of Default,” shall not be Events of Default under that indenture with respect to such series (“covenant defeasance”), upon the deposit with the trustee (or other qualifying trustee), in trust for such purpose, of money or certain U.S. government obligations which through the payment of principal and interest in accordance with their terms will provide money, in an amount sufficient to pay the principal of (and premium, if any) and interest on such debt security, on the scheduled due dates.

In the case of defeasance, the holders of such debt securities are entitled to receive payments in respect of such debt securities solely from such trust. Such a trust may only be established if, among other things, we have delivered to the trustee an opinion of counsel (as specified in the applicable indenture) to the effect that the holders of the debt securities affected thereby will not recognize income, gain or loss for federal income tax purposes as a result of such defeasance or covenant defeasance and will be subject to federal income tax on the same amounts, in the same manner and at the same times as would have been the case if such defeasance or covenant defeasance had not occurred. Such opinion of counsel, in the case of defeasance described above, must refer to and be based upon a ruling of the

Internal Revenue Service or a change in applicable federal income tax law occurring after the date of the applicable indenture.

Modification and Waiver

The existing indenture contains, and any other indenture will contain, provisions permitting us and the trustee to modify that indenture or enter into or modify any supplemental indenture without the consent of the holders of the debt securities in regard to matters as will not adversely affect the interests of the holders of the debt securities, including, without limitation, the following:

- to evidence the succession of another corporation to us;
- to add to our covenants further covenants for the benefit or protection of the holders of any or all series of debt securities or to surrender any right or power conferred upon us by that indenture;
- to add any additional events of default with respect to all or any series of debt securities issued under that indenture;
- to add to or change any of the provisions of that indenture to facilitate the issuance of debt securities in bearer form with or without coupons, or to permit or facilitate the issuance of debt securities in uncertificated form;
- to add to, change or eliminate any of the provisions of that indenture in respect of one or more series of debt securities thereunder, under certain conditions designed to protect the rights of any existing holder of those debt securities;
- to secure all or any series of debt securities issued under that indenture;
- to establish the forms or terms of the debt securities of any series issued under that indenture;
- to evidence the appointment of a successor trustee and to add to or change provisions of that indenture necessary to provide for or facilitate the administration of the trusts under that indenture by more than one trustee; or
- to cure any ambiguity, to correct or supplement any provision of that indenture which may be defective or inconsistent with another provision of that indenture or to make other amendments that do not adversely affect the interests of the holders of any series of debt securities in any material respect.

We and the trustee under each indenture may otherwise modify that indenture or any supplemental indenture relating to that indenture with the consent of the holders of not less than a majority in aggregate principal amount of each series of debt securities affected thereby at the time outstanding, except that no such modifications shall, without the consent of the holder of each debt security affected thereby:

change the fixed maturity of any debt securities or any installment of interest or principal on any debt securities, or reduce the principal amount thereof or reduce the rate of interest or premium payable upon redemption, or reduce the amount of principal of an original issue discount debt security or any other debt security that would be due and payable upon a declaration of acceleration of the maturity thereof, or change the currency in which the debt securities are

payable or impair the right to institute suit for the enforcement of any payment after the stated maturity thereof or the redemption date, if applicable, or adversely affect any right of the holder of any debt security to require us to repurchase that security;

• reduce the percentage of debt securities of any series, the consent of the holders of which is required for any waiver or supplemental indenture;

• modify the provisions of that indenture relating to the waiver of past defaults or the waiver of certain covenants

• or the provisions described in this section, except to increase any percentage set forth in those provisions or to

• provide that other provisions of that indenture may not be modified without the consent of the holder of each debt security affected thereby;

• change any obligation of ours to maintain an office or agency;

• change any obligation of ours to pay additional amounts;

• adversely affect the right of repayment or repurchase at the option of the holder; or

• reduce or postpone any sinking fund or similar provision.

With respect to any vote of holders of a series of debt securities, we will generally be entitled to set any day as a record date for the purpose of determining the holders of outstanding debt securities that are entitled to vote or take other action under the applicable indenture.

“Street Name” and other indirect holders should consult their banks or brokers for information on how approval may be granted or denied if we seek to change the indenture or debt securities or request a waiver.

Subordinated Debt Securities

Although the existing senior indenture and the forms of senior indenture and subordinated indenture filed as exhibits to the registration statement of which this prospectus is a part are generally similar and many of the provisions discussed above pertain to both senior and subordinated debt securities, there are many substantive differences between the senior debt securities and subordinated debt securities that we may offer pursuant to this prospectus. This section discusses some of those differences.

Subordination. Subordinated debt securities will be subordinate in right of payment to all senior indebtedness. “Senior indebtedness” is defined to mean, with respect to us, the principal, premium, if any, and interest, fees, charges, expenses, reimbursement obligations, guarantees and other amounts owing with respect to all of our indebtedness (including indebtedness of others guaranteed by us), whether outstanding on the date of the applicable subordinated indenture or the date debt securities of any series are issued under that indenture or thereafter created, incurred or assumed, unless in any case in the instrument creating or evidencing any such indebtedness or obligation or pursuant to which the same is outstanding it is provided that such indebtedness or obligation is not superior in right of payment to the subordinated debt securities or it is provided that such obligation is subordinated to senior indebtedness to substantially the same extent as the subordinated debt securities are subordinated to senior indebtedness.

Terms of Subordinated Debt Securities May Contain Conversion or Exchange Provisions. The applicable prospectus supplement for a particular series of subordinated debt securities will describe the

specific terms discussed above that apply to the subordinated debt securities being offered thereby as well as any applicable conversion or exchange provisions.

Modification of an Indenture Relating to Subordinated Debt Securities. Each subordinated indenture may be modified by us and the trustee without the consent of the holders of the subordinated debt securities for one or more of the purposes discussed above under “ – Modification and Waiver.” We and the trustee may also modify each subordinated indenture to make provision with respect to any conversion or exchange rights for a given issue of subordinated debt securities.

“Street Name” and Other Indirect Holders

Investors who hold securities in accounts at banks or brokers generally will not be recognized by us as legal holders of debt securities. This is called holding in “Street Name.” Instead, we would recognize only the bank or broker, or the financial institution that the bank or broker uses to hold its securities. These intermediary banks, brokers and other financial institutions pass along principal, interest and other payments on the debt securities, either because they agree to do so in their customer agreements or because they are legally required to. If you hold debt securities in “Street Name,” you should check with your own institution to find out:

• how it handles payments and notices;

• whether it imposes fees or charges;

• how it would handle voting, if applicable;

• whether and how you can instruct it to send you debt securities registered in your own name so you can be a direct holder, as described below; and

• if applicable, how it would pursue rights under your debt securities if there were a default or other event triggering the need for holders to act to protect their interests.

Direct Holders

Our obligations, as well as the obligations of each trustee under the indentures and those of any third parties employed by us or the trustee under any of the indentures, run or will run, as the case may be, only to persons who are registered as holders of debt securities issued under the applicable indenture. As noted above, we do not have obligations to you if you hold in “Street Name” or other indirect means, either because you choose to hold debt securities in that manner or because the debt securities are issued in the form of global securities, as described below. For example, once we make payment to the registered holder, we have no further responsibility for the payment, even if that holder is legally required to pass the payment along to you as a “Street Name” customer but does not do so.

Global Securities

What is a Global Security? A global security is a special type of indirectly held debt security as described above under “ – ‘Street Name’ and Other Indirect Holders.” If we choose to issue debt securities in the form of global securities, the ultimate beneficial owners can only hold the debt securities in “Street Name.” We would do this by requiring that the global security be registered in the name of a financial institution we select and by requiring that the debt securities included in the global security not be transferred to the name of any other direct holder unless the special circumstances described below

occur. The financial institution that acts as the sole direct holder of the global security is called the “depository.” Any person wishing to own a debt security issued in the form of a global security must do so indirectly by virtue of an account with a broker, bank or other financial institution that in turn has an account with the depository. The applicable prospectus supplement will indicate whether a series of debt securities will be issued only in the form of global securities and, if so, will describe the specific terms of the arrangement with the depository.

Special Investor Considerations for Global Securities. As an indirect holder, an investor’s rights relating to a global security will be governed by the account rules of the investor’s financial institution and of the depository, as well as general laws relating to securities transfers. We do not recognize this type of investor as a holder of debt securities and instead deal only with the depository that holds the global security.

An investor should be aware that if a series of debt securities is issued only in the form of global securities:

- the investor cannot have debt securities of that series registered in his or her own name;
- the investor cannot receive physical certificates for his or her interest in the debt securities of that series;
- the investor will be a “Street Name” holder and must look to his or her own bank or broker for payments on the debt securities of that series and protection of his or her legal rights relating to the debt securities of that series, as described under “– ‘Street Name’ and Other Indirect Holders”;
- the investor may not be able to sell interests in the debt securities of that series to some insurance companies and other institutions that are required by law to own their securities in the form of physical certificates; and
- the depository’s policies will govern payments, transfers, exchange and other matters relating to the investor’s interest in the global security. Neither we nor the applicable trustee have or will have any responsibility for any aspect of the depository’s actions or for its records of ownership interests in the global security. Also, neither we nor the applicable trustee do or will supervise the depository in any way.

Special Situations When The Global Security Will be Terminated. In limited special situations, a global security will terminate, and interests in it will be exchanged for physical certificates representing debt securities. After that exchange, the choice of whether to hold debt securities directly or in “Street Name” will be up to the investor. Investors must consult their own bank or brokers to find out how to have their interests in debt securities transferred to their own name so that they will be direct holders. The rights of “Street Name” investors and direct holders in debt securities have been previously described in subsections entitled “– ‘Street Name’ and Other Indirect Holders” and “– Direct Holders.” The special situations for termination of a global security are:

- when the depository notifies us that it is unwilling, unable or no longer qualified to continue as depository, and we do not appoint a successor depository;

when an Event of Default on the applicable series of debt securities has occurred and has not been cured; and
at any time if we decide to terminate a global security.

The applicable prospectus supplement may also list additional situations for terminating a global security that would apply only to the particular series of debt securities covered by the prospectus supplement. When a global security terminates, only the depositary is responsible for deciding the names of the institutions that will be the initial direct holders.

Form, Exchange, Registration and Transfer

Unless we inform you otherwise in an applicable prospectus supplement, we will issue the debt securities offered pursuant to this prospectus in registered form, without interest coupons, and only in denominations of \$2,000 and integral multiples of \$1,000 in excess thereof. We will not charge a service charge for any registration of transfer or exchange of the debt securities offered pursuant to this prospectus. We may, however, require the payment of any tax or other governmental charge payable for that registration.

Debt securities of any series will be exchangeable for other debt securities of the same series, in the same total principal amount and on the same terms but in different authorized denominations, in accordance with the terms of the applicable indenture. Holders may present debt securities for registration of transfer at the office of the security registrar or any transfer agent we designate. The security registrar or transfer agent will effect the transfer or exchange when it is satisfied with the documents of title and identity of the person making the request.

We will appoint the trustee under the applicable indenture as security registrar for the debt securities issued under that indenture. If a prospectus supplement refers to any transfer agents initially designated by us, we may at any time rescind that designation or approve a change in the location through which any transfer agent acts. We will be required to maintain an office or agency for transfers and exchanges in each place of payment with respect to debt securities we may offer under any of the indentures. We may at any time designate additional transfer agents for any series of debt securities.

In the case of any redemption of debt securities offered under this prospectus, neither the security registrar nor the transfer agent will be required to register the transfer or exchange of any debt security during a period beginning 15 business days prior to the mailing of the relevant notice of redemption and ending on the close of business on the day of mailing of the notice, except the unredeemed portion of any debt security being redeemed in part.

Payment and Paying Agents

Unless we inform you otherwise in the applicable prospectus supplement:

payments on a series of debt securities will be made in U.S. dollars by check mailed to the holder's registered address or, with respect to global securities, by wire transfer;

we will make interest payments to the person in whose name the debt security is registered at the close of business on the record date for the interest payment; and

the trustee under the applicable indenture will be designated as our paying agent for payments on debt securities issued under that indenture. We may at any time designate additional paying agents or rescind the designation of any paying agent or approve a change in the office through which any paying agent acts.

Subject to the requirements of any applicable abandoned property laws, the trustee and paying agent will pay to us upon written request any money held by them for payments on the debt securities under the applicable indenture that remain unclaimed for two years after the date when the payment was due. After payment to us, holders entitled to the money must look to us for payment. In that case, all liability of the trustee or paying agent with respect to that money will cease.

DESCRIPTION OF CAPITAL SECURITIES

Common Stock

We may issue, either separately or together with other securities, including as a part of units, shares of our common stock. Shares of common stock issued as part of units may be attached to or separate from any other securities part of those units. Under our Restated Articles of Incorporation, we are authorized to issue up to 1,200,000,000 shares of our common stock, par value \$1.66 ²/₃ per share. As of June 30, 2016, we had 266,282,301 shares of common stock issued and had reserved 13,315,241 additional shares of common stock for issuance under our stock compensation plans.

The applicable prospectus supplement relating to an offering of common stock or other securities convertible or exchangeable for, or exercisable into, common stock, or the settlement of which may result in the issuance of common stock, will describe the relevant terms, including the number of shares offered, any initial offering price and market price and dividend information, as well as, if applicable, information on other related securities.

The following summary is not complete and is not intended to give full effect to provisions of statutory or common law. You should refer to the applicable provisions of the following:

- the Pennsylvania Business Corporation Law, as it may be amended from time to time;
- our Restated Articles of Incorporation, as they may be amended or restated from time to time (“Restated Articles of Incorporation”); and
- our Amended and Restated Bylaws, as they may be amended or restated from time to time (“Bylaws”).

Dividends. The holders of our common stock are entitled to receive dividends when, as and if declared by our Board of Directors, out of funds legally available for their payment subject to the rights of holders of our preferred stock.

Voting Rights. The holders of our common stock are entitled to one vote per share on all matters submitted to a vote of shareholders. There are no cumulative voting rights associated with our common stock.

Rights Upon Liquidation. In the event of our voluntary or involuntary liquidation, dissolution or winding up, the holders of common stock will be entitled to share equally in any of our assets available

for distribution after the payment in full of all debts and distributions and after the holders of all series of our outstanding preferred stock have received their liquidation preferences in full.

Miscellaneous. The outstanding shares of common stock are fully paid and nonassessable. The holders of common stock are not entitled to preemptive or redemption rights. There are no sinking fund provisions applicable to the common stock. Shares of common stock are not convertible into shares of any other class of capital stock.

Computershare Trust Company, N.A. is the transfer agent and registrar for the common stock.

Stock Exchange Listing. Our common stock is listed on the New York Stock Exchange and trades under the symbol "PPG."

Preferred Stock

We may elect to issue shares of our preferred stock from time to time, as described in the applicable prospectus supplement relating to any offering of preferred stock pursuant to this prospectus. We may issue shares of preferred stock separately or as a part of units, and any such shares issued as part of units may be attached to or separate from any other securities part of those units. Shares of our preferred stock may have dividend, redemption, voting and liquidation rights taking priority over our common stock, and shares of our preferred stock may be convertible into our common stock.

Our Board of Directors is authorized, subject to any limitations prescribed by law, to provide for the issuance of shares of preferred stock in one or more series. In addition, our Board of Directors is authorized to establish from time to time the number of shares to be included in each series of preferred stock and to fix the designation, powers (including but not limited to voting powers, if any), preferences and rights of the shares of each series of preferred stock and any qualifications, limitations or restrictions of each series of preferred stock. The number of authorized shares of preferred stock may be increased or decreased (but not below the number of shares thereof then outstanding) by the affirmative vote of the holders of a majority of the outstanding common stock, without a vote of the holders of the preferred stock, or of any series of preferred stock, unless a vote of any such holders is required pursuant to the terms of any preferred stock.

Our Restated Articles of Incorporation authorize our Board of Directors, without further shareholder action, to provide for the issuance of up to 10,000,000 shares of preferred stock, in one or more series. As of the date of this prospectus, no shares of preferred stock have been issued.

The particular terms of any series of preferred stock being offered by us under this prospectus will be described in the prospectus supplement relating to that series of preferred stock. Those terms may include:

- the title and liquidation preference per share of the preferred stock and the number of shares offered;
- the purchase price of the preferred stock;
- the dividend rate (or method of calculation), the dates on which dividends will be paid and the date from which dividends will begin to accumulate;
- any redemption or sinking fund provisions of the preferred stock;

- any conversion provisions of the preferred stock;
- the voting rights, if any, of the preferred stock; and
- any additional dividend, liquidation, redemption, sinking fund and other rights, preferences, privileges, limitations and restrictions of the preferred stock.

If the terms of any series of preferred stock being offered differ materially from the terms set forth in this prospectus, the definitive terms will be disclosed in the applicable prospectus supplement. The summary in this prospectus is not complete. You should refer to the applicable Certificate of Amendment to our Restated Articles of Incorporation or certificate of designations, as the case may be, establishing a particular series of preferred stock, in either case which will be filed with the Secretary of the Commonwealth of the Commonwealth of Pennsylvania and the SEC in connection with an offering of preferred stock.

The preferred stock will, when issued, be fully paid and nonassessable.

Dividend Rights. The preferred stock will be preferred over our common stock as to payment of dividends. Before any dividends or distributions (other than dividends or distributions payable in common stock) on our common stock will be declared and set apart for payment or paid, the holders of shares of each series of preferred stock will be entitled to receive dividends when, as and if declared by our Board of Directors. We will pay those dividends either in cash, shares of common stock or preferred stock or otherwise, at the rate and on the date or dates set forth in the applicable prospectus supplement. With respect to each series of preferred stock, the dividends on each share of the series will be cumulative from the date of issue of the share unless another date is set forth in the applicable prospectus supplement relating to the series. Accruals of dividends will not bear interest.

Rights Upon Liquidation. The preferred stock will be preferred over our common stock as to assets so that the holders of each series of preferred stock will be entitled to be paid, upon our voluntary or involuntary liquidation, dissolution or winding up and before any distribution is made to the holders of common stock, the amount set forth in the applicable prospectus supplement. However, in this case the holders of preferred stock will not be entitled to any other or further payment. If upon any liquidation, dissolution or winding up our net assets are insufficient to permit the payment in full of the respective amounts to which the holders of all outstanding preferred stock are entitled, our entire remaining net assets will be distributed among the holders of each series of preferred stock in amounts proportional to the full amounts to which the holders of each series are entitled.

Redemption. All shares of any series of preferred stock will be redeemable to the extent set forth in the prospectus supplement relating to the series. All shares of any series of preferred stock will be convertible into shares of our common stock or into shares of any other series of our preferred stock to the extent set forth in the applicable prospectus supplement relating to the series.

Voting Rights. Except as indicated in the applicable prospectus supplement relating to a series, the holders of preferred stock will be entitled to one vote for each share of preferred stock held by them on all matters properly presented to shareholders. The holders of common stock and the holders of all series of preferred stock will vote together as one class, except as indicated otherwise in the applicable prospectus supplement.

Additional Series of Preferred Stock. In the event of a proposed merger or tender offer, proxy contest or other attempt to gain control of us and not approved by our Board of Directors, it would be

possible for our Board of Directors to authorize the issuance of one or more series of preferred stock with voting rights or other rights and preferences which would impede the success of the proposed merger, tender offer, proxy contest or other attempt to gain control of us. This authority may be limited by applicable law, our Restated Articles of Incorporation, as they may amended or restated from time to time, and the applicable rules of the stock exchange upon which our common stock is listed. The consent of our shareholders would not be required for any such issuance of preferred stock.

Special Charter Provisions. Our Restated Articles of Incorporation contain various provisions that may discourage or delay attempts to gain control of PPG. Our Restated Articles of Incorporation provide that:

• our Board of Directors is classified into three classes, with one class elected each year to serve a three-year term; in addition to the requirements of law and the other provisions of our Restated Articles of Incorporation, the affirmative vote of at least 80% of the outstanding shares of our common stock is required for the adoption or authorization of any of the following events:

- certain mergers or consolidations of PPG or any subsidiary with or into other entities;
- certain sales, leases, exchanges, mortgages, pledges, transfers or other dispositions (in one transaction or a series of transactions) of any assets of PPG or any subsidiary having an aggregate fair market value of \$10,000,000 or more;
- certain issuances or sales by PPG or any subsidiary (in one transaction or a series of transactions) of any securities of PPG or any subsidiary having an aggregate fair market value of \$10,000,000 or more;
- the adoption of certain plans or proposals for the liquidation or dissolution of PPG;
- certain reclassifications of securities (including any reverse stock splits) or recapitalizations of PPG or certain transactions which have the effect, directly or indirectly, of increasing the proportionate share of the outstanding shares of any class of equity securities or securities convertible into equity securities of PPG or any subsidiary which are directly or indirectly owned by affiliates of PPG;
- the removal of our directors from office with or without cause;
- the amendment or repeal by shareholders of certain provisions of our Restated Articles of Incorporation; except as otherwise provided by law, our Restated Articles of Incorporation or our Bylaws, our Bylaws may be amended or repealed only by action of the Board of Directors at any regular or special meeting, subject to the power of the shareholders to change such action;
- special meetings of the shareholders may be called at any time by a majority of our Board of Directors or by the Chairman of our Board of Directors and may not be called by any other person or persons or in any other manner; and

shareholders must provide advance notice if they wish to submit a proposal or nominate candidates for director at our annual meeting of shareholders.

In addition, Chapter 25 of the Pennsylvania Business Corporation Law contains provisions that limit our ability to enter into certain business combination transactions with a shareholder owning 20% or more of our common stock.

DESCRIPTION OF OTHER SECURITIES

We will set forth in the applicable prospectus supplement a description of any warrants, depositary shares, purchase contracts or units that may be offered pursuant to this prospectus.

PLAN OF DISTRIBUTION

We may offer the offered securities in one or more of the following ways, or any other way set forth in an applicable prospectus supplement from time to time:

- or through underwriting syndicates represented by managing underwriters;
- through one or more underwriters without a syndicate for them to offer and sell to the public;
- through dealers or agents; or
- to investors directly in negotiated sales or in competitively bid transactions.

The prospectus supplement for each series of securities we sell will describe the offering, including:

- the name or names of any underwriters;
- the purchase price and the proceeds to us from that sale;
- any underwriting discounts and other items constituting underwriters' compensation;
- any commissions paid to agents;
- the initial public offering price and any discounts or concessions allowed or reallowed or paid to dealers; and
- any securities exchanges on which the securities may be listed.

Underwriters

If underwriters are used in a sale, we will execute an underwriting agreement with them regarding those securities. Unless otherwise described in the applicable prospectus supplement, the obligations of the underwriters to purchase these securities will be subject to conditions, and the underwriters must purchase all of these securities if any are purchased.

The securities subject to the underwriting agreement may be acquired by the underwriters for their own account and may be resold by them from time to time in one or more transactions, including

negotiated transactions, at a fixed offering price or at varying prices determined at the time of sale. Underwriters may be deemed to have received compensation from us in the form of underwriting discounts or commissions and may also receive commissions from the purchasers of these securities for whom they may act as agent. Underwriters may sell these securities to or through dealers. These dealers may receive compensation in the form of discounts, concessions or commissions from the underwriters and commissions from the purchasers for whom they may act as agent. Any initial offering price and any discounts or concessions allowed or re-allowed or paid to dealers may be changed from time to time.

We may authorize underwriters to solicit offers by institutions to purchase the securities subject to the underwriting agreement from us, at the public offering price stated in the applicable prospectus supplement under delayed delivery contracts providing for payment and delivery on a specified date in the future. If we sell securities under these delayed delivery contracts, the applicable prospectus supplement will state that this is the case and will describe the conditions to which these delayed delivery contracts will be subject and the commissions payable for that solicitation.

In connection with underwritten offerings of the securities, the underwriters may engage in over-allotment, stabilizing transactions, covering transactions and penalty bids in accordance with Regulation M under the Exchange Act, as follows:

- Over-allotment transactions involve sales in excess of the offering size, which create a short position for the underwriters.

- Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum.

- Covering transactions involve purchases of the securities in the open market after the distribution has been completed in order to cover short positions.

- Penalty bids permit the underwriters to reclaim a selling concession from a broker/dealer when the securities originally sold by that broker/dealer are repurchased in a covering transaction to cover short positions.

These stabilizing transactions, covering transactions and penalty bids may cause the price of the securities to be higher than it otherwise would be in the absence of these transactions. If these transactions occur, they may be discontinued at any time.

Agents

We also may sell any of the securities through agents designated by us from time to time. We will name any agent involved in the offer or sale of these securities and will list commissions payable by us to these agents in the applicable prospectus supplement. These agents will be acting on a best efforts basis to solicit purchases for the period of their appointment, unless we state otherwise in the applicable prospectus supplement.

Direct Sales

We may sell any of the securities directly to purchasers. In this case, we will not engage underwriters or agents in the offer and sale of these securities.

In addition, debt securities described in this prospectus may be issued upon the exercise of warrants or the settlement of purchase contracts or units.

Indemnification

We may indemnify underwriters, dealers or agents who participate in the distribution of securities against certain liabilities, including liabilities under the Securities Act, and may agree to contribute to payments that these underwriters, dealers or agents may be required to make.

No Assurance of Liquidity

The securities we offer may be a new issue of securities with no established trading market. Any underwriters that purchase securities from us may make a market in these securities. The underwriters will not be obligated, however, to make a market and may discontinue market-making at any time without notice to holders of the securities. We cannot assure you that there will be liquidity in the trading market for any securities of any series.

LEGAL MATTERS

The validity of the issuance of the offered securities will be passed upon for us by K&L Gates LLP, Pittsburgh, Pennsylvania.

EXPERTS

The financial statements and management's assessment of the effectiveness of internal control over financial reporting (which is included in Management Report's on Internal Control over Financial Reporting) incorporated in this Prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2015 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

PART II
 INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The expenses in connection with the issuance and distribution of the securities being registered, other than underwriting compensation, are:

SEC registration fee	\$.*
Legal fees and expenses	**
Accounting fees and expenses	**
Trustee's fees and expenses	**
Printing and engraving fees	**
Miscellaneous	**
 Total	 \$.*

* In accordance with Rules 456(b) and 457(r), we are deferring payment of all of the registration fee required in connection with this registration statement.

The foregoing sets forth the general categories of expenses (other than underwriting discounts and commissions) that we anticipate we will incur in connection with the offering of securities under this Registration Statement.

** Information regarding estimated expenses of issuance and distribution of each identified class of securities being registered will be provided at the time information as to such class is included in a prospectus supplement in accordance with Rule 430B.

Item 15. Indemnification of Directors and Officers.

Sections 1741-1750 of the Pennsylvania Business Corporation Law provide for indemnification of PPG's directors and officers against certain liabilities under certain circumstances.

Article VI of our Bylaws provides that a director, officer or employee shall be found to be entitled to indemnification for expenses (including attorney's fees) and any liability (including judgments, fines or penalties and amounts paid in settlement) actually and in good faith paid or incurred by any such person in connection with any actual or threatened proceeding (including any derivative lawsuits) by reason of the fact that such person is or was serving as a director, officer or employee of PPG or, at the request of PPG, was serving another corporation, partnership, joint venture, trust, employee benefit plan or other entity, unless a referee finds the conduct engaged in to have been such that, if so found by a court, indemnification would be prohibited by Pennsylvania law. PPG is also required to indemnify any such person (1) where there has been a determination by a court as to the conduct of the person claiming indemnification such that indemnification would not be prohibited by Pennsylvania law and (2) where the person is otherwise entitled to indemnification by Pennsylvania law. Expenses with respect to a proceeding which are incurred in good faith are required to be advanced by PPG prior to final disposition of the proceeding, subject to any obligation to repay PPG which is imposed by law or by provision in the Restated Articles of Incorporation, Bylaws, an agreement or otherwise. Under Pennsylvania law, any such

advancement of expenses must be made subject to an undertaking to repay PPG in the event that it is determined ultimately that the person receiving the advancement is not entitled to indemnification. A written request for such advancement of expense must be made to PPG's Corporate Secretary.

The selection of the referee is to be made by the general counsel or, if the general counsel is the person claiming indemnification or is otherwise involved in the proceeding, by the senior officer who does not have such a relationship to the proceeding. The referee is defined to be an attorney with substantial expertise in corporate law, who is both independent of the parties and unbiased. The person claiming indemnification may object, within 10 days of the notice of selection of the referee, to the referee selected. If the parties cannot agree on the selection of a referee, or if PPG fails to propose a referee, within 45 days of the submission of the request for indemnification, the referee will be selected by the American Arbitration Association.

The determination of entitlement to indemnification is made by the referee; however, the referee is required to find the person entitled to indemnification unless the referee finds that the conduct of the person was such that if so found by a court, indemnification would be prohibited by Pennsylvania law. The determination of the referee is binding on PPG but not on the person claiming indemnification.

To the extent that a person is entitled to indemnification for only a portion of the expenses or liability resulting from a proceeding, PPG is required to indemnify the person for such portion.

The Bylaws authorize PPG to purchase and maintain insurance, to create a trust fund, to grant a security interest or to use other means (including, without limitation, establishing a letter of credit) to ensure the payment of indemnification.

PPG is specifically authorized to enter into agreements with any director, officer or employee, which agreements may grant rights in furtherance of, different from, or in addition to but not in limitation of, the rights to indemnification granted in the Bylaws, without further shareholder approval of the terms and conditions of, or the form of, such agreements to the extent permitted by Pennsylvania law. Without limitation of the foregoing, in such agreements PPG may agree (1) to maintain insurance against certain expenses and liabilities and (2) to contribute to expenses and liabilities incurred in accordance with the application of relevant equitable considerations to the relative benefits to, and the relevant fault of, PPG.

The Bylaws provide (1) that the rights granted therein are contract rights, (2) that the rights granted will cover acts and omissions occurring on or after January 27, 1987, and (3) that the rights granted will continue as to a person who has ceased to be a director, officer or employee, with respect to a proceeding which results from acts or failures to act while such person was a director, officer or employee.

Sections 1741-1750 and the Bylaws both also provide that the indemnification provided for therein shall not be deemed exclusive of any other rights to which those seeking indemnification may otherwise be entitled.

PPG also has policies of directors' and officers' liability insurance to indemnify its directors and officers against certain liabilities incurred in their capacities as such.

Item 16. Exhibits.

The following Exhibits are filed as part of this Registration Statement:

Exhibit Number	Description
* 1.1	Form of Underwriting Agreement.
* 1.2	Form of Distribution Agreement.
4.1	Indenture, dated as of March 18, 2008, incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K dated March 18, 2008.
4.2	Supplemental Indenture, dated as of March 18, 2008, incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K dated March 18, 2008.
4.3	Second Supplemental Indenture, dated as of November 12, 2010, incorporated by reference to Exhibit 4.3 to the Registrant's Current Report on Form 8-K dated November 12, 2010.
4.4	Third Supplemental Indenture, dated as of August 3, 2012, incorporated by reference to Exhibit 4.4 to the Registrant's Current Report on Form 8-K dated August 3, 2012.
4.5	Fourth Supplemental Indenture, dated as of November 12, 2014, incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K dated November 12, 2014.
4.6	Fifth Supplemental Indenture, dated as of March 13, 2015, incorporated by reference to Exhibit 4.3 to the Registrant's Current Report on Form 8-K dated March 13, 2015.
4.7	Form of Senior Debt Indenture, incorporated by reference to Exhibit 4.5 to the Registrant's Registration Statement on Form S-3 filed July 29, 2013.
4.8	Form of Subordinated Debt Indenture, incorporated by reference to Exhibit 4.6 to the Registrant's Registration Statement on Form S-3 filed July 29, 2013.
4.9	Form of Common Stock Certificate incorporated by reference to Exhibit E to the Registrant's Registration Statement on Form 10 filed June 29, 1935.
* 4.10	Form of Preferred Stock Certificate.
* 4.11	Form of Statement with respect to Shares of Preferred Stock.
4.12	Form of Senior Debt Security (included in Exhibits 4.1 and 4.7).
4.13	Form of Subordinated Debt Security (included in Exhibit 4.8).
+5.1	Opinion of K&L Gates LLP.

Computation of Ratio of Earnings to Fixed Charges incorporated by reference to Exhibit 12 to the Registrant's
12.1 Quarterly Report on Form 10-Q for its fiscal quarter ended June 30, 2016.

+23.1 Consent of PricewaterhouseCoopers LLP.

23.2 Consent of K&L Gates LLP (included as part of Exhibit 5.1).

+24.1 Powers of Attorney.

Form T-1 Statement of Eligibility of The Bank of New York Mellon Trust Company, N.A. with respect to the
+25.1 form of senior debt indenture.

+25.2 Form T-1 Statement of Eligibility of The Bank of New York Mellon Trust Company, N.A. with respect to the
form of subordinated debt indenture.

+25.3 Form T-1 Statement of Eligibility of The Bank of New York Mellon Trust Company, N.A. (formerly known as
The Bank of New York Trust Company, N.A.) with respect to the Indenture dated as of March 18, 2008.

* To be filed either by amendment to this Registration Statement or as an exhibit to a report filed under the Securities
Exchange Act of 1934, as amended, and incorporated herein by reference.

+Filed herewith.

Item 17. Undertakings.

The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this
registration statement:

(i) to include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii) to reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the
most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental
change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or
decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was
registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in
the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume
and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the
"Calculation of Registration Fee" table in the effective registration statement; and

(iii) to include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement; provided, however, that paragraphs (i), (ii) and (iii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:

(A) Each prospectus filed by a registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(B) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5) or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii) or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which the prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

(5) That, for the purpose of determining liability of a registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities, each undersigned registrant undertakes that in a primary offering of securities of an undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

- (i) Any preliminary prospectus or prospectus of an undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
 - (ii) Any free writing prospectus relating to the offering prepared by or on behalf of an undersigned Registrant or used or referred to by an undersigned registrant;
 - (iii) The portion of any other free writing prospectus relating to the offering containing material information about an undersigned registrant or its securities provided by or on behalf of an undersigned registrant; and
 - (iv) Any other communication that is an offer in the offering made by an undersigned registrant to the purchaser.
- (6) That, for purposes of determining any liability under the Securities Act of 1933, each filing of registrant's annual report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (7) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of each registrant pursuant to the foregoing provisions, or otherwise, each registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act of 1933 and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by a registrant of expenses incurred or paid by a director, officer or controlling person of a registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, that registrant will, unless in the opinion of its counsel the has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act of 1933 and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Pittsburgh, Commonwealth of Pennsylvania on July 29, 2016.

PPG INDUSTRIES, INC.

By: /s/ Frank S. Sklarsky
Name: Frank S. Sklarsky
Title: Executive Vice President and
Chief Financial Officer

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

SIGNATURE	TITLE	DATE
/s/ Michael H. McGarry Michael H. McGarry	Director, President and Chief Executive Officer (Principal Executive Officer)	July 29, 2016
/s/ Frank S. Sklarsky Frank S. Sklarsky (Principal Financial and Accounting Officer)	Executive Vice President and Chief Financial Officer	July 29, 2016
* Charles E. Bunch	Executive Chairman and Director	July 29, 2016
* Stephen F. Angel	Director	July 29, 2016
* James G. Berges	Director	July 29, 2016
* John V. Faraci	Director	July 29, 2016

* Director July 29, 2016
Hugh Grant

* Director July 29, 2016
Victoria F. Haynes

* Director July 29, 2016
Melanie L. Healey

* Director July 29, 2016
Michele J. Hooper

* Director July 29, 2016
Michael W. Lamach

* Director July 29, 2016
Martin H. Richenhagen

* By: /s/ Frank S. Sklarsky
Frank S. Sklarsky, Attorney-in-Fact

EXHIBIT INDEX

Exhibit Number	Description
* 1.1	Form of Underwriting Agreement.
* 1.2	Form of Distribution Agreement.
4.1	Indenture, dated as of March 18, 2008, incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K dated March 18, 2008.
4.2	Supplemental Indenture, dated as of March 18, 2008, incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K dated March 18, 2008.
4.3	Second Supplemental Indenture, dated as of November 12, 2010, incorporated by reference to Exhibit 4.3 to the Registrant's Current Report on Form 8-K dated November 12, 2010.
4.4	Third Supplemental Indenture, dated as of August 3, 2012, incorporated by reference to Exhibit 4.4 to the Registrant's Current Report on Form 8-K dated August 3, 2012.
4.5	Fourth Supplemental Indenture, dated as of November 12, 2014, incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K dated November 12, 2014.
4.6	Fifth Supplemental Indenture, dated as of March 13, 2015, incorporated by reference to Exhibit 4.3 to the Registrant's Current Report on Form 8-K dated March 13, 2015.
4.7	Form of Senior Debt Indenture, incorporated by reference to Exhibit 4.5 to the Registrant's Registration Statement on Form S-3 filed July 29, 2013.
4.8	Form of Subordinated Debt Indenture, incorporated by reference to Exhibit 4.6 to the Registrant's Registration Statement on Form S-3 filed July 29, 2013.
4.9	Form of Common Stock Certificate incorporated by reference to Exhibit E to the Registrant's Registration Statement on Form 10 filed June 29, 1935.
* 4.10	Form of Preferred Stock Certificate.
* 4.11	Form of Statement with respect to Shares of Preferred Stock.
4.12	Form of Senior Debt Security (included in Exhibits 4.1 and 4.7).
4.13	Form of Subordinated Debt Security (included in Exhibit 4.8).
+5.1	Opinion of K&L Gates LLP.

Computation of Ratio of Earnings to Fixed Charges incorporated by reference to Exhibit 12 to the Registrant's
12.1 Quarterly Report on Form 10-Q for its fiscal quarter ended June 30, 2016.

+23.1 Consent of PricewaterhouseCoopers LLP.

23.2 Consent of K&L Gates LLP (included as part of Exhibit 5.1).

+24.1 Powers of Attorney.

Form T-1 Statement of Eligibility of The Bank of New York Mellon Trust Company, N.A. with respect to the
+25.1 form of senior debt indenture.

+25.2 Form T-1 Statement of Eligibility of The Bank of New York Mellon Trust Company, N.A. with respect to the
form of subordinated debt indenture.

+25.3 Form T-1 Statement of Eligibility of The Bank of New York Mellon Trust Company, N.A. (formerly known as
The Bank of New York Trust Company, N.A.) with respect to the Indenture dated as of March 18, 2008.

* To be filed either by amendment to this Registration Statement or as an exhibit to a report filed under the Securities
* Exchange Act of 1934, as amended, and incorporated herein by reference.

+Filed herewith.