

2019 Proxy Statement

and Notice of Annual Meeting of Shareholders



NOTICE OF ANNUAL MEETING OF SHAREHOLDERS

WHEN	April 18, 2019 at 11:00 AM Eastern Time
WHERE	Fairmont Pittsburgh, Grand Ballroom 510 Market Street Pittsburgh, Pennsylvania 15222
WHAT	<ol style="list-style-type: none">1. To elect as directors the four named nominees to serve in a class whose term expires in 2022;2. To approve the appointment of Steven A. Davis and Catherine R. Smith as directors to serve in a class whose term expires in 2021;3. To vote on a nonbinding resolution to approve the compensation of the Company's named executive officers on an advisory basis;4. To vote on an amendment of the Company's Articles of Incorporation to provide for the annual election of directors;5. To vote on an amendment of the Company's Articles of Incorporation and Bylaws to replace the supermajority voting requirements;6. To ratify the appointment of PricewaterhouseCoopers LLP as the Company's independent registered public accounting firm for 2019; and7. To transact any other business that may properly come before the meeting.
RECORD DATE	February 22, 2019
ANNUAL MEETING	Admission to the Annual Meeting will be by Admission Card only. You must also present a photo ID for admission to the Meeting.

PLEASE VOTE

Please know that your vote is very important to us and we encourage you to vote promptly. Whether or not you expect to attend the Annual Meeting in person, please vote via the Internet or telephone, or by paper proxy card or vote instruction form, which you should complete, sign and return by mail, so that your shares may be voted.



Internet

Visit www.cesvote.com. You will need the 11-digit control number included in your proxy card, voter instruction form or notice.



Mobile App

You can scan this QR code to vote with your mobile phone. You will need the 11-digit control number included in your proxy card, voter instruction form or notice.



Phone

Call 1-888-693-8683. You will need the 11-digit control number included in your proxy card, voter instruction form or notice.



Mail

Send your completed and signed proxy card or voter instruction form to the address on your proxy card or voter instruction form.



In Person

See below regarding Attendance at the Meeting.

Daniel G. Fayock
Assistant General Counsel and Secretary

March 7, 2019



TABLE OF CONTENTS

	Page
Proposal 1: Election of Directors to Serve in a Class Whose Term Expires in 2022	5
Proposal 2: Approval of the Appointment of Steven A. Davis and Catherine R. Smith as Directors to Serve in a Class Whose Term Expires in 2021	13
Corporate Governance	15
Compensation of Directors	25
Compensation Discussion and Analysis	28
Compensation of Executive Officers	44
Proposal 3: Advisory Vote on Approval of the Compensation of the Named Executive Officers	59
Proposal 4: Proposal to Amend the Articles of Incorporation to Provide for the Annual Election of Directors	62
Proposal 5: Proposal to Amend the Articles of Incorporation and Bylaws to Replace the Supermajority Voting Requirements	64
Independent Registered Public Accounting Firm	66
Proposal 6: Ratification of Independent Registered Public Accounting Firm	67
Equity Compensation Plan Information	68
Beneficial Ownership	69
Section 16(a) Beneficial Ownership Reporting Compliance	71
General Matters	72
Other Information	76
Annex A—Reconciliation of Non-GAAP Financial Measures	A-1
Annex B—Proposed Amendment of the Articles of Incorporation to Declassify the Board of Directors	B-1
Annex C—Proposed Amendment of the Articles of Incorporation to Replace the Supermajority Voting Requirements	C-1
Annex D—Proposed Amendment of the Bylaws to Replace the Supermajority Voting Requirements	D-1



PROXY SUMMARY

This summary highlights information contained in this Proxy Statement. It does not contain all of the information you should consider. You should read the entire Proxy Statement carefully before voting. Please see the General Matters section beginning on page 72 for important information about proxy materials, voting, the Annual Meeting, Company documents and communications.

TIME AND PLACE OF THE ANNUAL MEETING

Thursday, April 18, 2019

11:00 AM Eastern Time

Fairmont Pittsburgh, Grand Ballroom
510 Market Street
Pittsburgh, Pennsylvania 15222

MEETING AGENDA

Voting Matters	Board Recommendations		Page
Election of Four Director Nominees	FOR	✓	5
Approval of the appointment of Steven A. Davis and Catherine R. Smith as directors to serve in a class whose term expires in 2021;	FOR	✓	13
Advisory Vote on Approval of the Compensation of the Named Executive Officers	FOR	✓	59
Vote on an Amendment of the Company's Articles of Incorporation to Provide for the Annual Election of Directors	FOR	✓	62
Vote on an Amendment of the Company's Articles of Incorporation and Bylaws to Replace the Supermajority Voting Requirements	FOR	✓	64
Ratification of PricewaterhouseCoopers LLP as the Company's Independent Registered Public Accounting Firm for 2019	FOR	✓	67

DIRECTOR NOMINEES

Nominees to Serve in a Class Whose Term Expires in 2022

	PRINCIPAL OCCUPATION	AGE DIRECTOR SINCE	COMMITTEES	OTHER PUBLIC COMPANY BOARDS
James G. Berges	Partner, Clayton, Dubilier & Rice, LLC	71 Director since 2000	Officers-Directors Compensation Nominating and Governance	None
John V. Faraci	Retired Chairman and CEO of International Paper Company	69 Director since 2012	Technology and Environment Nominating and Governance	ConocoPhillips United Technologies Corporation
Gary R. Heminger	Chairman and CEO of Marathon Petroleum Corporation	65 Director since 2017	Audit Nominating and Governance	Marathon Petroleum Corporation Fifth Third Bancorp MPLX GP LLC Tesoro Logistics GP, LLC
Michael H. McGarry	Chairman and CEO of PPG Industries, Inc.	61 Director since 2015	None	None



	PRINCIPAL OCCUPATION	AGE	COMMITTEES	OTHER PUBLIC COMPANY BOARDS
Steven A. Davis	Former Chairman and CEO of Bob Evans Farms, Inc.	60	None	Marathon Petroleum Corporation Legacy Acquisition Corp.
Catherine R. Smith	Executive Vice President and Chief Financial Officer of Target Corporation	55	None	Baxter International Inc.

SKILLS, EXPERTISE AND EXPERIENCE OF OUR DIRECTORS AND DIRECTOR APPOINTEES

The table below lists some of the key skills, experience and expertise possessed by our directors and director appointees. The biographies of our directors and director appointees include more information about our directors' and director appointees' relevant skills, experience and qualifications.

	Leadership	Finance	Manufacturing	Global	Industry	Environmental	Retail / Marketing	Technology
Stephen F. Angel	✓	✓	✓	✓	✓	✓	✓	✓
James G. Berges	✓		✓	✓	✓		✓	✓
Steven A. Davis	✓	✓	✓	✓			✓	✓
John V. Faraci	✓	✓	✓	✓	✓			
Hugh Grant	✓	✓		✓	✓	✓	✓	✓
Victoria F. Haynes	✓				✓	✓		✓
Melanie L. Healey	✓	✓	✓	✓			✓	
Gary R. Heminger	✓	✓			✓		✓	
Michele J. Hooper	✓	✓		✓				
Michael W. Lamach	✓	✓	✓	✓	✓	✓		✓
Michael H. McGarry	✓		✓	✓	✓	✓	✓	✓
Catherine R. Smith	✓	✓	✓	✓			✓	
Martin H. Richenhagen	✓	✓	✓	✓	✓		✓	

QUESTIONS AND ANSWERS

Please see General Matters beginning on page 72 for important information about the proxy materials, voting, attending the 2019 Annual Meeting and the deadlines to submit shareholder proposals and director nominees for the 2020 Annual Meeting of Shareholders.

LEARN MORE ABOUT PPG AND OUR SUSTAINABILITY ACHIEVEMENTS

You can learn more about PPG by visiting our website at www.ppg.com. Please also visit our Sustainability website at www.sustainability.ppg.com to learn more about PPG's sustainability initiatives and achievements and PPG's community and employee engagement programs.



PROPOSAL 1: Election of Directors to Serve in a Class Whose Term Expires in 2022

Four directors are nominated for election to a class that will serve until the 2022 annual meeting of shareholders and until their successors have been duly elected and qualified, or their earlier retirement or resignation. It is intended that the shares represented by each proxy will be voted, in the discretion of the proxies, **FOR** the nominees for directors set forth below, each of whom is an incumbent, or for any substitute nominee or nominees designated by our Board of Directors in the event any nominee or nominees become unavailable for election. In the event that an incumbent director receives a greater number of votes against his election than votes for such election, he is required to tender his resignation for consideration by the Nominating and Governance Committee of the Board of Directors in accordance with our Bylaws, as described on page 17 under “Director Resignation Policy.” The principal occupations of, and certain other information regarding, the nominees and our continuing directors are set forth below. In addition, information about each director’s specific experience, attributes and skills that led the Board to the conclusion that each of the directors is highly qualified to serve as a member of the Board is set forth below. Our Corporate Governance Guidelines require that any director who has attained the age of 72 retire at the next annual meeting following the director’s 72nd birthday. In accordance with this policy, if elected, Mr. Berges will retire at the 2020 Annual Meeting of Shareholders.

The Board believes that each of the Company’s directors is highly qualified to serve as a member of the Board. Each of our directors has contributed to the mix of skills, core competencies and qualifications of the Board. Our directors are highly educated and have diverse backgrounds and talents and extensive track records of success in what we believe are highly relevant positions with some of the most admired organizations in the world. Many of our directors also benefit from an intimate knowledge of our operations and corporate philosophy. The Board believes that each director’s service as the chairman, chief executive officer, chief operating officer, president or group president of a well-respected company has provided the directors with skills that are important to serving on our Board. The Board has also considered the fact that all of our directors have worked for, or served on the boards of directors of, a variety of companies in a wide range of industries. Specifically, the Board has noted that our directors have skills that, among others, have made them particularly suited to serve as a director of PPG, a global manufacturer of high technology paints, coatings and specialty materials for industrial and consumer markets, with operations in more than 70 countries. The Board believes that through their varying backgrounds, our directors bring a wealth of experiences, new ideas and solutions to our Board.

Vote Required

Each director nominee who receives a majority of the votes cast (the number of shares voted “for” the director must exceed 50% of the votes cast with respect to that director) at the Annual Meeting will be elected as a director.

**THE BOARD RECOMMENDS THAT SHAREHOLDERS VOTE *FOR* THE ELECTION
OF EACH OF THE DIRECTOR NOMINEES.**



Nominees to Serve in a Class Whose Term Expires in 2022

James G. Berges



Age: 71
**Partner, Clayton,
Dubilier & Rice, LLC**

Professional Experience:

Mr. Berges has been a Director of PPG since 2000. He became a partner in Clayton, Dubilier & Rice, LLC, a private equity investment firm, in 2006. Prior to that, he was President of Emerson Electric Co. from 1999 until his retirement in 2005. Emerson Electric Co. is a global manufacturer of products, systems and services for industrial automation, process control, HVAC, electronics and communications, and appliances and tools. Mr. Berges is Chairman of Core & Main LP, a portfolio company of Clayton, Dubilier & Rice. Mr. Berges served as a director of Atkore International Group, Inc. from 2010 to 2018, as a director of NCI Building Systems, Inc. from 2009 to 2018, as Chairman of HD Supply, Inc. from 2007 to 2015 and as Chairman of Hussmann International, Inc. from 2012 to 2016.

Qualifications: As a partner with private equity investment firm Clayton, Dubilier & Rice, Mr. Berges works with portfolio companies in a wide range of industries to improve their operations. Previously, he served as President of Emerson Electric Company, a diversified global technology company. As a result of Mr. Berges' experience advising and serving on the boards of directors of numerous companies, he can draw from a diverse set of leadership experiences and operational and governance perspectives.

John V. Faraci



Age: 69
**Retired Chairman and
Chief Executive Officer of
International Paper
Company**

Professional Experience:

Mr. Faraci has been a Director of PPG since 2012. Mr. Faraci retired as Chairman and Chief Executive Officer of International Paper, a global manufacturer of paper and packaging products, in December 2014. Mr. Faraci was named Chairman and Chief Executive Officer of International Paper in November 2003. Earlier in 2003, Mr. Faraci was elected President and a director of International Paper. Mr. Faraci is an Operating Partner with Advent International and a member of the RBC Capital Markets Advisory Council. He is also a director of United Technologies Corporation and ConocoPhillips.

Qualifications: Mr. Faraci has significant leadership and financial expertise gained from years of service at a large multinational manufacturing company. He has served as both the Chief Executive Officer and Chief Financial Officer of International Paper Company, where he led a transformation to refocus International Paper on its paper and packaging business. Mr. Faraci's experience repositioning International Paper was instrumental as PPG transformed its business to focus on coatings products. Mr. Faraci also has international operational expertise gained from years of experience leading a large multinational company and his experience leading one of International Paper's former international subsidiaries.





Age: 65
Chairman and
Chief Executive Officer of
Marathon Petroleum
Corporation

Professional Experience:

Mr. Heminger has been a Director of PPG since 2017. Mr. Heminger has been Chairman of the Board of Marathon Petroleum Corporation since 2016 and its Chief Executive Officer since 2011. Marathon Petroleum is one of the largest independent petroleum product refining, marketing, retail and pipeline transportation companies in the United States. Mr. Heminger has spent over 40 years in a variety of leadership, financial and marketing positions with Marathon Petroleum. From 2011 to 2017, he served as President and Chief Executive Officer of Marathon Petroleum Corporation, and from 2001 to 2011, Mr. Heminger served as both Executive Vice President – Downstream, Marathon Oil Corporation and as President of Marathon Petroleum Company LLC. Previously, he served as Executive Vice President, Supply, Transportation and Marketing for Marathon Ashland Petroleum from January to September 2001, as Senior Vice President, Business Development from 1999 to January 2001 and as Vice President, Business Development from 1998 to 1999. Since 2012, Mr. Heminger has served as Chairman of the Board and Chief Executive Officer of MPLX GP LLC, a wholly owned, indirect subsidiary of Marathon Petroleum and the general partner of MPLX LP, a consolidated master limited partnership formed to own and operate midstream energy infrastructure assets. Since October 2018, Mr. Heminger has served as Chairman of the Board and Chief Executive Officer of Tesoro Logistics GP, LLC, a wholly owned, indirect subsidiary of Marathon Petroleum Corporation and the general partner of Andeavor Logistics LP, a consolidated master limited partnership formed to own and operate midstream energy infrastructure assets that was acquired by Marathon Petroleum as part of its October 1, 2018 acquisition of Andeavor. Mr. Heminger is also a director of Fifth Third Bancorp, MPLX GP LLC and Tesoro Logistics GP, LLC. MPLX GP LLC and Tesoro Logistics GP, LLC each manage master limited partnerships that are controlled and consolidated by Marathon Petroleum Corporation.

Qualifications: Mr. Heminger has significant leadership and financial expertise gained from years of service at a large petroleum product refining, transport, marketing and retail company. His over 40 years of experience leading a complex manufacturing and marketing business provides useful guidance in managing PPG's complex organization with many of the same challenges and opportunities as faced by PPG. Mr. Heminger also brings to the Board marketing and retail expertise gained from overseeing Marathon Petroleum Corporation's extensive network of gasoline retail locations and convenience stores.

PPG's Board of Directors has reviewed Mr. Heminger's service on the boards of directors of Fifth Third Bancorp, Marathon Petroleum Corporation, MPLX GP LLC and Tesoro Logistics GP, LLC and has determined that his service on these boards has not negatively impacted his service on PPG's Board. MPLX GP LLC and Tesoro Logistics GP, LLC are each the general partner of a controlled, consolidated master limited partnerships held by Marathon Petroleum Corporation to operate Marathon Petroleum Corporation's transportation, logistics and processing operations. His duties as an officer and director of these companies are integrally related to his role as the Chairman and Chief Executive Officer of Marathon Petroleum Corporation. As related companies, the board meetings of MPLX GP LLC and Tesoro Logistics GP, LLC typically are held in succession with those of Marathon Petroleum Corporation. In 2018, Mr. Heminger attended all of PPG's Board meetings and all meetings of the Committees on which he serves. The Board believes that Mr. Heminger has been a valuable contributor to our Board and that his leadership of a business that serves both industry and retail consumers like PPG is very important to our Board's overall skills and experience.





Age: 61
Chairman and
Chief Executive Officer of
PPG Industries, Inc.

Professional Experience:

Mr. McGarry has been a Director of PPG since 2015. Mr. McGarry has been Chairman and Chief Executive Officer of PPG since September 1, 2016. Previously, he served as President and Chief Executive Officer from September 1, 2015 to September 1, 2016, President and Chief Operating Officer from March 2015 until September 1, 2015 and Chief Operating Officer from August 2014 until March 2015. Mr. McGarry has also served as Executive Vice President from 2012 until 2014; Senior Vice President, Commodity Chemicals from 2008 until 2012; Vice President, Coatings, Europe, and Managing Director, PPG Europe from 2006 until 2008; and Vice President, Chlor-Alkali and Derivatives from 2004 to 2006. He joined PPG in 1981. Mr. McGarry served as a director of Axiall Corporation from 2013 through August 2016.

Qualifications: Mr. McGarry has been an employee of PPG for over 35 years and has served in executive level positions at PPG since 2004. He has served in a variety of key business and functional leadership roles in the United States, Europe and Asia. Mr. McGarry has been at the forefront of PPG's portfolio transformation leading the acquisition of SigmaKalon; the separation of PPG's former commodity chemicals business; the acquisition and integration of AkzoNobel's North American architectural coatings business; the acquisition of Consorcio Comex, S.A. de C.V.; and the dispositions of PPG's flat glass and fiber glass businesses. Mr. McGarry also has extensive product stewardship, manufacturing and logistics experience gained through years of working in PPG's former commodity chemicals business.



Continuing Directors—Term Expires in 2020

Stephen F. Angel



Age: 63
Chief Executive Officer of Linde plc

Professional Experience:

Mr. Angel has been a Director of PPG since 2010. He has been Chief Executive Officer and a director of Linde plc, a global producer and distributor of atmospheric and process gases and high-performance surface coatings, since October 31, 2018 upon the closing of the combination of Praxair, Inc. with Linde AG to form Linde plc. He served as Chairman of the Board, President and Chief Executive Officer of Praxair, Inc. from 2007 until October 31, 2018. Mr. Angel served as President and Chief Operating Officer of Praxair, Inc. from March to December 2006 and as Executive Vice President of Praxair, Inc. from 2001 to 2006. Prior to joining Praxair, Inc., Mr. Angel spent 22 years in a variety of management positions with General Electric Company.

Qualifications: Mr. Angel has diverse managerial and operational experience within the manufacturing industry. As the Chief Executive Officer of Linde plc and a former senior operating executive at General Electric, Mr. Angel understands the challenges faced by a global manufacturer of diversified products, and his experience provides the Board with insight into sales and marketing and operational matters.

Hugh Grant



Age: 60
Retired Chairman of the Board and Chief Executive Officer of Monsanto Company

Professional Experience:

Mr. Grant has been a Director of PPG since 2005. Mr. Grant retired as Chairman of the Board and Chief Executive Officer of Monsanto Company, a global provider of technology-based solutions and agricultural products that improve farm productivity and food quality, on June 7, 2018 upon the closing of the merger of Monsanto Company and Bayer AG. Mr. Grant served as Chairman of the Board and Chief Executive Officer of Monsanto Company from 2003 until June 7, 2018. He previously served as Executive Vice President and Chief Operating Officer of Monsanto Company at the time of an initial public offering in 2000 and remained in that position for the subsequent spin-off of the company in 2002.

Qualifications: Mr. Grant has an extensive background in the global agricultural technology industry, having served in various positions at Monsanto Company, where he was the Chairman of the Board and Chief Executive Officer. Mr. Grant brings to the Board significant leadership, managerial and operational expertise gained from years of experience leading the operations of a large multinational company.



Melanie L. Healey



Age: 57
**Former Group President,
North America of
The Procter & Gamble
Company**

Professional Experience:

Ms. Healey has been a Director of PPG since 2016. She served as Group President at Procter & Gamble, one of the world's leading providers of branded consumer packaged goods, from 2007 to 2015, serving as President and Advisor to the Chairman and Chief Executive Officer from January to June 2015, as Group President, North America from 2009 to 2015 and as Group President, Global Feminine and Health Care from 2007 to 2009. She previously served as President, Global Feminine Care and Adult Care Business from 2005 to 2007 and as Vice President and General Manager, Feminine Care North America from 2001 to 2005. Ms. Healey joined Procter & Gamble in 1990. She has more than 30 years of experience in the consumer goods industry having previously held positions with S. C. Johnson & Son, Inc. and Johnson & Johnson. Ms. Healey is also a director of Hilton Worldwide Holdings Inc., Target Corporation and Verizon Communications Inc.

Qualifications: Ms. Healey has extensive experience in the consumer goods industry with three multinational companies. She has a thorough understanding of strategy, branding, consumer marketing and international operations, including 18 years working outside the United States. Ms. Healey brings to the Board significant marketing, brand building, managerial and international expertise gained from years of experience marketing consumer products to customers worldwide.

Michele J. Hooper



Age: 67
**President and Chief
Executive Officer of
The Directors' Council**

Professional Experience:

Ms. Hooper has been a Director of PPG since 1995. In 2003, she co-founded, and became the Managing Partner of, The Directors' Council, a private company that works with corporate boards to increase their independence, effectiveness and diversity. She was named to her current position in 2009. Ms. Hooper was President and Chief Executive Officer of Voyager Expanded Learning, a developer and provider of learning programs and teacher training for public schools, from 1999 until 2000. Prior to that, she was President and Chief Executive Officer of Stadtlander Drug Company, Inc., a provider of disease-specific pharmaceutical care from 1998 until Stadtlander was acquired in 1999. Ms. Hooper is also a director of UnitedHealth Group Incorporated and United Continental Holdings, Inc. She served as a director of Warner Music Group from 2006 to 2011 and as a director of AstraZeneca plc from 2003 to 2012.

Qualifications: Ms. Hooper is an expert in corporate governance and board diversity. As President and Chief Executive Officer of The Directors' Council, she works with major companies to enhance the effectiveness of their corporate governance. Ms. Hooper also has significant experience leading the audit committees of several major companies, including a 14-year tenure as chair of PPG's Audit Committee. In addition to having chaired PPG's Audit Committee, she serves on or has served on the audit committees of UnitedHealth Group, AstraZeneca (Chair), Warner Music Group (Chair), Seagram Company Ltd. and Target Corporation (Chair). In addition, Ms. Hooper has served as a Public Board Member and former Vice Chair of the Center for Audit Quality, Chair of the CAQ Initiative for Detering and Detecting Financial Reporting Fraud, and co-Chair of the National Association of Corporate Directors Blue Ribbon Commission on Audit Committee Responsibilities. Ms. Hooper's experience as a senior executive at a range of companies and her corporate governance and accounting expertise provides the Board with a unique set of skills that enhances the Board's leadership and oversight capabilities.



Continuing Directors—Term Expires in 2021

Victoria F. Haynes



Age: 71
Retired President
and Chief Executive
Officer of RTI
International

Professional Experience:

Dr. Haynes has been a Director of PPG since 2003. She served as the President and Chief Executive Officer of RTI International, which performs scientific research and development in advanced technologies, public policy, environmental protection, and health and medicine, from 1999 until 2012. She was Vice President of the Advanced Technology Group and Chief Technical Officer of BF Goodrich Company from 1992 to 1999. She is also a director of Nucor Corporation and Royal DSM N.V. Dr. Haynes served as a director of Archer Daniels Midland Company from 2007 through 2011 and as a director of Axiall Corporation from 2013 through August 2016.

Qualifications: Dr. Haynes is a leader in advanced technology and research. Her previous service as President and Chief Executive Officer of RTI International as well as her scientific leadership positions with BF Goodrich Company provide her with insight into the research and development issues currently faced by global companies. Dr. Haynes' science background, coupled with her experience leading a high technology institution, is a valuable resource for the Board when reviewing our technological innovations.

Michael W. Lamach



Age: 55
Chairman, President
and Chief Executive
Officer of
Ingersoll-Rand plc

Professional Experience:

Mr. Lamach has been a Director of PPG since 2015. He has been the Chairman, President and Chief Executive Officer of Ingersoll-Rand plc, a diversified manufacturer and services provider of climate and refrigeration systems, industrial technologies and small electric vehicles, since June 2010 and a director since February 2010. Previously, Mr. Lamach served in several roles with Ingersoll-Rand, including President and Chief Executive Officer from February 2010 to June 2010; President and Chief Operating Officer from February 2009 to February 2010; President of Trane Commercial Systems from June 2008 to February 2009; and President of the Security Technologies Sector from February 2004 to June 2008. Prior to joining Ingersoll-Rand, Mr. Lamach spent 17 years in a variety of management positions with Johnson Controls. He served as a director of Iron Mountain, Inc. from 2007 to 2015.

Qualifications: During his 30-year career, Mr. Lamach has lead a number of businesses serving different end-use markets, including automotive components, controls, security systems and HVAC systems. As Chairman, President and Chief Executive Officer of Ingersoll-Rand plc, he brings to the Board experience leading a global company that sells a diverse range of products and services to both industrial and consumer customers. Mr. Lamach's service as the Vice Chair of the Board and a member of the Executive Committee of the National Association of Manufacturers provides him with keen insight into the challenges facing manufacturers.





Age: 66
Chairman, President
and Chief Executive
Officer of AGCO
Corporation

Professional Experience:

Mr. Richenhagen has been a Director of PPG since 2007. He has been Chairman, President and Chief Executive Officer of AGCO Corporation, an agricultural equipment manufacturer, since 2006. From 2004 to 2006, he served as President and Chief Executive Officer of AGCO. From 2003 to 2004, Mr. Richenhagen was Executive Vice President of Forbo International SA, a Swiss flooring materials company. From 1998 to 2003, he was with CLAAS KgaA MbH, a German-based manufacturer of agricultural and forest machinery, serving as Group President from 2000 until 2003. Mr. Richenhagen is also a director of Linde plc.

Mr. Richenhagen was a director of Praxair, Inc. from 2015 until the closing of its combination with Linde AG in October 2018 to form Linde plc.

Qualifications: Mr. Richenhagen has been leading global manufacturing companies for many years. As Chairman, President and Chief Executive Officer of AGCO Corporation, he leads a global manufacturer of agricultural equipment with dealers and distributors in more than 140 countries worldwide. Mr. Richenhagen brings considerable international business experience to the Board, having served as a senior executive at multinational companies located in Europe and the United States.



PROPOSAL 2: Approval of the Appointment of Steven A. Davis and Catherine R. Smith as Directors to Serve in a Class Whose Term Expires in 2021

According to PPG's Amended and Restated Bylaws, vacancies on the Board of Directors may be filled by the affirmative vote of a majority of the remaining directors. On February 21, 2019, the Board of Directors increased the size of the Board to 13 directors, effective as of April 18, 2019, and appointed Steven A. Davis and Catherine R. Smith to fill the vacancies subject to the approval of their appointment by the Company's shareholders at the 2019 Annual Meeting. If their appointment is approved by the Company's shareholders, the director appointees will become directors of the Company on April 18, 2019 and will join the class of directors that will serve until the 2021 annual meeting of shareholders and until their successors have been duly elected and qualified, or their earlier retirement or resignation. It is intended that the shares represented by each proxy will be voted, in the discretion of the proxies, **FOR** approval of the director appointees. The principal occupations of, and certain other information regarding, the director appointees are set forth below. In addition, information about each director appointee's specific experience, attributes and skills that led the Board to the conclusion that each of the director appointees is highly qualified to serve as a member of the Board is set forth below.

Vote Required

Each director appointee who receives a majority of the votes cast (the number of shares voted "for" the director appointee must exceed 50% of the votes cast with respect to that director appointee) at the Annual Meeting will become a director as discussed above on April 18, 2019.

THE BOARD RECOMMENDS THAT SHAREHOLDERS VOTE *FOR* THE APPROVAL OF THE APPOINTMENT OF EACH OF THE DIRECTOR APPOINTEES.

Director Appointees to Serve in a Class Whose Term Expires in 2021

Steven A. Davis



Age: 60
Former Chairman and Chief Executive Officer of Bob Evans Farms, Inc.

Professional Experience:

Mr. Davis, served as Chairman and Chief Executive Officer of Bob Evans Farms, Inc., an operator of nearly 500 family style restaurants in 18 states and a leading producer and distributor of refrigerated and frozen convenience food items, from 2006 to 2015. From 1993 to 2006, Mr. Davis held a variety of senior leadership roles at YUM! Brands, Inc., an operator of over 45,000 KFC, Pizza Hut and Taco Bell restaurants in 140 countries and territories, including president of its Long John Silver's and A&W All-American Food Restaurants. Mr. Davis is a director of Marathon Petroleum Corporation, Albertsons Companies, Inc. and Legacy Acquisition Corp. Mr. Davis served as a director of Sonic Corp. from 2017 to 2018 until Sonic Corp. was acquired by Inspire Brands, Inc. and as a director of Walgreens Boots Alliance from 2009 to 2015.

Qualifications: Mr. Davis's experience as Chairman and Chief Executive Officer of Bob Evans Farms and his leadership roles at YUM! Brands provide him with significant operational, marketing, retail and branding experience. He brings to the Board significant experience managing a network of branded retail locations with a focus on customer service.





Age: 55
**Executive Vice President
and Chief Financial Officer
of Target Corporation**

Professional Experience:

Ms. Smith has served as Executive Vice President and Chief Financial Officer of Target Corporation, a national retailer with approximately 1,850 stores in the United States, since 2015, with plans for a May 2020 retirement. From February to December 2014, Ms. Smith was Executive Vice President and Chief Financial Officer of Express Scripts Holding Company, a Fortune 20 company and the United States' largest pharmacy benefit manager, leaving the company in March 2015. From 2010 to 2014, she was Executive Vice President of Strategy and Chief Financial Officer of the Walmart International segment of Wal-Mart Stores, Inc., a discount retailer and e-commerce company with approximately 11,700 stores in 28 countries. Ms. Smith is a director of Baxter International Inc.

Qualifications: Ms. Smith has significant expertise gained from years of leading the complex finance organizations of some of the largest companies in the United States. Her experience in financial reporting, accounting and internal controls brings valuable expertise to the Board. In addition, Ms. Smith has extensive experience leading retail companies with a national and international footprint like PPG.



CORPORATE GOVERNANCE

Board Composition, Refreshment and Diversity

PPG's business, property and affairs are managed under the direction of the Board of Directors. The Board is currently comprised of 11 members, divided into three classes. Terms of the classes are staggered, with one class standing for election each year. The Board has placed on the ballot for the Annual Meeting a proposal to amend PPG's Articles of Incorporation to provide for the annual election of all directors. Please see Proposal 4 for more information. The Board is elected by our shareholders to oversee management of the Company in the long-term interests of all shareholders. The Board also considers the interests of other constituencies, which include customers, employees, retirees, suppliers, the communities we serve and the environment. The Board strives to ensure that PPG conducts business in accordance with the highest standards of ethics and integrity.

The Board seeks to maintain an appropriate balance of directors with varying tenure, diversity and skills. The Nominating and Governance Committee continually evaluates potential director candidates with the goal of finding directors whose skills complement the skills of PPG's current directors, who add to the expertise of the Board as a whole and who have experience to contribute insight into our strategy. Using a skills matrix that includes the experience and skills of our current directors and keeping in mind the skills that the Board believes would add to the capabilities and knowledge of our Board, the Nominating and Governance Committee regularly reviews the skills and experience of our directors and potential director candidates. More information about the skills and experience of our directors and director appointees can be found in the matrix on page 4 and within the biographies of our directors and director appointees beginning on page 6.

Our Corporate Governance Guidelines require that any director who has attained the age of 72 retire at the next annual meeting following the director's 72nd birthday. Four new directors have joined the Board since 2015, and in this proxy statement we are asking shareholders to approve the appointment of two new directors. Since the end of 2012, the average age of our directors has remained 64 and our average director tenure has remained approximately 10 years.

The Nominating and Governance Committee does not have a formal policy with regard to the consideration of diversity in identifying director candidates. However, we endeavor to have a Board representing diverse experience at policy-making levels in business, government, education and technology, and in areas that are relevant to the Company's global activities. The Nominating and Governance Committee seeks to find director candidates who have demonstrated executive leadership ability and who are representative of the broad scope of shareholder interests by identifying candidates from diverse industries having diverse cultural backgrounds, ethnic backgrounds, viewpoints and ages. The Nominating and Governance Committee believes that the current members of the Board provide this diversity as five of our 11 directors and both of our director appointees (subject to shareholder approval) are diverse based on gender, ethnicity and cultural background.

Shareholder Engagement

Through engagement with our shareholders, the Board and our senior management team are provided with feedback on a variety of topics, including strategic and financial performance, operations, corporate governance, executive compensation, Board composition, and environmental and social issues. These constructive engagements enable the Board and management to evaluate and assess our company from different perspectives and viewpoints. During 2018, one or more members of management met with active, institutional investors representing approximately 80% of our outstanding shares. In addition, members of management held governance-focused meetings with active, institutional investors representing approximately 45% of our outstanding shares. Our Lead Director, Hugh Grant, participated in a number of these governance-focused meetings. The key themes of feedback received during our engagement meetings as well as efforts we are taking in consideration of the feedback we received were shared with the Board. These initiatives help to ensure that the Board is apprised of key trends and topics being considered by our shareholders.

Corporate Governance Guidelines, Board Self-Evaluation and Board Orientation

The Board has adopted Corporate Governance Guidelines. These guidelines are revised from time to time to better address particular needs as they change over time. In 2014, the Board revised the Corporate Governance Guidelines to include additional responsibilities for the Company's Lead Director. In 2015, the Board revised the Corporate Governance Guidelines to better delineate the responsibilities of the Chairman of the Board and those of the Chief Executive Officer. The Corporate Governance Guidelines may be accessed from the Corporate Governance section of our website at www.ppg.com/investor.



The Board annually evaluates its own performance and that of the individual committees. The evaluation process is coordinated by the Nominating and Governance Committee and has three parts: committee self-assessments, full Board evaluations and evaluations of the individual directors in the class whose term is expiring at the next annual meeting. The committee self-assessments consider whether and how well each committee has performed the responsibilities listed in its charter. The full Board evaluations consider the committee self-assessments, as well as the quality of the Board's meeting agendas, materials and discussions. All assessments and evaluations focus on both strengths and opportunities for improvement and are shared with the Board.

The Board has a program for orienting new directors which includes presentations from members of senior management regarding our operations, governance, finances and compensation programs. The Company also provides for continuing education for all directors, including the reimbursement of expenses for continuing education.

Director Independence

In accordance with the rules of the New York Stock Exchange, the Board affirmatively determines the independence of each director and nominee for election as a director or appointment in accordance with the categorical guidelines it has adopted, which include all objective standards of independence set forth in the exchange listing standards. Based on these standards, at its meeting held on February 21, 2019, the Board determined that each of the following non-employee directors and director appointees is independent and has no material relationship with PPG, except as a director and shareholder:

Stephen F. Angel
James G. Berges
Steven A. Davis
John V. Faraci
Hugh Grant
Victoria F. Haynes

Gary R. Heminger
Melanie L. Healey
Michele J. Hooper
Michael W. Lamach
Martin H. Richenhagen
Catherine R. Smith

In addition, based on such standards, the Board affirmatively determined that Michael H. McGarry is not independent because he is an officer of PPG. The categorical independence standards adopted by the Board are contained in the Corporate Governance Guidelines, which may be accessed from the Corporate Governance section of our website at www.ppg.com/investor.

Board Leadership Structure

We believe our Board leadership structure provides the appropriate balance of independent directors and management directors. We have a traditional board leadership structure under which Mr. McGarry serves as our Chief Executive Officer and Chairman of the Board. We currently have ten other directors, each of whom is independent. Our Board has four standing committees, each of which is comprised solely of independent directors with a committee chair. The Board believes that Mr. McGarry is the best person to serve as Chairman because he is the director most familiar with our business and industry and the director most capable of identifying strategic priorities and executing our business strategy. The Board believes the combined role of Chairman and Chief Executive Officer serves as a highly effective bridge between the Board and management and provides the leadership to execute our business strategy and create shareholder value.

In addition, having one person serve as both Chairman and Chief Executive Officer demonstrates to our employees, suppliers, customers, shareholders and other stakeholders that PPG has strong leadership setting the tone and having the responsibility for managing our operations. Having a single leader eliminates the potential for confusion and provides clear leadership for PPG. We believe that our Board consists of directors with significant leadership skills, as discussed above. All of our independent directors have served as the chairman, chief executive officer, president or group president of other companies. Accordingly, we believe that our independent directors have demonstrated leadership in large enterprises and are well versed in board processes and that having directors with significant leadership skills benefits our Company and our shareholders.

In accordance with our Bylaws and our Corporate Governance Guidelines, the Chairman is responsible for chairing Board meetings and setting the agenda for these meetings. Each director also may suggest items for inclusion on the agenda and may raise at any Board meeting subjects that are not on the agenda for that meeting. As required by our Corporate Governance Guidelines, our independent directors meet separately, without management present, at each meeting of the Board. In addition, each of the Board's standing committees regularly meets without members of management present.



The Board has designated the chair of the Nominating and Governance Committee to serve as the Lead Director. In their discretion, the independent directors may select another independent director to serve as the Lead Director. Aside from chairing meetings of the independent directors, the Lead Director presides at all meetings where the Chairman is not present, serves as a liaison between the independent directors and the Chairman and Chief Executive Officer, has the power to call meetings of the independent directors, consults with the Chairman and Chief Executive Officer about the concerns of the Board, approves Board meeting agendas and other types of information sent to the Board, approves meeting schedules to assure that there is sufficient time for discussion of all agenda items, and is available for consultation and direct communication with major shareholders as appropriate.

As part of its annual self-evaluation process, the Board evaluates our leadership structure to ensure that it provides the optimal structure for PPG. We believe that having a director with day-to-day oversight of Company operations, coupled with experienced independent directors who have appointed a Lead Director and four wholly-independent board committees, is the appropriate leadership structure for PPG.

The Board's Role in Risk Management

In accordance with New York Stock Exchange requirements, our Audit Committee charter provides that the Audit Committee is responsible for overseeing our risk management process. The Audit Committee is updated on a regular basis on relevant and significant risk areas. This includes periodic updates from certain officers of the Company and a formal annual update by the Director of Corporate Audit Services. The annual update provides a comprehensive review of PPG's enterprise risks and includes the feedback of most of the Company's officers. The Audit Committee, in turn, reports to the full Board. While the Audit Committee has primary responsibility for overseeing risk management, our entire Board is actively involved in overseeing risk management for the Company by engaging in periodic discussions with Company officers and other employees as the Board may deem appropriate. In 2018, the Board spent additional time reviewing our cybersecurity program. In addition, each of our Board committees considers the risks within its areas of responsibility. For example, our Technology and Environment Committee considers risks related to our environment, health, safety, product stewardship and other sustainability policies, programs and practices. Our Audit Committee focuses on risks inherent in our accounting, financial reporting, cybersecurity and internal controls. Our Officers—Directors Compensation Committee considers the risks that may be implicated by our executive compensation program. We believe that the leadership structure of our Board supports the Board's effective oversight of the Company's risk management.

Director Resignation Policy

Our Bylaws provide that if an incumbent director is not elected by majority vote in an "uncontested election" (where the number of nominees does not exceed the number of directors to be elected), the director must offer to tender his or her resignation to our Board of Directors. The Nominating and Governance Committee would then make a recommendation to the Board whether to accept or reject the resignation, or whether other action should be taken. The Board will act on the Nominating and Governance Committee's recommendation and publicly disclose its decision and the rationale behind it within 90 days from the date the election results are certified. The director who tenders his or her resignation will not participate in the Board's decision with respect to their resignation. The election of directors that will be held at the 2019 Annual Meeting is an uncontested election.

Executive Succession Planning

One of the Board's primary responsibilities is to oversee the development of appropriate executive-level talent to successfully execute PPG's strategy. Management succession is regularly discussed by the Board with Mr. McGarry and with PPG's Vice President, Human Resources. The Board reviews candidates for all executive officer positions to confirm that qualified successor-candidates are available for all key positions and that development plans are being utilized to strengthen the skills and qualifications of successor-candidates. At least annually, as required by our Corporate Governance Guidelines, and typically more often, the Board's discusses CEO succession planning. Mr. McGarry provides the Board with recommendations for and evaluations of potential CEO successors and reviews with the Board development plans for these successors. Directors engage with potential CEO and senior management talent at Board and committee meetings and in less formal settings to enable directors to personally interact with candidates. The Board reviews management succession in the ordinary course of business as well as contingency planning in the event of an emergency or unanticipated event.



Board Oversight of PPG's Strategy

PPG's Board is actively engaged in developing our strategy and overseeing the execution of our strategy, including major business and organizational initiatives, capital allocation priorities and potential business development opportunities. The Board devotes at least one full day each year to reviewing and formulating our strategy. Throughout the year, the Board uses its experience in manufacturing, global business, science and technology and marketing to oversee the execution of our strategy and capital allocation and works with senior management to guide our strategy.

Review and Approval or Ratification of Transactions with Related Persons

The Board and its Nominating and Governance Committee have adopted written policies and procedures relating to approval or ratification of "Related Person Transactions." Under these policies and procedures, the Nominating and Governance Committee (or its chair, under some circumstances) reviews the relevant facts of all proposed Related Person Transactions and either approves or disapproves of the entry into the Related Person Transaction, by taking into account, among other factors it deems appropriate:

- The benefits to PPG of the transaction;
- The impact on a director's independence, in the event the "Related Person" is a director or an immediate family member of a director or an entity in which a director is a partner, shareholder or executive officer;
- The availability of other sources for comparable products or services;
- The terms of the transaction; and
- The terms available to unrelated third parties or to employees generally.

No director may participate in any consideration or approval of a Related Person Transaction with respect to which he or she or any of his or her immediate family members is the Related Person. Related Person Transactions are approved only if they are determined to be in, or not inconsistent with, the best interests of PPG and its shareholders.

If a Related Person Transaction that has not been previously approved or previously ratified is discovered, the Nominating and Governance Committee, or its chair, will promptly consider all of the relevant facts. In addition, the committee generally reviews all ongoing Related Person Transactions on an annual basis to determine whether to continue, modify or terminate the Related Person Transaction.

Under our policies and procedures, a "Related Person Transaction" is generally a transaction, arrangement or relationship (or any series of similar transactions, arrangements or relationships) in which PPG was, is or will be a participant and the amount involved exceeds \$120,000, and in which any Related Person had, has or will have a direct or indirect material interest. A "Related Person" is generally any person who is, or at any time since the beginning of PPG's last fiscal year was, (i) a director or executive officer of PPG or a nominee to become a director of PPG; (ii) any person who is known to be the beneficial owner of more than 5% of any class of PPG's voting securities; or (iii) any immediate family member of any of the foregoing persons.

Certain Relationships and Related Transactions

As discussed above, the Nominating and Governance Committee is charged with reviewing potential conflicts of interest and all Related Person Transactions. PPG and its subsidiaries purchase products and services from and/or sell products and services to companies of which certain of the directors and/or executive officers of PPG are directors and/or executive officers. During 2018, PPG entered into the following transactions with Related Persons that are required to be reported under the rules of the Securities and Exchange Commission:

Martin H. Richenhagen, a director of PPG, is the Chairman, President and Chief Executive Officer of AGCO Corporation. During 2018, PPG and its subsidiaries sold approximately \$4.2 million of coatings products to AGCO Corporation.

Michael W. Lamach, a director of PPG, is Chairman, President and Chief Executive Officer of Ingersoll-Rand plc. During 2018, PPG and its subsidiaries sold approximately \$4.2 million of coatings products to Ingersoll-Rand.

Stephen F. Angel, a director of PPG, is the Chief Executive Officer and a director of Linde plc. During 2018, PPG and its subsidiaries purchased approximately \$2.4 million of industrial gases from Linde plc and its predecessors, Praxair, Inc. and Linde AG, and sold approximately \$900,000 of coatings products to Linde plc and its predecessors.

The Nominating and Governance Committee does not consider the amounts involved in such transactions material. Such purchases from and sales to each company involved less than 1% of the consolidated gross revenues for 2018 of each of the purchaser and the seller and all of such transactions were in the ordinary course of business.



Board Meetings and Committees

The Board currently has four standing committees: Audit Committee, Nominating and Governance Committee, Officers—Directors Compensation Committee and Technology and Environment Committee. The current composition of each Board committee is indicated below. The charter of each Board committee is available on the Corporate Governance section of our website at www.ppg.com/investor.

AUDIT COMMITTEE	NOMINATING AND GOVERNANCE COMMITTEE	OFFICERS—DIRECTORS COMPENSATION COMMITTEE	TECHNOLOGY AND ENVIRONMENT COMMITTEE
Victoria F. Haynes	James G. Berges	Stephen F. Angel	Stephen F. Angel
Melanie L. Healey	John V. Faraci	James G. Berges*	John V. Faraci
Gary R. Heminger	Hugh Grant*	Hugh Grant	Victoria F. Haynes*
Michael W. Lamach	Gary R. Heminger	Michael W. Lamach	Melanie L. Healey
Martin H. Richenhagen*	Michele J. Hooper	Martin H. Richenhagen	Michele J. Hooper

* Committee Chair

During 2018, the Board of Directors held eight regular and three special meetings, the Audit Committee held 10 meetings, the Nominating and Governance Committee held seven meetings, the Officers—Directors Compensation Committee held four meetings, and the Technology and Environment Committee held three meetings. The average attendance at meetings of the Board and committees during 2018 was 99%, and no incumbent director attended less than 75% of the total number of meetings of the Board and committees on which such director served. PPG does not have a formal policy requiring attendance at the annual meeting of shareholders; however, all directors serving at the time of the 2018 annual meeting of shareholders attended the meeting.

Our independent directors meet separately, without any management present, at each meeting of the Board. The Board has designated the chair of the Nominating and Governance Committee to serve as the Lead Director and to preside over the independent director sessions. In their discretion, the independent directors may select another independent director to serve as the Lead Director.

Audit Committee

The Audit Committee is comprised of five directors, each of whom is independent under the standards adopted by the Board, the listing standards of the New York Stock Exchange and the applicable rules of the Securities and Exchange Commission. The committee's charter, which may be accessed on the Corporate Governance section of our website at www.ppg.com/investor, describes the composition, purposes and responsibilities of the committee. Among other things, the charter provides that the committee will be comprised of independent, non-employee directors. The functions of the committee are primarily to review with our independent auditors and our internal auditors their respective reports and recommendations concerning audit findings and the scope of and plans for their future audit programs and to review audits, annual and quarterly financial statements and accounting and financial controls. The committee also appoints our independent registered public accounting firm, oversees our internal audit department, assists the Board in oversight of our compliance with legal and regulatory requirements related to financial reporting matters and oversees the risk management process. The Board has determined that each member of the committee is "financially literate" in accordance with the applicable rules of the New York Stock Exchange. In addition, the Board has determined that all of the members of the committee, including Mr. Richenhagen, the chair of the committee, are "audit committee financial experts" in accordance with the applicable rules of the Securities and Exchange Commission.

Audit Committee Report to Shareholders

The primary role of the Audit Committee is to oversee and review on behalf of the Board of Directors PPG's processes to provide for the reliability and integrity of the Company's financial reporting, including the Company's disclosure practices, risk management processes and internal controls. The Audit Committee operates under a written charter adopted by the Board of Directors.



The Audit Committee is responsible for the appointment of both the independent registered public accounting firm and PPG's lead internal auditor, the Director of Corporate Audit Services. In 2016, the Audit Committee approved the appointment of a new Director of Corporate Audit Services. In 2018, the Audit Committee approved the appointment of an interim Director of Corporate Audit Services when the then current Director of Corporate Audit Services was named the Acting Controller, and the Audit Committee then participated in the appointment of a new Director of Corporate Audit Services. In addition, the Audit Committee led the appointment and retention of PricewaterhouseCoopers LLP as PPG's independent registered public accounting firm for 2018 and participated in the selection process for a new lead audit partner due to the required rotation of PPG's current lead audit partner after completion of the 2017 audit. For the work performed on the 2018 audit, the Audit Committee discussed and evaluated PricewaterhouseCoopers' performance, which included an evaluation by the Company's management of PricewaterhouseCoopers' performance. The Audit Committee is responsible for the compensation of the independent registered public accounting firm and has reviewed and approved in advance all services performed by PricewaterhouseCoopers.

The Audit Committee discussed with, and received regular status reports from, the Director of Corporate Audit Services and PricewaterhouseCoopers on the overall scope and plans for their audits, their plans for evaluating the effectiveness of PPG's internal control over financial reporting and the coordination of efforts between them. The Audit Committee reviewed and discussed the key risk factors used in developing PPG's internal audit and PricewaterhouseCoopers' audit plans. The Audit Committee also reviewed with the Company's management PPG's risk management practices and an assessment of significant risks.

The Audit Committee met separately with both the Director of Corporate Audit Services and PricewaterhouseCoopers, with and without management present, to discuss the results of their examinations, their audits of PPG's financial statements and internal control over financial reporting and the overall quality of PPG's financial reporting. The Audit Committee also met separately with the Company's Senior Vice President and Chief Financial Officer and with the Company's Senior Vice President and General Counsel. The Audit Committee annually reviews its performance and receives feedback on its performance from the Company's management and PricewaterhouseCoopers, when appropriate.

The Company's management is responsible for the preparation and accuracy of PPG's financial statements. The Company is also responsible for establishing and maintaining adequate internal control over financial reporting. In 2018, PPG's independent registered public accounting firm, PricewaterhouseCoopers, was responsible for auditing the consolidated financial statements and expressing an opinion as to their conformity with generally accepted accounting principles, as well as expressing an opinion on the effectiveness of PPG's internal control over financial reporting.

In carrying out its responsibilities, the Audit Committee discussed and reviewed with the Company's management the process to assemble the financial statements, including the Company's internal controls and procedures designed to assure compliance with accounting standards and applicable laws and regulations.

In 2018, the Audit Committee, with the assistance of outside counsel and forensic accountants, oversaw an investigation into certain accounting irregularities that resulted in PPG restating its audited consolidated financial statements for the years ended December 31, 2017 and 2016 and certain quarterly periods within those fiscal years in order to correct PPG's previously issued financial statements. In connection with the preparation of the Company's 2018 financial statements, management has determined that material weakness identified in the Company's internal control over financial reporting has been remediated.

The Audit Committee reviewed and discussed the audited consolidated financial statements as of and for the year ended December 31, 2018 and management's report on internal control over financial reporting with management and with PricewaterhouseCoopers. The Audit Committee also discussed with PricewaterhouseCoopers the matters required by the applicable requirements of the Public Company Accounting Oversight Board, including Auditing Standard No. 16, *Communications with Audit Committees*.

The Audit Committee has received the written independence disclosures and letter from PricewaterhouseCoopers required by applicable requirements of the Public Company Accounting Oversight Board regarding the independent registered public accounting firm's communications with the Audit Committee concerning independence and discussed with PricewaterhouseCoopers its independence. In addition, the Audit Committee considered whether PricewaterhouseCoopers' provision of non-audit services to PPG is compatible with maintaining its independence.



Based upon these reviews and discussions, the Audit Committee recommended to the Board that the audited financial statements be included in the Annual Report on Form 10-K for the year ended December 31, 2018 for filing with the Securities and Exchange Commission.

The Audit Committee:

Victoria F. Haynes
Melanie L. Healey
Gary R. Heminger
Michael W. Lamach
Martin H. Richenhagen (Chair)

Notwithstanding anything to the contrary set forth in any of our previous filings under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, that incorporate future filings, including this Proxy Statement, in whole or in part, the foregoing Audit Committee Report to Shareholders shall not be incorporated by reference into any such filings.

Nominating and Governance Committee

The Nominating and Governance Committee is comprised of five directors, each of whom is independent under the standards adopted by the Board and the listing standards of the New York Stock Exchange. The committee's charter, which may be accessed on the Corporate Governance section of our website at www.ppg.com/investor, describes the composition, purposes and responsibilities of the committee. Among other things, the charter provides that the committee will be comprised of independent, non-employee directors. The charter also provides that the committee is responsible for identifying and recommending to the Board of Directors persons to be nominated by the Board to stand for election as directors at each annual meeting of shareholders, the persons to be elected by the Board to fill any vacancy or vacancies on the Board, and the persons to be elected by the Board to be Chairman of the Board, Vice Chairman of the Board, if any, President, if any, and the other executive officers of PPG. The committee also recommends to the Board actions to be taken regarding the structure, organization and functioning of the Board, and the persons to serve as members of the standing committees of, and other committees appointed by, the Board. The charter gives the committee the responsibility to develop and recommend corporate governance guidelines to the Board, to recommend to the Board the process and criteria to be used in evaluating the performance of the Board and to oversee the evaluation of the Board.

The Nominating and Governance Committee is responsible for identifying and screening potential director candidates and for recommending to the Board qualified candidates for nomination. The committee considers recommendations of potential candidates from current directors, management and shareholders. The committee also has authority to retain and terminate search firms to assist in identifying director candidates. From time to time, search firms have been paid a fee to identify candidates. In February 2019, the Board of Directors appointed Mr. Davis and Ms. Smith as directors of PPG subject to approval by the Company's shareholders at the 2019 Annual Meeting. Mr. Davis was initially identified as a potential nominee by Mr. Heminger. Following an interview process undertaken by Mr. McGarry, Mr. Grant and a number of other directors and a review of his candidacy by the Nominating and Governance Committee, Mr. Davis was recommended by the Nominating and Governance Committee as an appointee for election to the Board. Ms. Smith was initially identified as a potential nominee by Mr. McGarry and Ms. Healey. Mr. McGarry interviewed Ms. Smith and invited her to meet with other members of the Board. Following meetings with a number of other directors and a review of her candidacy by the Nominating and Governance Committee, Ms. Smith was recommended by the Nominating and Governance Committee as an appointee for election to the Board.

Director Candidate Attributes. In evaluating director candidates, the committee looks for candidate having the skills that the Board believes would add to the capabilities and knowledge of our Board, including the skills and attributes set forth below:

- age shall be considered only in terms of experience of the candidate, seeking candidates who have broad experience in business, finance, the sciences, administration, government affairs or law;
- candidates for director should have knowledge of the global operations of industrial and retail businesses such as those of PPG;
- candidates for director should be cognizant of PPG's societal responsibilities in conducting its operations;
- each candidate should have sufficient time available to be a meaningful participant in Board affairs. Candidates should not be considered if there is either a legal impediment to service or a foreseeable conflict of interest which might materially hamper full and objective participation in all matters considered by the Board of Directors;



- absent unforeseen health problems, each candidate should be able to serve as director for a sufficient period of time to make a meaningful contribution to the Board's guidance of PPG's affairs; and
- the Board will be comprised of a majority of independent directors.

In applying these criteria, the committee seeks to establish a Board that, when taken as a whole, should:

- be representative of the broad scope of shareholder interests, without orientation to any particular constituencies;
- challenge management, in a constructive way, to reach PPG's goals and objectives;
- be sensitive to the cultural and geographical diversity of shareholders, associates, operations and interests;
- be comprised principally of active or retired senior executives of publicly held corporations or financial institutions, with consideration given to those individuals who are scientifically-oriented, educators and government officials having corporate experience, whenever the needs of PPG indicate such membership would be appropriate;
- include directors of varying ages, but whose overriding credentials reflect maturity, experience, insight and prominence in the community; and
- be small enough to promote open and meaningful boardroom discussion, but large enough to staff the necessary Board committees.

Shareholder Recommendations or Nominations for Director and Proxy Access

The Nominating and Governance Committee considers recommendations of potential candidates from shareholders. Candidates recommended by shareholders are evaluated against the same criteria used to evaluate all candidates. Shareholders wishing to recommend or nominate a nominee for director should send their recommendation or nomination to the corporate secretary at PPG Industries, Inc., One PPG Place, Pittsburgh, Pennsylvania 15272.

PPG's Bylaws provide for "proxy access." Proxy access is a process that allows an eligible shareholder or a group of eligible shareholders to nominate director candidates to appear in PPG's proxy materials. Proxy access is available to shareholders or groups consisting of no more than 20 shareholders that have held at least 3% of PPG's outstanding stock for at least three years and who have met the other requirements set forth in Article I of PPG's Bylaws. A shareholder recommendation or nomination of a director candidate must be submitted by the deadlines and with the information and written representations that are described in Article I of our Bylaws. Director nominations submitted pursuant to PPG's proxy access Bylaw for consideration at the 2020 annual meeting of shareholders must be received by PPG no earlier than October 9, 2019 and no later than November 8, 2019. A copy of PPG's Bylaws may be accessed on the Corporate Governance section of our website at www.ppg.com/investor.

Officers—Directors Compensation Committee

The Officers—Directors Compensation Committee is comprised of five directors, each of whom is independent under the standards adopted by the Board and the listing standards of the New York Stock Exchange. The committee's charter, which may be accessed on the Corporate Governance section of our website at www.ppg.com/investor, describes the composition, purposes and responsibilities of the committee. Among other things, the charter provides that the committee will be comprised of independent, non-employee directors.

Committee meetings are regularly attended by our Chairman and Chief Executive Officer and our Vice President of Human Resources, as well as a representative of the outside compensation consulting firm retained by the committee, FW Cook. At each meeting, the committee meets in executive session. The committee's chair reports the committee's recommendations on executive compensation to the Board. The human resources department supports the committee in its duties and, along with the Compensation and Employee Benefits Committee, a committee comprised of members of senior management, may be delegated authority to fulfill certain administrative duties regarding our compensation programs. The committee has authority under its charter to retain, approve fees for and terminate advisors, consultants and agents as it deems necessary to assist in the fulfillment of its responsibilities.

The committee approves, adopts, administers, interprets, amends, suspends and terminates our compensation plans applicable to, and fixes the compensation and benefits of, all of our directors and executive officers. Recommendations regarding compensation of other officers are made by our Chairman and Chief Executive Officer. The conclusions reached and recommendations based on these reviews, including with respect to salary adjustments and annual award amounts, are presented to the committee. The committee can exercise its discretion in modifying any recommended adjustments or awards to executives. The committee regularly reviews tally sheets that set forth the Company's total



compensation obligations to our senior executives under various scenarios, including retirement, voluntary and involuntary termination and termination in connection with a change in control of PPG.

The committee engaged FW Cook to advise the committee on all matters related to executive officer and director compensation. Specifically, FW Cook provides relevant market data, current updates regarding trends in executive and director compensation, and advice on program design, specific compensation recommendations for the Chairman and Chief Executive Officer and on the recommendations being made by management for executives other than the Chairman and Chief Executive Officer. The committee meets independently with its consultant at each regularly scheduled meeting. All of the services that the compensation consultant performs for PPG are performed at the request of the committee, are related to executive and director compensation and are in support of decision making by the committee.

In 2018, the committee considered the independence of FW Cook in light of Securities and Exchange Commission rules and New York Stock Exchange listing standards. The committee requested and received a letter from FW Cook addressing FW Cook's and the senior advisor involved in the engagement's independence, including the following factors: (1) other services provided to us by FW Cook; (2) fees paid by us as a percentage of FW Cook's total revenue; (3) policies or procedures maintained by FW Cook that are designed to prevent a conflict of interest; (4) any business or personal relationships between the senior advisor and a member of the committee; (5) any company stock owned by FW Cook or the senior advisor; and (6) any business or personal relationships between our executive officers and FW Cook or the senior advisor. The committee discussed these considerations and concluded that the work performed by FW Cook and FW Cook's senior advisor involved in the engagement did not raise any conflict of interest.

Officers—Directors Compensation Committee Report to Shareholders

We have reviewed and discussed the Compensation Discussion and Analysis section of this Proxy Statement with management. Based on our review and discussion with management, we have recommended to the Board of Directors that the Compensation Discussion and Analysis be included in this Proxy Statement and incorporated in the Annual Report on Form 10-K for the year ended December 31, 2018.

The Officers—Directors Compensation Committee:

Stephen F. Angel
James G. Berges (Chair)
Hugh Grant
Michael W. Lamach
Martin H. Richenhagen

Notwithstanding anything to the contrary set forth in any of our previous filings under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, that incorporate future filings, including this Proxy Statement, in whole or in part, the foregoing Officers—Directors Compensation Committee Report to Shareholders shall not be incorporated by reference into any such filings.

Compensation Program Design Mitigates Risk

Annually, PPG management undertakes a review of all of PPG's compensation programs to identify any inherent material risks to PPG created by these programs. Certain of these compensation programs are also periodically reviewed by the Company's internal auditors. The framework used to identify any potential risks that could be incentivized by our compensation programs was developed with input from members of our human resources, finance, and legal functions and our independent executive compensation consultant, FW Cook. Based on the results of the 2018 review, we concluded that the design of our compensation programs does not encourage our employees to take unnecessary or excessive risks that could harm the long-term value of PPG. Features of our compensation programs and practices that mitigate risk include, among other things: (i) incentive plans that are appropriately weighted between short-term and long-term performance and cash and equity; (ii) long-term incentives that consist of a mix of stock options, performance-based restricted stock units and total shareholder return contingent shares, which provides for a balanced mix of performance measures; (iii) ranges of performance and multiple performance targets are utilized to determine incentive compensation payouts, rather than a single performance target that provides an "all or nothing" basis for compensation; (iv) maximum payouts are in place in our incentive compensation programs to limit excessive payments; (v) determination of incentive compensation payouts is subject to managerial approval and/or Officers—Directors Compensation Committee discretion; and (vi) our executive officers are subject to a recoupment policy in the event of a financial restatement affecting their incentive compensation payout.



Compensation Committee Interlocks and Insider Participation

No member of the Officers—Directors Compensation Committee was at any time during 2018 an officer or employee of PPG or any of our subsidiaries nor is any such person a former officer of PPG or any of our subsidiaries. In addition, no “Officers—Directors Compensation Committee interlocks” existed during 2018. For information concerning Related Person Transactions involving members of the Officers—Directors Compensation Committee, see “Corporate Governance—Certain Relationships and Related Transactions” on page 18.

Technology and Environment Committee

The Technology and Environment Committee is comprised of five directors, each of whom is independent under the standards adopted by the Board. The committee’s charter, which may be accessed on the Corporate Governance section of our website at www.ppg.com/investor, describes the composition, purposes and responsibilities of the committee. The primary purpose of the committee is to discharge certain of the Board’s responsibilities relating to the oversight of programs, initiatives and activities of PPG in the areas of science, technology and sustainability. The functions of the committee are primarily to assess the science and technology capabilities of PPG in all phases of its activities in relation to its corporate strategies and plans; review with management the existing and emerging technologies, and environment, health, safety, product stewardship and other sustainability issues, that can have a material impact on PPG; and review the status of our environment, health, safety, product stewardship and other sustainability policies, programs and practices. More information about PPG’s sustainability goals, metrics, initiatives and achievements and PPG’s community and employee engagement programs can be found in PPG’s sustainability website located at www.sustainability.ppg.com.

Codes of Ethics

Our Global Code of Ethics, which was updated in 2017, is applicable to all directors and employees worldwide, embodies our global principles and practices relating to the ethical conduct of our business and our long-standing commitment to honesty, fair dealing and compliance with all laws affecting our business. We also have a Code of Ethics for Senior Financial Officers that is applicable to our principal executive officer, principal financial officer, principal accounting officer, controller or persons performing similar functions. The Global Code of Ethics and Code of Ethics for Senior Financial Officers are available on the Corporate Governance section of our website at www.ppg.com/investor. In addition, we intend to post on our website all disclosures that are required by law, the Form 8-K rules or the New York Stock Exchange listing standards concerning any amendments to, or waivers from, any provision of our codes.

The Board has established a means for employees, customers, suppliers, shareholders or other interested parties to submit confidential and anonymous reports of suspected or actual violations of our Global Code of Ethics. Any employee, shareholder or other interested party can call the PPG Ethics HELPLINE toll-free to submit a report. In North America, this number is (800) 461-9330. This number is operational 24 hours a day, seven days a week. PPG Ethics HELPLINE numbers for other regions may be found on the Ethics page of our website at www.ppg.com/ethics.

Communications with the Board

Shareholders and other interested parties may send communications to the Board, the independent directors (individually or as a group) or the Lead Director in writing by sending them in care of our corporate secretary at PPG Industries, Inc., One PPG Place, Pittsburgh, Pennsylvania 15272. All communications received will be opened by the corporate secretary for the sole purpose of determining whether the contents represent a message to directors. Communications deemed by the corporate secretary to be frivolous or otherwise inappropriate for the Board’s consideration will not be forwarded. The corporate secretary will maintain a log of all such communications. Communications of an urgent nature are promptly reported to the Board. Communications to directors may also be forwarded within PPG for review by a subject matter expert.



COMPENSATION OF DIRECTORS

Overview

The compensation program for the directors who are not also officers of PPG, to whom we refer as non-employee directors, is reviewed annually by the Officers—Directors Compensation Committee to ensure that the program remains competitive. As a part of the Officers-Directors Compensation Committee's review, the types and levels of compensation offered to our non-employee directors are compared with those provided by a select group of comparable companies. Target total annual compensation for our directors is set at or near the market median using a comparator group of companies. The companies comprising this comparator group are used for review of the executive officer compensation program as well. The comparator group used in 2017 to set 2018 compensation was:

3M Company	Eastman Chemical Company	Honeywell International Inc.	Parker-Hannifin Corporation
Air Products and Chemicals, Inc.	Eaton Corporation	Illinois Tool Works Inc.	Praxair, Inc.
Arconic Inc.	Ecolab Inc.	International Paper Company	The Sherwin-Williams Company
The Dow Chemical Company	Emerson Electric Co.	Johnson Controls, Inc.	Stanley Black & Decker, Inc.
E.I. du Pont de Nemours and Company	Goodyear Tire & Rubber Company	Monsanto Company	Textron Inc.

Taking into consideration the size of PPG relative to this comparator group and advice from FW Cook, the Officers-Directors Compensation Committee reports its recommendations to the Board for approval. The Officers-Directors Compensation Committee does not determine director compensation, but only makes recommendations to the Board. Changes to the non-employee directors' compensation program generally become effective as of the year following adoption.

Directors Compensation Table (2018)

NAME	FEES EARNED OR PAID IN CASH (\$) ⁽¹⁾		STOCK AWARDS (\$) ⁽²⁾	ALL OTHER COMPENSATION (\$) ⁽³⁾	TOTAL (\$)
	ANNUAL RETAINER	COMMITTEE CHAIRPERSON FEES			
S. F. Angel	\$ 135,000	\$ —	\$ 135,093	\$ 10,000	\$ 280,093
J. G. Berges	\$ 135,000	\$ 20,000	\$ 135,093	\$ —	\$ 290,093
J. V. Faraci	\$ 135,000	\$ —	\$ 135,093	\$ 10,000	\$ 280,093
H. Grant	\$ 135,000	\$ 45,000	\$ 135,093	\$ 10,000	\$ 325,093
V. F. Haynes	\$ 135,000	\$ 15,000	\$ 135,093	\$ —	\$ 285,093
M. L. Healey	\$ 135,000	\$ —	\$ 135,093	\$ —	\$ 270,093
G. R. Heminger	\$ 135,000	\$ —	\$ 135,093	\$ —	\$ 270,093
M. J. Hooper	\$ 135,000	\$ —	\$ 135,093	\$ —	\$ 270,093
M. W. Lamach	\$ 135,000	\$ —	\$ 135,093	\$ —	\$ 270,093
M. H. Richenhagen	\$ 135,000	\$ 25,000	\$ 135,093	\$ —	\$ 295,093

- (1) Fees include an annual cash retainer of \$135,000, plus an additional cash retainer for each committee chair and for the Lead Director. For 2018, the annual retainer for service as a committee chair or as the Lead Director was as follows: \$25,000 for the chair of the Audit Committee; \$25,000 for the Lead Director; \$20,000 for the chair of each of the Nominating and Governance Committee and the Officers-Directors Compensation Committee; and \$15,000 for the chair of the Technology and Environment Committee.
- (2) In April 2018, each director received 1,227 time-based restricted stock units, or RSUs. The RSUs will vest on April 17, 2019 and the grant date fair value of each RSU grant was \$110.10. Dollar values represent the grant date fair value calculated in accordance with FASB ASC Topic 718. The assumptions made in calculating the grant date fair values are set forth in Note 18 to our Financial Statements for the year ended December 31, 2018, which is located on pages 86 through 88 of our Annual Report on Form 10-K. As of December 31, 2018, each director had 1,227 unvested RSUs.



- (3) Amounts in this column reflect donations made by the PPG Industries Foundation under our charitable awards program. The PPG Industries Foundation matches up to \$10,000 of donations made by a director in any one year. However, matching payments by the PPG Industries Foundation may be paid in a year subsequent to the donation depending on the timing of the director's donation during the year and the timing of the PPG Industries Foundation's verification process. This may result in matching payments that exceed \$10,000 in one year. For additional information regarding charitable awards, see "Charitable Awards Program" on page 27.

Annual Retainer

For 2018, each of our non-employee directors received an annual retainer with a value equal to \$270,000, of which \$135,000 was paid in cash and \$135,000 in equity in the form of time-based restricted stock units, or TBRsUs. The cash portion of the retainer was payable in quarterly installments, with the first quarterly installment paid after the annual shareholders meeting. The number of TBRsUs a director received was determined by dividing \$135,000 by the weighted average closing price of our stock on the grant date, which was the date of the 2018 annual meeting of shareholders. A TBRsU represents the right to receive a share of PPG common stock upon vesting and earns dividend equivalents during the vesting period when dividends are declared on PPG common stock, but does not carry voting rights or other rights afforded to a holder of PPG common stock. TBRsUs granted in 2018 vest on the day prior to the 2019 Annual Meeting of Shareholders. Beginning in 2019, the annual retainer will increase to \$280,000, of which \$135,000 will be paid in cash and \$145,000 will be paid in equity in the form of TBRsUs.

Additional Retainers for Committee Chairs and the Lead Director

In addition to the annual retainer for each non-employee director, each non-employee director who chairs a Board standing committee is entitled to an additional annual cash retainer, which is payable at the same time as the regular annual retainer. The Officers—Directors Compensation Committee also determined to begin paying an additional cash retainer to the Lead Director beginning in 2018 in recognition of the additional time and effort required by the Lead Director in his role, including, among other responsibilities, planning Board meetings, meeting with management and engaging with our shareholders. For 2018, the additional annual retainer for service as a committee chair or as the Lead Director was:

COMMITTEE	RETAINER AMOUNT
Audit	\$ 25,000
Lead Director	\$ 25,000
Nominating and Governance	\$ 20,000
Officers—Directors Compensation	\$ 20,000
Technology and Environment	\$ 15,000

Insurance Coverage

We pay the premiums to provide each of our non-employee directors with the following insurance coverage:

- Accidental death and dismemberment insurance coverage, which provides \$250,000 for accidental loss of life, and up to 100% of the death benefit for loss of limb. The aggregate cost to PPG of providing this coverage to non-employee directors for 2018 was \$1,664; and
- PPG aircraft travel insurance coverage, which provides up to a \$1,000,000 per seat voluntary settlement allowance, for travel on a PPG-owned aircraft, and a reduced amount for travel on a PPG leased or chartered aircraft. The aggregate cost to PPG of providing this coverage to non-employee directors for 2018 was \$17,105.

Deferred Compensation

A non-employee director may elect to have all or a portion of his or her retainer fees (including fees payable in TBRsUs) credited to the PPG Industries, Inc. Deferred Compensation Plan for Directors, thus deferring receipt of such fees until after the director leaves the Board. All amounts held in a director's account under the Deferred Compensation Plan are credited as hypothetical shares of our stock, or what we refer to as common stock equivalents, the number of which is determined by dividing the dollar amount of the deferral by the closing stock price of PPG common stock on the New York Stock Exchange on the date of the deferral. Common stock equivalents earn dividend equivalents (that are converted into additional common stock equivalents) when dividends are declared on PPG common stock, but do not carry voting rights or other rights afforded to a holder of PPG common stock. Each non-employee director will generally be paid his or her deferred compensation account balance no earlier than six months and ten days after leaving the



Board of Directors, except in circumstances of death or disability, in which case payment shall be made as soon as administratively possible. Each non-employee director's account balance related to compensation deferred on or after January 1, 2005 will be paid in a lump sum; however, a non-employee director may elect to receive payment of his or her account balance related to compensation deferred prior to January 1, 2005 in one to 15 annual installments. All distributions are made in the form of one share of PPG common stock for each common stock equivalent credited to the director's deferred account (and cash as to any fractional common stock equivalents).

Charitable Awards Program

As part of our overall program to promote charitable giving, we established a directors' charitable award program funded by insurance policies on the lives of directors who were initially elected before July 17, 2003. Upon the death of any of these directors, PPG will donate an amount up to and including a total of \$1 million to one or more qualifying charitable organizations designated by any such director and approved by PPG. We will be reimbursed subsequently from the proceeds of the life insurance policies. Directors derive no financial benefit from this program since all charitable deductions accrue solely to PPG. This program is not applicable to any director initially elected on or after July 17, 2003. The aggregate cost of this program to PPG for 2018 was \$59,627.

In addition to the above program, all of our current directors are eligible to participate in the PPG Industries Foundation Matching Gifts Program, which encourages charitable donations by our directors by matching his or her contributions to eligible institutions. Contributions of up to a total of \$10,000 per year may be matched under the program. Most charitable organizations are eligible for the Matching Gifts Program, with a few exceptions.

Stock Ownership

We established stock ownership guidelines for all non-employee directors effective January 1, 2005. Under the guidelines, each non-employee director is required to own shares of our stock with a value equal to five times the portion of the annual retainer that is paid in cash. For non-employee directors, unvested TBRsUs and common stock equivalent shares credited to the director under the Deferred Compensation Plan are counted toward meeting this requirement. Ms. Healey and Messrs. Lamach and Heminger are within their five-year compliance period and should meet the ownership requirement by the end of such period. All other non-employee directors have met or exceeded the ownership requirement.

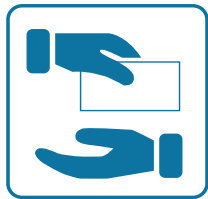


COMPENSATION DISCUSSION AND ANALYSIS ROADMAP



HOW DID WE PERFORM?

- Delivered solid adjusted earnings per diluted share growth
- Increased sales about 4%
- Returned approximately \$2.2 billion to shareholders, including \$1.7 billion of share repurchases and an increased annual per share dividend payout of about \$450 million
- Generated about \$1.5 billion in cash from continuing operations
- Completed several acquisitions, increasing both geographic and product scope
- While our financial performance was strong, we did not achieve our adjusted earnings per diluted share, adjusted cash flow or sales volume/mix growth targets resulting in below target incentive compensation awards



HOW DO WE DETERMINE COMPENSATION?

- Based on our pay-for-performance philosophy
- Executive Compensation is approved by our independent Officers-Directors Compensation Committee
- We utilize general industry and comparator group data that is intended to be representative of the market in which we compete most directly for executive talent and pay is set at or near the market median



HOW DO WE ADDRESS RISK?

- Our officers are subject to stock ownership requirements
- Our officers may not engage in transactions that are contrary to the interests of shareholders
- Executive officers are subject to a “clawback” policy
- Incentive plans that are appropriately weighted between short-term and long-term performance and cash and equity using multiple award types and performance measures



HOW DO WE PAY OUR EXECUTIVES?

- Our annual compensation policies reflect our pay-for-performance philosophy with over 70% of pay tied to performance
- Our executive officers receive two forms of annual compensation—base salary and annual incentive awards—which together constitute an executive’s total annual compensation
- Our executive officers receive three forms of long-term incentive compensation—stock options, performance based RSUs and total shareholder return contingent shares—which together constitute an executive’s total long-term incentive compensation



WHY YOU SHOULD APPROVE OUR SAY-ON-PAY?

- Base salary and annual incentive targets for our executive officers are established annually to maintain parity with the competitive market for executives in comparable positions and are set at or near the market median
- Our compensation program is heavily weighted toward pay for meeting performance objectives and increasing PPG’s stock price
- Our shareholders overwhelmingly approved the compensation of our named executive officers, with approximately 93% of shareholder votes cast in favor of our 2018 say-on-pay resolution



COMPENSATION DISCUSSION AND ANALYSIS

Executive Summary

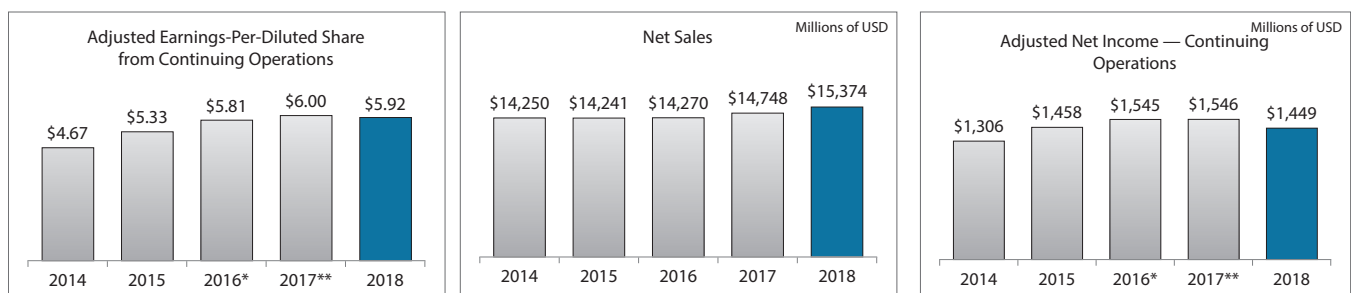
PPG's vision is to be the world's leading coatings company by consistently delivering high-quality, innovative and sustainable solutions that customers trust to protect and beautify their products and surroundings. This vision is enabled by a strategy of accelerated profitable growth and enhanced operational excellence. Our executive compensation program is a key factor in promoting this strategy and a crucial tool in aligning the interests of our senior leadership with those of our shareholders.

The Company's strong performance and focus on shareholder value is evident in our continuing legacy of outstanding cash generation and rewarding shareholders. PPG has paid uninterrupted annual dividends since 1899 and has increased its annual dividend payout for 47 consecutive years. Continuing with that legacy, in 2018 PPG returned about \$2.2 billion to shareholders in the form of an increased annual per share dividend payout and share repurchases.

Executive compensation is based on our pay-for-performance philosophy, which emphasizes executive performance measures that correlate closely with the achievement of both shorter-term performance objectives and longer-term shareholder value creation. To this end, a substantial portion of our executives' annual and long-term compensation is performance-based, with the payment being contingent on the achievement of performance goals. We believe the program strikes the appropriate balance between effectively incentivizing our executives based on performance and utilizing responsible, market competitive pay practices in order that our executives dedicate themselves fully to value creation for our shareholders. This balance is evidenced by the following:

- In 2018, the Company delivered solid financial performance despite significant and persistent raw material and logistics cost inflation, which impacted the entire coatings industry. Total net sales from continuing operations for 2018 were approximately \$15.4 billion, up about 4% compared to 2017, including net favorable foreign currency translation of less than 1%. The Company's 2018 full-year reported net income from continuing operations was \$1.3 billion, or \$5.40 per diluted share, versus \$1.4 billion, or \$5.31 per diluted share, in 2017. Adjusted net income from continuing operations for 2018 was \$1.45 billion, versus \$1.51 billion in 2017.
- In September, the Company raised the per-share dividend by 7%—paying approximately \$450 million in dividends in 2018. The Company also repurchased approximately \$1.7 billion of stock in 2018.
- In 2018, the Company completed several acquisitions, increasing both geographic and product scope. Cash spending for these acquisitions totaled approximately \$380 million.

The following charts contain adjusted earnings-per-diluted share from continuing operations, net sales from continuing operations and adjusted net income from continuing operations as used for determining the compensation of our executive officers for each of the last five fiscal years:



* 2016 Adjusted Net Income and Adjusted Earnings Per Diluted Share include \$46 million (\$0.17) for the results of the flat glass business through September 30, 2016, which has been recast as discontinued operations for all periods presented but which is included in the Compensation metric.

**2017 Adjusted Net Income and Adjusted Earnings Per Diluted Share include \$15 million (\$0.06) for the results of the North American fiber glass business through August 31, 2017, which has been recast as discontinued operations for all periods presented, but which is included in the Compensation metric. These figures also include \$20 million (\$0.08) for the impact of raw materials and Puerto Rican business resulting from the 2017 natural disasters.

Adjusted earnings-per-diluted share from continuing operations and adjusted net income from continuing operations are not recognized financial measures determined in accordance with U.S. generally accepted accounting principles (U.S. GAAP) and should not be considered a substitute for earnings-per-diluted share or net income or other financial measures as computed in accordance with U.S. GAAP. PPG's management considers this information useful in providing insight into the company's ongoing operating performance because it excludes the impact of items that cannot



reasonably be expected to recur on a quarterly basis or that are not attributable to our primary operations. A Regulation G reconciliation of adjusted earnings-per-share from continuing operations and adjusted net income from continuing operations to reported adjusted earnings-per-diluted share from continuing operations and net income from continuing operations is included in Annex A to this Proxy Statement.

- Although we had solid performance in 2018, we did not achieve our adjusted earnings per diluted share target, our adjusted cash flow target or our sales volume/mix growth target. As a result, annual incentive awards that were paid to executive officers ranged from 37% to 116% of target. Our total shareholder return over the past three years when measured against the S&P 500 was in the 31st percentile resulting in the payment of long-term TSR share awards at 32.5% of target.
- Between 70% and 89% of the named executive officers' target total direct compensation opportunity for 2018 was in the form of performance-based variable compensation and long-term incentives motivating them to deliver strong business performance and create shareholder value.
- Base salary and annual incentive targets for our executive officers are established annually to maintain parity with the competitive market for executives in comparable positions. Target total annual compensation for each position is set at or near the market median.
- PPG's compensation programs are reviewed annually to identify any inherent material risks to PPG created by these programs. Based on the results of the 2018 review, we concluded that the design of our compensation programs does not encourage our employees to take unnecessary or excessive risks that could harm the long-term value of PPG.
- At the 2018 annual meeting, we held a shareholder advisory vote on the compensation of our named executive officers, commonly referred to as a say-on-pay vote. Our shareholders overwhelmingly approved the compensation of our named executive officers, with approximately 93% of shareholder votes cast in favor of our 2018 say-on-pay resolution. Following its review of this vote, the Officers—Directors Compensation Committee recommended to the full Board that we retain our general approach to executive compensation, with an emphasis on short- and long-term incentive compensation that rewards our executive officers when they deliver value for our shareholders. Consistent with this philosophy:
 - Our performance metrics are focused on increasing shareholder value and are tied to measures impacting both shorter-term and longer-term performance. Shorter-term performance metrics include adjusted earnings-per-diluted share from continuing operations, cash flow from operating activities-continuing operations, pre-tax, pre-interest income, working capital reduction, and sales volume/mix growth. Longer-term performance metrics include total shareholder return, adjusted earnings per diluted share growth, cash flow return on capital and stock price appreciation.
 - Payment of long-term incentive awards is based solely on Company performance. We have three-year award and payout cycles for both performance-based restricted stock units, or PBRsUs, and total shareholder return shares, or TSR shares. We also have three-year vesting for stock options.
- We provide very limited perquisites to our executive officers.

Our officers are subject to stock ownership requirements. Our Chief Executive Officer must own shares of PPG common stock with a value of six times his base salary and the other executive officers must own shares of PPG common stock with a value of three times his or her base salary. Officers are expected to meet these ownership requirements within five years of election. Those officers who have not yet met this requirement are paid 20% of their annual incentive in PPG stock, which is restricted from sale for a period of two to five years. In addition, for officers who have been subject to the policy for more than five years at their current requirement level and have not met the ownership requirement, 100% of the vested shares delivered from the PBRsU award and TSR share award must be held by the officer for a minimum of one year and until the requirement is met. The executive officers named in the Summary Compensation Table have met their ownership requirement, except for Ms. Liebert who joined the Company in June 2018. Ms. Liebert is within the five-year compliance period.

- Our officers may not engage in transactions that are contrary to the interests of shareholders, such as "short sales," "short sales against the box," "put" and "call" options and hedging transactions designed to minimize an executive's risk inherent in owning PPG stock. In addition, officers may not hold PPG stock in a margin account and may not pledge PPG stock as collateral for a loan.



- Executive officers are subject to a “clawback” policy that is designed to recoup incentive compensation when a financial restatement occurs and certain other conditions exist.
- We do not provide tax gross-ups on perquisites to our named executive officers.

Compensation Philosophy and Objectives

PPG’s philosophy in establishing compensation policies for our executive officers is to align compensation with our strategic objectives, while concurrently providing competitive compensation that enables us to attract and retain top-quality executive talent. The primary objectives of our compensation policies for executive officers are to:

- Attract and retain executive officers by offering total compensation that is competitive with that offered by similarly situated companies and rewarding outstanding personal performance;
- Promote and reward the achievement of short-term objectives that our Board of Directors and management believe will lead to long-term growth in shareholder value; and
- Closely align the interests of executive officers with those of our shareholders by making long-term incentive compensation dependent upon the Company’s financial performance and total shareholder return.

Principal Components of Executive Compensation

The principal components of our executive compensation program are:

COMPENSATION COMPONENT	OVERVIEW	OBJECTIVES
Base Salary	Fixed compensation that is established annually.	Maintain parity with the competitive market for executives in comparable positions.
Annual Incentive Awards	Variable compensation that is based on Company, business, and individual performance.	Incentivize executive officers to achieve our short-term performance objectives.
Long-Term, Equity-Based Incentives	Variable compensation that is based solely on Company performance.	Retain our executive officers, align their financial interests with the interests of shareholders, and incentivize achievement of our long-term strategic goals.

Mix of Compensation Components

Executive compensation is based on our pay-for-performance philosophy, which emphasizes executive performance measures that correlate closely with the achievement of both shorter-term performance objectives and longer-term shareholder value creation. To this end, a substantial portion of our executives’ annual and long-term compensation is performance-based, with the payment being contingent on the achievement of performance goals. The portion of compensation that is performance-based increases with the executive’s level of responsibility. We use performance-based compensation for more senior positions because these roles have greater leadership responsibility and influence on the performance of the Company as a whole.

Compensation Program Design Mitigates Risk

In 2018, the Company’s management undertook a review of all of PPG’s compensation programs to identify any inherent material risks to PPG created by these programs. Based on the results of this review, we concluded that the design of our compensation programs does not encourage our employees to take unnecessary or excessive risks that could harm the long-term value of PPG. For more information about this review and the features of our compensation program that mitigate risk, see “Corporate Governance—Compensation Program Design Mitigates Risk” on page 23.

Annual Compensation Programs

Our executive officers receive two forms of annual compensation—base salary and annual incentive awards—which together constitute an executive’s total annual compensation. Please note that “total annual compensation,” as discussed in this Compensation Discussion and Analysis, differs from the “Total” compensation column of the Summary Compensation Table on page 44, which includes long-term incentive and other forms of compensation. The levels of base salary and annual incentive targets for our executive officers are established annually under a program intended to



maintain parity with the competitive market for executives in comparable positions. Target total annual compensation for each position is set at or near the “market value” for that position.

To determine market value, the Officers-Directors Compensation Committee considers compensation data based on a comparator group, as well as the most recently available data from nationally-recognized independent executive compensation surveys representing a cross section of manufacturing companies.

For purposes of establishing the 2018 executive compensation program, the Officers-Directors Compensation Committee considered a competitive analysis of total direct compensation levels and compensation mixes for our executive officers, using information from:

- two general industry surveys as provided by management: the Aon Hewitt Associates 2017 TCM Executive Total Compensation Survey and the Willis Towers Watson 2017 U.S. General Industry Executive Database. The competitive consensus for top five named executive officers consists of an equally-weighted average of median data from both general industry surveys; and
- comparison company median data from a comparator group consisting of 20 companies. The comparator group used in 2017 to set 2018 compensation was:

3M Company	Eastman Chemical Company	Honeywell International Inc.	Parker-Hannifin Corporation
Air Products and Chemicals, Inc.	Eaton Corporation	Illinois Tool Works Inc.	Praxair, Inc.
Arconic Inc.	Ecolab Inc.	International Paper Company	The Sherwin-Williams Company
The Dow Chemical Company	Emerson Electric Co.	Johnson Controls, Inc.	Stanley Black & Decker, Inc.
E.I. du Pont de Nemours and Company	Goodyear Tire & Rubber Company	Monsanto Company	Textron Inc.

Our comparator group is intended to be representative of the market in which we compete most directly for executive talent. The selection of companies comprising our comparator group is based on similarity in revenue size, lines of business, participation in global markets and market capitalization. The peer group is constructed to target PPG near the median of the composite ranking of the financial and operating metrics of the companies in the comparator group.

The Officers-Directors Compensation Committee annually reviews this group of companies with our independent executive compensation consultant, FW Cook, to ensure that it remains an appropriate benchmark for us.

We target the median levels of compensation to derive our market value by adjusting this compensation data to reflect differences in company revenues using regression analysis. The competitive analysis showed that the 2018 target total direct compensation for the Company’s named executive officers was positioned within the market median range on average.

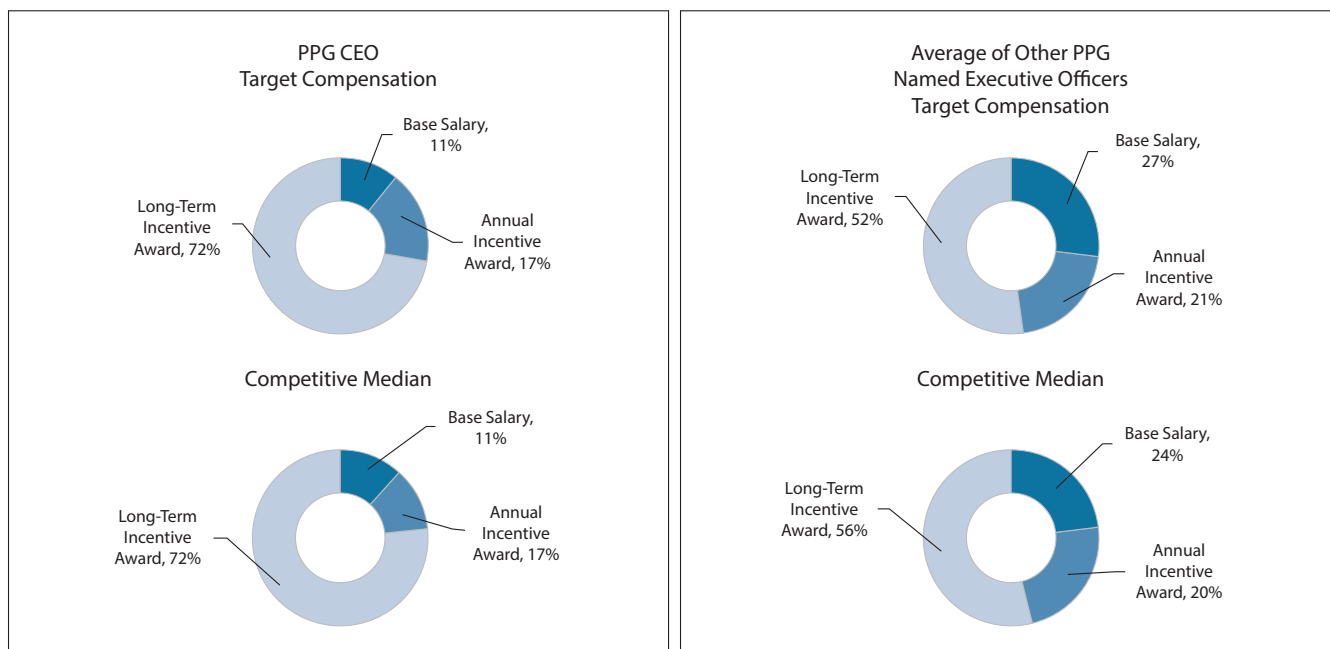
In addition, the Officers-Directors Compensation Committee annually reviews a tally sheet of each executive officer’s compensation. Each tally sheet includes detailed data for each of the following compensation elements:

- Annual compensation: Information regarding base salary and annual incentive targets for the current year;
- Long-term incentive awards: Information regarding all equity-based awards, whether vested or unvested, including total pre-tax value to the executive and holdings relative to our stock ownership requirements;
- Benefits and perquisites: Line item summary showing the annualized cost to the Company of health and welfare benefits, life insurance and perquisites;
- Pension and deferred compensation: Annualized cost to the Company of pension plan benefits (qualified plan and non-qualified plan) and defined contribution plans (401(k) and deferred compensation); and
- Description and quantification of all compensation and benefits payable upon retirement, termination of employment or change in control.

The Officers-Directors Compensation Committee reviews the information presented in the tally sheet to ensure that it is informed of the compensation and benefits each executive is receiving annually.



The charts below illustrate the allocation of the principal compensation components for our named executive officers for 2018.



Annual Compensation Policies

Our annual compensation policies reflect our pay-for-performance philosophy. We set target total annual compensation for our executive officers to be competitive with the market value for comparable positions, taking into account each executive's experience in the position and performance. Annual incentive awards are targeted at a level that, when combined with base salaries, is intended to yield total annual compensation that approximates market value. As a result, total annual compensation for a position generally should exceed its market value when our financial performance exceeds our applicable annual targets and individual performance contributes to meeting our objectives. Total annual compensation generally should be below market value when our financial performance does not meet targets and/or individual performance does not have a favorable impact on our objectives.

Base Salary. Based on the Officers-Directors Compensation Committee's review of the applicable compensation data as discussed above, in February 2018 the Officers-Directors Compensation Committee set base salaries effective March 1, 2018 for all executive officers in relation to the market value for comparable positions. Mr. McGarry received a base salary increase of \$40,000; Mr. Morales received a based increase of \$75,000; Mr. Bost received a base salary increase of \$5,000; and Mr. Knavish received a base salary increase of \$20,000.

On July 1, 2018, Mr. Knavish's annual base salary increased \$105,000 to \$625,000.

Ms. Liebert joined PPG in June 2018, and pursuant to her offer letter with the Company, Ms. Liebert received an annual base salary of \$625,000. For a description of the material terms of Ms. Liebert's offer letter, see "Compensatory Arrangements with Certain Executive Officers" on page 51.

Annual Incentive Awards. In February 2018, the Officers-Directors Compensation Committee established annual incentive awards based primarily on target levels set for each executive officer and pre-established, short-term performance objectives. On an annual basis, the Officers-Directors Compensation Committee establishes a target annual incentive award for each executive officer based on the executive's position and the market value of comparable positions in our comparator group. For 2018, this target, when expressed as a percentage of base salary, was as follows for each of the executive officers named in the Summary Compensation Table: Mr. McGarry, 145%; Mr. Morales, 90%; Ms. Liebert, 70%; Mr. Bost, 85%; and Mr. Knavish, 70%. The amount of an executive's actual annual incentive award, in relation to the executive's target opportunity, is determined on the basis of achievement of short-term performance objectives. The performance objectives for our Chairman and Chief Executive Officer, our Chief Financial Officer and our Senior Vice President, Law, Compliance and Special Projects include specific financial targets for Company performance (weighted 70%) and personal performance (weighted 30%). The performance objectives for



our other executive officers include specific financial targets for Company performance (weighted 20%), business performance (weighted 50%) and personal performance (weighted 30%).

For many years, PPG has been committed to sustainability. Recognizing the importance of sustainability and its ability to drive innovation in our business, PPG includes sustainability goals in the performance goals of its Chairman and Chief Executive Officer. Performance against these goals is reviewed by the Officers—Directors Compensation Committee of the Board of Directors.

Annual incentive compensation of PPG's executives and senior managers is partially (30 percent) based on personal goals that tie to overall corporate business goals, with the remainder based on company and business financial performance. Although PPG does not require that its executives and senior managers have personal goals linked to social or environmental performance, some executives and senior managers, by virtue of their responsibilities, may have goals related to those issues. In addition, executive business unit leaders receive sustainability scorecards for their business unit, and they are responsible for driving improvement in their business unit's sustainability metrics. Safety, waste costs, energy usage and costs, and sustainable product sales are part of these executives' annual performance review.

The potential payout of the Company performance component of the annual incentive is based on a pre-determined schedule recommended by management and approved by the Officers-Directors Compensation Committee. The schedule corresponds to various levels of potential Company financial performance measured by adjusted earnings-per-diluted share from continuing operations (weighted 60%), adjusted cash flow from operating activities (weighted 20%) and sales volume/mix growth (weighted 20%), assuming the minimum adjusted earnings-per-diluted share from continuing operations threshold is met. The maximum payout of this component under the schedule is 220% of target.

In assessing Company performance against objectives, the Officers-Directors Compensation Committee considers actual results against the approved target objectives, considering whether significant unforeseen obstacles or favorable circumstances altered the expected difficulty of achieving the desired results and the extent to which economic assumptions underlying the performance targets materialized. The overall assessment for Company performance then determines the percentage of the target award that will be paid to each executive for the Company performance component of the annual incentive award. For 2018, as described below, the Officers-Directors Compensation Committee exercised discretion in applying certain non-operating adjustments to the actual earnings-per-diluted share from continuing operations and cash flow from operating activities – continuing operations results, consistent with guidelines established previously by the Officers-Directors Compensation Committee. These adjustments generally relate to legacy litigation or legacy environmental remediation, accounting rule changes and major portfolio changes, including planned restructuring initiatives.

In February 2018, the Officers-Directors Compensation Committee approved a financial performance standard for the Company component of the award of \$6.44 adjusted earnings per diluted share from continuing operations, adjusted cash flow from operating activities of \$1,925 million and sales volume/mix growth of 1.7%. If achieved, this standard would generate 100% of the target bonus for the Company component of the award. The approved performance standard for 2018 included a threshold adjusted earnings per diluted share from continuing operations of \$4.83, below which no bonus would be paid, regardless of either the adjusted cash flow from operating activities or the sales volume/mix growth performance, and a minimum cash flow from continuing operations performance of \$1,198 million and a minimum sales growth/mix performance of 0.0% for payment on those two components. In addition, the approved performance standard for 2018 included a maximum bonus opportunity of 220% if adjusted earnings per diluted share from continuing operations of \$7.08, adjusted cash flow from operating activities of \$2,156 million and sales volume/mix growth of 2.6% were achieved.

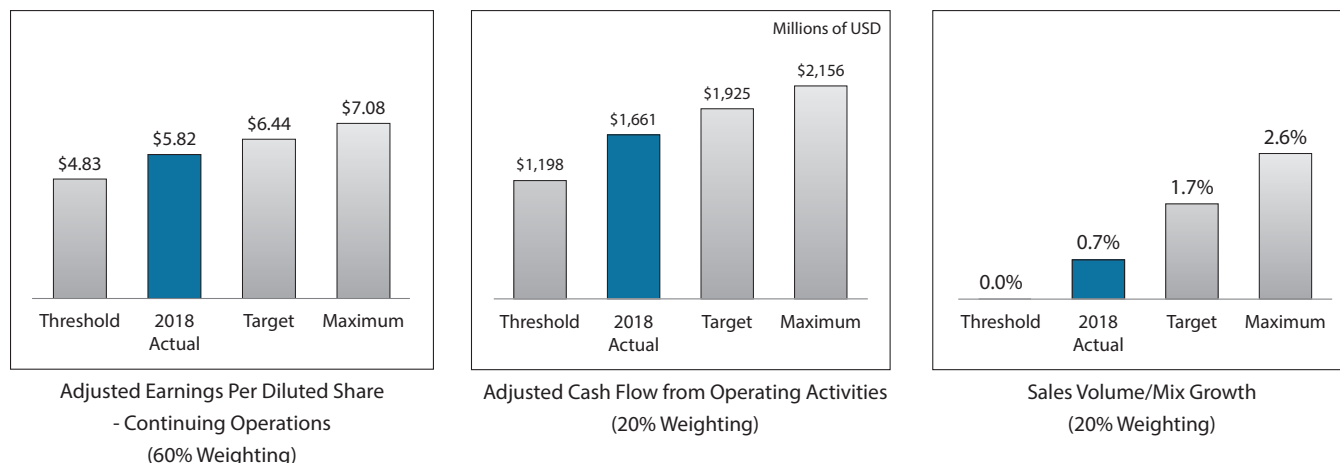
For 2018, the Officers-Directors Compensation Committee approved the actual Company performance component for incentive awards based on adjusted earnings per diluted share from continuing operations of \$5.82, adjusted cash flow from operating activities of \$1,661 million and sales volume/mix growth of 0.7%. The earnings per diluted share performance component included adjustments of \$0.24 for environmental remediation charges and other costs, \$0.18 for a business restructuring charge, \$0.03 for legacy legal settlements, \$0.03 for accelerated depreciation from restructuring actions, \$0.03 for an impairment of a non-manufacturing asset, \$0.02 for brand rationalization, \$0.02 for transaction-related costs, offset by a \$0.08 gain on the sale of non-operating assets and \$0.05 for the tax benefit related to the U.S. Tax Cuts and Jobs Act. Adjustments to the cash flow from operating activities performance component included adding back \$99 million for cash contributions to pension plans and \$95 million for restructuring cash spending.

Adjusted earnings per diluted share from continuing operations of \$5.82, adjusted cash flow from operating activities of \$1,661 million and sales volume/mix growth of 0.7% resulted in a payout of 56% of target for the Company performance



component, based on the schedule discussed above. For the adjusted earnings per diluted share component, this schedule yielded a payout of 59% for the result of \$5.82 per share. For the adjusted cash flow component, this schedule yielded a payout of 63% for the result of \$1,661 million. For the sales volume/mix growth component, this schedule yielded a payout of 41% for the result of 0.7%. Combining these three results using the 60%, 20% and 20% weightings, respectively, yielded an overall result of 56%, which was approved by the Officers-Directors Compensation Committee.

Approved 2018 Performance Components



The personal performance component of the annual incentive is based on measures of individual performance relevant to the particular individual's job responsibilities. The personal performance assessment of our Chairman and Chief Executive Officer is determined by the Officers-Directors Compensation Committee, with input from the other non-management members of the Board. The personal performance of each other executive officer is determined by our Chairman and Chief Executive Officer. The following factors were considered in assessing the personal performance of the executive officers named in the Summary Compensation Table for 2018 against individual objectives:

Under Mr. McGarry's leadership, the Company delivered adjusted earnings per diluted share growth despite significant and persistent raw material and logistics cost inflation, which impacted the entire coatings industry. Total net sales from continuing operations for 2018 were approximately \$15.4 billion, up about 4% compared to 2017, including net favorable foreign currency translation of less than 1%. The Company's 2018 full-year reported net income from continuing operations was \$1.3 billion, or \$5.40 per diluted share, versus \$1.4 billion, or \$5.31 per diluted share, in 2017. Adjusted net income from continuing operations for 2018 was \$1.45 billion, versus \$1.51 billion in 2017. Mr. McGarry led the expansion of our coatings portfolio with the signing and completion of a number of acquisitions. Mr. McGarry was also successful in leading the Company's efforts to increase prices to recover margins. These results met expectations.

Mr. Morales led the finance organization. In 2018, the Company generated cash from operations of about \$1.5 billion, which was consistent with 2017, and completed more than \$1.7 billion of share repurchases. Mr. Morales led the Company's efforts to contain its costs and return capital to shareholders. In addition, he provided guidance over the signing and completion of several acquisitions. Mr. Morales effectively led initiatives to modernize the Finance function and performed effectively as a member of the Executive Committee, positively influencing the results of the Company. In 2018, the Company discovered that the Company's former Vice President and Controller directed his subordinates to improperly override the Company's internal controls during the Company's financial close process, which directions were followed and not disclosed to others in senior management. This discovery led to an Audit Committee investigation and a restatement of the Company's financial statements. Subsequent to the Audit Committee investigation, Mr. Morales has been involved in the Company's remediation efforts. These results partially met expectations.

Ms. Liebert made an effective transition to the role of Senior Vice President, Automotive Coatings after joining the Company in June 2018. She led the automotive original equipment manufacturer (OEM) business and the Latin America region. Sales volumes expanded in Latin America, primarily from automotive OEM coatings, industrial coatings, packaging coatings and automotive refinish coatings. Ms. Liebert also began efforts to increase prices and reorganized the automotive coatings business to be more effective. These results met expectations.



Mr. Bost was Senior Vice President and General Counsel for the period January through July, during which time he led the legal organization's assistance of the Audit Committee's investigation into certain accounting matters and was instrumental in signing and completing a number of acquisitions. In addition, he effectively performed as a member of the Executive Committee, positively influencing the results of the Company. In August, he made a successful transition to his role as Senior Vice President, Law, Compliance and Special Projects. These results exceeded expectations.

Mr. Knavish led the industrial business and the Asia Pacific region. He also oversaw the packaging coatings businesses through June. Under Mr. Knavish's leadership, industrial coatings and packaging coatings achieved increased sales volumes aided by new product technologies. Industrial coatings sales volumes growth was the strongest in Europe due to strong end-use market demand for coil and heavy-duty equipment materials. In 2018, despite significant positive price and lower overheads, margins declined due to raw material cost inflation in both Asia and his business unit accountability. Mr. Knavish was instrumental in securing two definitive agreements for acquisitions. He provided leadership to his staff responsibilities for the global supply management organization. These results partially met expectations.

Business unit short-term performance objectives and their assessment are specific to each particular business and are based on pre-tax, pre-interest earnings, working capital reduction, and sales volume/mix growth. The overall assessment of business performance determines the percent of target paid to applicable executives for the business component of the annual incentive award.

For 2018, we assessed the performance of 10 defined businesses against the criteria discussed above. Actual payouts of the business performance component ranged from 0% to 190% of target. The business performance component payouts for two of our executive officers named in the Summary Compensation Table, Ms. Liebert and Mr. Knavish, are based on the performance of each of the specific businesses and regions for which each of them is responsible.

Ms. Liebert's business performance component, for the period from her hire date in June through December, was a composite of the results of the automotive coatings business and the Latin America region. The composite performance of these businesses partially met performance objectives for pre-tax, pre-interest earnings, working capital reductions and sales volume/mix growth and resulted in a payout of 20% of target for this component.

Mr. Knavish's business performance component was a composite of the results of the industrial and packaging coatings businesses and the Asia Pacific region. The composite performance of these businesses partially met performance objectives for pre-tax, pre-interest earnings, working capital reductions and sales volume/mix growth and resulted in a payout of 40% of target for this component.

The level of achievement of corporate and personal performance objectives for 2018 for Messrs. McGarry, Morales and Bost corresponded to payouts of 63%, 37% and 78% of target, respectively. The level of achievement of business, corporate and personal performance objectives for 2018 for Ms. Liebert and Mr. Knavish corresponded to payouts of 65%, and 69% of target, respectively. Ms. Liebert's annual incentive award was prorated as she joined the Company on June 21, 2018. The annual incentive awards actually paid to each of these executives for 2018 are shown in the "Non-Equity Incentive Plan Compensation" column of the Summary Compensation Table on page 44. Annual incentive awards for these executive officers have ranged from 37% to 159% of target.

Annual incentive awards are payable in cash, except that any executive who does not meet the stock ownership requirements described under "PPG Stock Ownership Requirements" on page 43 receives 20% of his or her annual incentive award in the form of PPG common stock. Such stock is restricted from sale by such executive for a period of between two and five years, depending upon the level of stock ownership of the executive. In addition, for officers who have been subject to the policy for more than five years at their current requirement level and have not met the ownership requirement, 100% of the vested shares delivered from the PBRSU award and TSR share award must be held by the officer for a minimum of one year and until the requirement is met. U.S.-based participants are entitled to defer part or all of an annual incentive award under our deferred compensation plan. The executive officers named in the Summary Compensation Table have met their stock ownership requirement, except for Ms. Liebert who joined the Company in June 2018. Ms. Liebert is within the five-year compliance period. For additional information concerning our deferred compensation plan, see "Deferred Compensation Opportunities" on page 40.



Long-Term Incentive Compensation

Our Officers-Directors Compensation Committee believes that long-term incentive compensation is an important component of our program because it has the effect of retaining executives, aligning executives' financial interests with the interests of shareholders and incentivizing achievement of PPG's long-term strategic goals. Payment of long-term incentive awards is based solely on Company performance. Grants are targeted at levels that approximate market value for comparable positions, utilizing the same compensation data used for setting total annual compensation. Each February, the Officers-Directors Compensation Committee reviews and approves equity-based compensation for that year to be granted to executive officers. Three types of long-term incentive awards are granted annually to executive officers:

- Stock options;
- Total Shareholder Return contingent shares, or TSR shares; and
- Performance-based Restricted Stock Units, or PBRsUs.

The number of stock options, TSR shares and PBRsUs granted to executive officers is intended to represent an estimated potential value that, when combined with total annual compensation, as discussed above, will approximate the market value of total annual and long-term compensation paid to executives in our comparator group and in a cross-section of general industrial companies represented in nationally-recognized executive compensation surveys.

These types of long-term incentive awards were selected to provide a program that focuses on different aspects of long-term performance: stock price appreciation, total return to shareholders and earnings-per-share growth and cash flow return on capital. The estimated potential value of the awards granted to each executive officer is delivered equally through each instrument, so that approximately one-third of the value of the total award is in stock options, one-third is in performance-based RSUs, and one-third is in TSR shares. The Officers-Directors Compensation Committee selected equal distribution to emphasize its view that each of the three equity-based vehicles serves a particular purpose and is equally important in supporting our long-term compensation strategy.

Stock Options. Stock options provide our executive officers with the opportunity to purchase and maintain an equity interest in PPG and to share in the appreciation of the value of our stock. All stock options granted to executive officers in 2018 were granted from our shareholder-approved Omnibus Incentive Plan. Some features of our stock option program include:

- Options become exercisable on the third anniversary of the date of grant;
- The term of each grant does not exceed ten years;
- The exercise price is equal to the closing market price on the date of grant (we do not backdate or grant discounted stock options);
- We do not grant options with "reload" or "restored" provisions; and
- Repricing of stock options is prohibited.

We continue to use stock options as a long-term incentive because stock options focus the management team on delivering levels of company financial performance over a longer term that contribute to shareholder value. For additional information concerning the timing of grants of stock options, see "Our Policies with Respect to the Granting of Equity Awards" on page 42. In February 2018, the following stock options were awarded to each of the executive officers named in the Summary Compensation Table: Mr. McGarry, 105,057; Mr. Morales, 17,072; Mr. Bost, 17,072; and Mr. Knavish, 11,819. Ms. Liebert was awarded a one-time grant of 15,272 stock options in June 2018 when she joined the Company. Such awards are consistent with our program to distribute long-term incentive awards equally among three different equity-based vehicles, as discussed above.



TSR Shares. TSR shares represent a contingent share grant that is made at the beginning of a three-calendar-year performance period and vests on the last day of the performance period. The grant is settled in a combination of cash and shares of PPG common stock at the end of the performance period. The award amount generated by the grant is based on PPG's total shareholder return relative to the S&P 500 comparison group. This comparison group represents the entire S&P 500 Index as it existed at the beginning of the performance period, excluding any companies that have been removed from the Index because they ceased to be publicly traded during the performance period. The calculation of total shareholder return assumes that all dividends were reinvested. Summarized below are the material provisions of the TSR share program:

BASIS OF PAYOUT	PERFORMANCE PERIOD	VESTING AND PAYOUT OF BENEFIT
<ul style="list-style-type: none"> Total shareholder return of PPG compared to total shareholder return for S&P 500 companies (as described above) Payout is 0% to 220% of original TSR shares awarded: 	3 calendar years	<ul style="list-style-type: none"> Vest on last day of performance period Settled in a combination of cash and shares at end of performance period Dividend equivalents are awarded at the end of the performance period, based on the actual number of shares earned and paid

PPG TSR	GRANT PAYOUT
90 th percentile	220 %
80 th percentile	180 %
70 th percentile	140 %
60th percentile	100 %
50 th percentile	80 %
40 th percentile	50 %
30 th percentile	30 %
Below	— %

If minimum performance is not achieved, no payment is made with respect to the TSR share grant. If performance is above target, payment may exceed the original number of contingent TSR shares awarded. Target performance is set at the 60th percentile rank, which allows for a 100% payout only if our performance is greater than the median performance for the comparison set of companies. The minimum and maximum number of shares that may be issued upon settlement of a TSR share grant ranges from 0% to 220% of the original number of contingent TSR shares awarded. Dividend equivalents are awarded at the end of the performance period, based on the actual number of shares earned and paid to an executive. TSR shares are intended to reward executives only when we provide a greater long-term return to shareholders relative to a percentage of the comparison set of companies, which is consistent with our pay-for-performance compensation philosophy.

In February 2018, the following TSR shares were awarded to each of the executive officers named in the Summary Compensation Table: Mr. McGarry, 22,925; Mr. Morales, 3,725; Mr. Bost, 3,725; and Mr. Knavish, 2,579. Ms. Liebert was awarded a one-time grant of 3,172 TSR shares in June 2018 when she joined the Company. Such awards are consistent with our program to distribute long-term incentive awards equally among three different equity-based vehicles, as discussed above under "Long-Term Incentive Compensation."

The performance period for the TSR shares granted in 2016 ended on December 31, 2018. PPG's total shareholder return was measured against that of the S&P 500 (as described above) over the three-year period ending December 31, 2018. PPG's ranking on this performance measure was at the 31st percentile, resulting in payouts at 32.5% of target. The payouts were distributed 50% in shares of PPG common stock and 50% in cash. The cash payment was calculated based on the average PPG stock closing price during the month of December 2018. Payouts to the executive officers named in the Summary Compensation Table for the 2016 TSR grants were: Mr. McGarry, 3,934 shares and \$397,486; Mr. Morales, 160 shares and \$16,174; Mr. Bost, 713 shares and \$72,077; and Mr. Knavish, 286 shares and \$28,912. Such share payouts, which vested in December 2018, are reflected in the Option Exercises and Stock Vested table on page 48.

Performance-based RSUs. Performance-based RSUs, or PBRsUs, represent a contingent share grant that is made at the beginning of a three-calendar-year performance period and vests on the last day of the performance period. If we achieve certain pre-determined performance thresholds, payment is settled in shares of PPG common stock in the February immediately after the end of the three-year performance period. The performance criteria for each year in the three-year performance period are 10% growth in adjusted earnings-per-diluted share and 12% cash flow return on capital, taking into account the same adjustment categories utilized by the Officers-Directors Compensation Committee



in determining adjusted earnings-per-diluted share for purposes of annual incentive awards (see “Annual Incentive Awards” above). If minimum performance is not achieved, no shares are issued with respect to the grant. If performance is above target, the number of shares issued may exceed the original number of contingent shares awarded. The minimum and maximum number of shares that may be issued upon settlement of an PBRSU ranges from 0% to 180% of the original number of contingent shares awarded, depending on the number of goals attained during the three-year period (see the table below for a breakdown of the payout percentages). No dividend equivalents are awarded on performance-based RSUs. By including performance-based RSUs in the long-term incentive mix, executives are rewarded when financial performance objectives are achieved over an extended period of time. Summarized below are the material provisions of the performance-based RSUs:

BASIS OF PAYOUT	PERFORMANCE PERIOD	VESTING AND PAYOUT OF BENEFIT
Performance Goals:	3 calendar years	<ul style="list-style-type: none"> • Vest on last day of performance period • Settled in shares in the February immediately after the end of performance period • No dividend equivalents are awarded
<ul style="list-style-type: none"> • 10% growth in adjusted earnings-per-diluted share • 12% cash flow return on capital 		
Payout is 0% to 180% of original PBRSU shares awarded:		

GOALS ATTAINED IN PERFORMANCE PERIOD	PAYOUT
6 goals	180 %
4 or 5 goals in 3 years	150 %
4 goals in 2 years	100 %
3 goals	100 %
2 goals	50 %
1 goal	25 %
0 goals	— %

In February 2018, the following PBRsUs were awarded to each of the executive officers named in the Summary Compensation Table: Mr. McGarry, 24,205; Mr. Morales, 3,933; Mr. Bost, 3,933; and Mr. Knavish, 2,723. Ms. Liebert was awarded a one-time grant of 3,172 PBRsUs in June 2018 when she joined the Company. Such awards are consistent with our program to distribute long-term incentive awards equally among three different equity-based vehicles, as discussed above under “Long-Term Incentive Compensation.”

The performance period for the PBRsUs granted in 2016 ended on December 31, 2018. For the 2016 grants, three of the annual goals were achieved in three years, yielding payouts at 100% of target. Specifically, the results were as follows:

PBRSU Performance Measures for 2016-2018 Performance Period

	2016		2017		2018		2016 - 2018
	EPS GROWTH	CASH FLOW ROC	EPS GROWTH	CASH FLOW ROC	EPS GROWTH	CASH FLOW ROC	TOTAL GOALS MET
Goal Result	7.2 %	15.6 %	3.9 %	12.9 %	1.0 %	12.0 %	
Goals Met	—	1	—	1	—	1	3

The Company made share payouts to the executive officers named in the Summary Compensation Table for the 2016 PBRSU grants as follows: Mr. McGarry, 25,338; Mr. Morales, 980; Mr. Bost, 4,595; and Mr. Knavish, 1,755. Such payouts, which vested in December 2018, are reflected in the Option Exercises and Stock Vested table on page 48.

In February 2019, the Officers-Directors Compensation Committee determined to change the cash flow return on capital performance goal for the PBRsUs from 12% to 11% beginning with the 2019 performance goal. This change was made as a result of the Company’s adoption of Accounting Standards Update No. 2016-02, “Leases,” effective January 1, 2019. The adoption of this standard will require the Company to recognize the value of its right to use assets and lease liabilities on the balance sheet as the rights and obligations created by lease arrangements with terms greater than 12 months. These lease obligations will be classified as debt which will increase the Company’s reported total debt and will have the effect of reducing the Company’s cash flow return on capital. The Company is nearly complete in assessing the impact the adoption of this standard will have on its consolidated financial statements and expects an impact on assets and liabilities on its consolidated balance sheet in the range of \$700 million to \$750 million.



Time-based RSUs. In connection with her hiring in June 2018, Ms. Liebert was awarded a one-time grant of 29,923 time-based RSUs, which vest 10,228 on December 31, 2019; 14,271 on December 31, 2020; 3,996 on December 31, 2022; and 1,428 on December 31, 2023.

Perquisites and Other Benefits

In addition to the annual and long-term compensation described above, executive officers named in the Summary Compensation Table receive certain perquisites and other benefits. Such perquisites may include financial counseling services and limited personal use of PPG's corporate aircraft. At the direction of the Officers-Directors Compensation Committee, in 2011 executive officer perquisites were reviewed and reduced. Effective January 1, 2012, personal club memberships were discontinued and financial counseling benefits were limited to current participants only. Other benefits for our executive officers may include Company matching contributions under our Deferred Compensation Plan. These perquisites and other benefits are provided to increase the availability of the executives to focus on the business of the enterprise or because we believe they are important to our ability to attract and retain top-quality executive talent. The costs to PPG associated with providing these benefits for executive officers named in the Summary Compensation Table are reflected in the "All Other Compensation" column of the Summary Compensation Table on page 44 and in the All Other Compensation Table on page 45.

We also provide other benefits, such as medical, dental and life insurance and disability coverage, to each executive named in the Summary Compensation Table under our benefit plans, which are also provided to most eligible U.S.-based salaried employees. In addition, all of our U.S.-based executive officers are eligible to participate in the PPG Industries Foundation Matching Gift Program, which encourages charitable donations by all of our U.S. employees by matching his or her contributions to eligible institutions. Contributions of up to a total of \$10,000 per year may be matched under the program. Most charitable organizations are eligible for the Matching Gifts Program, with a few exceptions. The value of these benefits is not included in the Summary Compensation Table because such benefits are made available on a Company-wide basis to most U.S. salaried employees. We also provide vacation and other paid holidays to all employees, including the executive officers named in the Summary Compensation Table, which are comparable to those provided at other large companies.

Deferred Compensation Opportunities

Another aspect of our executive compensation program is our Deferred Compensation Plan. The plan is a voluntary, non-tax qualified, unfunded, deferred compensation plan available to all U.S.-based executive officers and other participants in our management incentive plans to enable them to save for retirement by deferring a portion of their current compensation. The plan also provides eligible employees with supplemental contributions equal to the contributions they would have received under our Employee Savings Plan, but for certain limitations under the Internal Revenue Code. Under the plan, compensation may be deferred until death, disability, retirement or termination or, in the case of the cash portion of certain incentive awards, other earlier specified dates the participants may select. Deferred amounts (other than the PPG common stock portion of deferred incentive awards, which must be invested in PPG stock) are credited to an investment account that earns a return based on the investment options chosen by the participant. The value of a participant's investment account is based on the value of the investments selected. Benefits are paid out of our general assets. For additional information concerning our Deferred Compensation Plan, see "Defined Contribution Retirement Plans and Deferred Compensation Plan" and the accompanying Non-Qualified Deferred Compensation Table on page 51.

Retirement Plans

For certain longer-serving, U.S.-based, salaried employees, we maintain both a tax-qualified defined benefit pension plan, called Retirement Plan C, and a non-qualified defined benefit pension plan, called the Non-Qualified Retirement Plan. U.S.-based salaried employees hired on or after January 1, 2006 are not eligible to participate in these plans. Each of the U.S.-based executive officers named in the Summary Compensation Table participate in these plans, except Ms. Liebert. The compensation covered by Retirement Plan C, which is compulsory and noncontributory, is the base salary of a participant as limited by applicable Internal Revenue Service regulations. Our Non-Qualified Retirement Plan is an unfunded supplemental plan that provides benefits paid out of our general assets in an amount substantially equal to the difference between the amount that would have been payable under Retirement Plan C, in the absence of legislation limiting pension benefits and earnings that may be considered in calculating pension benefits, and the amount actually payable under Retirement Plan C. The Non-Qualified Retirement Plan also includes a benefit based on bonus awards for certain U.S. management bonus program participants. We believe this supplemental retirement benefit is competitive with that provided by other companies with which we compete for executive talent. For additional



information concerning our retirement plans, see “Pension Benefits” and “Defined Contribution Retirement Plans and Deferred Compensation Plan” on pages 48 through 51.

Through December 31, 2015, we maintained a tax-qualified defined contribution retirement plan, called the Defined Contribution Retirement Plan, which was established by PPG for certain employees hired on or after January 1, 2006. The plan was funded by contributions made by the Company. Contributions were between 2% and 5% of a participant's eligible plan compensation, based on age and years of service. If contributions made for the benefit of an executive were limited due to requirements of the Internal Revenue Code, we credited such excess contributions to the executive officer's account in the Deferred Compensation Plan. An executive had a fully vested benefit under the plan upon completing three years of service with the Company and when the employee was within ten years of his or her Social Security normal retirement age or upon termination of employment after reaching early retirement age. On January 1, 2016, the Defined Contribution Retirement Plan was terminated and all balances were transferred to the PPG Industries Employee Savings Plan. Former participants in the Defined Contribution Retirement Plan now receive the same contributions they would have received under the Defined Contribution Retirement Plan as additional Company contributions to the Employee Savings Plan.

The PPG Industries Employee Savings Plan covers substantially all employees in the U.S. The Company makes matching contributions to the Savings Plan, at management's discretion, based upon participants' savings, subject to certain limitations. For most participants not covered by a collective bargaining agreement, Company-matching contributions are established each year at the discretion of the Company and are applied to participant savings up to a maximum of 6% of eligible participant compensation. Employees can contribute from 1% to 50% of eligible plan compensation to the Savings Plan, subject to certain Plan or legal limits that may apply. Employees are always 100% vested in any money employees contribute or the Company contributes to the Savings Plan as a matching contribution. All of our executive officers participate in the Savings Plan. Executive officers and other employees who were participants in the former Defined Contribution Retirement Plan now receive the same contributions they would have received under the Defined Contribution Retirement Plan as an additional Company contribution to the Employee Savings Plan. These contributions vest upon completion of three years of service with the Company.

Change In Control Agreements

We have agreements in place with each of the executive officers named in the Summary Compensation Table providing for their continued employment for a period of up to three years in the event of an actual or threatened change in control of PPG (as “change in control” is defined in the agreements). We believe that these agreements serve to maintain the focus of our senior executives and ensure that their attention, efforts and commitment are aligned with maximizing the success of PPG and shareholder value. These agreements avoid distractions involving executive management that arise when the Board is considering possible strategic transactions involving a change in control and assure continuity of executive management and objective input to the Board when it is considering any strategic transaction. For additional information concerning our change in control agreements, see “Potential Payments Upon Termination or Change in Control” on pages 52 through 57.

Regulatory Considerations

The tax and accounting consequences of utilizing various forms of compensation are considered when adopting new or modifying existing compensation programs. For example, we considered limitations on the deductibility of personal use of corporate aircraft under the American Jobs Creation Act when adopting our policies regarding use of our aircraft by executive officers. In addition, we have administered our incentive and equity compensation programs, severance plans and change in control agreements in compliance with federal tax rules affecting non-qualified deferred compensation.

Section 162(m) of the Internal Revenue Code limits the deductibility of compensation in excess of \$1 million paid to any one named executive officer during any fiscal year. Under the rules in effect before 2018, compensation that qualified as “performance-based” under Section 162(m) was deductible without regard to this \$1 million limit. To maintain flexibility in compensating executives in a manner designed to promote varying corporate goals, the Officers-Directors Compensation Committee did not adopt a policy requiring all compensation to be deductible under Section 162(m) and continues to reserve the right to structure compensation arrangements and issue awards that may not be deductible under Section 162(m). However, the Officers-Directors Compensation Committee historically has considered, among other factors, deductibility under Section 162(m) with respect to compensation arrangements for executives. Prior to 2018, we generally designed our annual and long-term incentive compensation programs for executives in a manner that was intended to qualify as performance-based compensation under Section 162(m), with the understanding that these programs may not qualify from time to time.



The Tax Cuts and Jobs Act, which was signed into law December 22, 2017, eliminated the performance-based compensation exception under Section 162(m), effective January 1, 2018, subject to a special rule that “grandfathers” certain awards and arrangements that were in effect on or before November 2, 2017. As a result, compensation that our Officers-Directors Compensation Committee structured in 2017 and prior years with the intent of qualifying as performance-based compensation under Section 162(m) that is paid on or after January 1, 2018 may not be fully deductible, depending on the application of the special grandfather rules. Moreover, from and after January 1, 2018, compensation awarded in excess of \$1,000,000 to our named executive officers, including our chief financial officer, generally will not be deductible. While the Tax Cuts and Jobs Act will limit the deductibility of compensation paid to our named executive officers, our Officers-Directors Compensation Committee will, consistent with its past practice, continue to retain flexibility to design compensation programs that are in the best long-term interests of PPG and our shareholders, with deductibility of compensation being one of a variety of considerations taken into account. We continue to analyze whether to redesign any of our compensation programs in light of the amendments to Section 162(m) and other sections of the Internal Revenue Code that became effective in 2018.

Financial Restatement

It is our policy that we will, to the extent permitted by governing law, seek recoupment of incentive compensation paid to any executive officer where:

- the payment was predicated upon the achievement of certain financial results that were subsequently the subject of a restatement;
- the executive officer is found to have engaged in fraud or misconduct that caused or partially caused the need for the restatement; and
- a lower payment would have been made to the executive officer based upon the restated financial results.

In each such instance, we will, to the extent practicable, seek to recover the amount by which the individual executive officer's incentive compensation for the relevant period exceeded the payment that would have been made based on the restated financial results, plus a reasonable rate of interest.

Our Policies with Respect to the Granting of Equity Awards

Equity awards may be granted by either the Officers-Directors Compensation Committee or its delegate. The Officers-Directors Compensation Committee only delegates authority to grant equity awards to employees who are not executive officers, and only in aggregate amounts not exceeding amounts approved by the Officers-Directors Compensation Committee. The Board generally does not grant equity awards, although the Officers-Directors Compensation Committee regularly reports its activity, including approval of grants, to the Board.

Timing of Grants. Equity awards are granted in February at a regularly scheduled meeting of the Officers-Directors Compensation Committee, and generally further grants are not made for the remainder of the year. These meetings occur approximately one month after the release of our earnings for the immediately preceding year. On limited occasions, grants may occur on an interim basis, primarily for the purpose of approving a compensation package for a newly hired or promoted executive officer. The timing of these grants is driven solely by the activity related to the need for the hiring or promotion, not our stock price or the timing of any release of Company information.

Option Exercise Price. The exercise price of a newly granted stock option is the closing price on the New York Stock Exchange on the date of grant. With respect to the occasional interim grants to a newly hired or promoted executive, the exercise price is the closing price on the New York Stock Exchange on the date of grant, which is the later of the approval date or the hire or promotion date; provided, however, that if the date of hire or promotion would fall within a Company imposed blackout period, the grant date will be the first business day following such blackout period.



PPG Stock Ownership Requirements

The Officers-Directors Compensation Committee also believes that it is in the best interests of shareholders for our officers to own a significant amount of PPG common stock, thereby aligning their interests with the interests of shareholders. Accordingly, in 2003 the Officers-Directors Compensation Committee implemented stock ownership requirements applicable to all of our officers based on a multiple of base salary. The current stock ownership requirements are:

Chief Executive Officer	6 times base salary
Other executive officers	3 times base salary
Other officers	1 or 2 times base salary

Ownership for purposes of these requirements includes shares of PPG common stock personally owned as well as all stock holdings in PPG's savings plan and deferred compensation accounts. Unexercised options and unvested shares awarded under our long-term incentive plans are not counted for these purposes. Officers are expected to meet these ownership requirements within five years of election, appointment or promotion. The executive officers named in the Summary Compensation Table have met their ownership requirement, except for Ms. Liebert who joined the Company in June 2018. Ms. Liebert is within the five-year compliance period.

Securities Trading Policy

PPG officers and directors may not engage in any transaction in which they may profit from short-term speculative swings in the value of PPG's securities. This prohibition includes "short sales" (selling borrowed securities that the seller hopes can be purchased at a lower price in the future) or "short sales against the box" (selling owned, but not delivered securities), "put" and "call" options (publicly available rights to sell or buy securities within a certain period of time at a specified price) and other hedging transactions designed to minimize an executive's risk inherent in owning PPG stock, such as zero-cost collars and forward sale contracts. In addition, officers may not hold PPG stock in a margin account and may not pledge PPG stock as collateral for a loan. This policy is designed to ensure compliance with all insider trading rules.



COMPENSATION OF EXECUTIVE OFFICERS

Summary Compensation Table (2016-2018)

NAME AND POSITION	YEAR	SALARY ⁽³⁾	BONUS ⁽⁴⁾	STOCK AWARDS ⁽⁵⁾	OPTION AWARDS ⁽⁶⁾	NON-EQUITY INCENTIVE PLAN COMPENSATION ⁽⁷⁾	CHANGE IN PENSION VALUE AND NONQUALIFIED DEFERRED COMPENSATION EARNINGS ⁽⁸⁾	ALL OTHER COMPENSATION ⁽⁹⁾	TOTAL
M. H. McGarry	2018	\$ 1,258,333	\$ —	\$ 5,334,995	\$ 2,666,347	\$ 1,160,000	\$ 1,223,849	\$ 140,880	\$ 11,784,404
Chairman and Chief	2017	\$ 1,212,500	\$ —	\$ 5,000,022	\$ 2,500,015	\$ 1,855,600	\$ 3,509,536	\$ 172,188	\$ 14,249,861
Executive Officer	2016	\$ 1,100,000	\$ —	\$ 4,666,753	\$ 2,333,538	\$ 2,100,000	\$ 2,095,675	\$ 172,708	\$ 12,468,674
V. J. Morales⁽¹⁾	2018	\$ 562,500	\$ —	\$ 866,866	\$ 433,287	\$ 190,000	\$ 248,630	\$ 34,983	\$ 2,336,266
Senior Vice President and Chief Financial Officer	2017	\$ 483,333	\$ —	\$ 518,123	\$ 266,490	\$ 500,000	\$ 590,573	\$ 30,579	\$ 2,389,098
R. B. Liebert⁽¹⁾⁽²⁾	2018	\$ 330,729	\$ —	\$ 3,610,807	\$ 333,388	\$ 150,000	\$ —	\$ 1,254,493	\$ 5,679,417
Senior Vice President, Automotive Coatings									
G. E. Bost II	2018	\$ 569,167	\$ —	\$ 866,866	\$ 433,287	\$ 380,000	\$ (220,888)	\$ 43,521	\$ 2,071,953
Senior Vice President, Law, Compliance and Special Projects	2017	\$ 562,500	\$ —	\$ 866,682	\$ 433,342	\$ 435,000	\$ 1,152,968	\$ 42,930	\$ 3,493,422
	2016	\$ 546,667	\$ —	\$ 833,299	\$ 416,711	\$ 600,000	\$ 1,136,481	\$ 60,999	\$ 3,594,157
T. M. Knavish	2018	\$ 569,167	\$ —	\$ 600,173	\$ 299,966	\$ 300,000	\$ 127,162	\$ 38,586	\$ 1,935,054
Senior Vice President, Architectural Coatings and President, PPG EMEA	2017	\$ 477,083	\$ —	\$ 466,721	\$ 233,327	\$ 300,000	\$ 725,622	\$ 31,173	\$ 2,233,926
	2016	\$ 438,333	\$ —	\$ 333,450	\$ 166,284	\$ 500,000	\$ 391,714	\$ 24,362	\$ 1,854,143

- (1) Mr. Morales was not a named executive officer in 2016. Ms. Liebert was not a named executive officer in 2016 or 2017.
- (2) Ms. Liebert joined PPG as Senior Vice President, Automotive Coatings on June 21, 2018.
- (3) The annual salaries as of January 1, 2018, and as of the annual salary increase date of March 1, 2018, were: Mr. McGarry, \$1,225,000 and \$1,265,000; Mr. Morales, \$500,000 and \$575,000; Mr. Bost, \$565,000 and \$570,000; and Mr. Knavish, \$500,000 and \$520,000. Mr. Knavish's salary increased as of July 1, 2018 to \$625,000. With her appointment as Senior Vice President, Automotive Coatings, Ms. Liebert's annual salary as of June 21, 2018 was \$625,000. The annual salaries as of January 1, 2017, and as of the annual salary increase date of March 1, 2017, were: Mr. McGarry, \$1,150,000 and \$1,225,000; Mr. Morales, \$400,000 and \$500,000; Mr. Bost, \$550,000 and \$565,000; and Mr. Knavish, \$450,000 and \$475,000. With his appointment to Senior Vice President, Industrial Coatings, Mr. Knavish's salary increased as of October 1, 2017 to \$500,000. The annual salaries as of January 1, 2016, and as of the annual salary increase date of March 1, 2016, were: Mr. McGarry, \$1,000,000 and \$1,100,000; Mr. Bost, \$530,000 and \$550,000; and Mr. Knavish, \$380,000 and \$450,000. With his appointment to Chairman and Chief Executive Officer, Mr. McGarry's salary increased as of September 1, 2016 to \$1,150,000.
- (4) The named executive officers were not entitled to receive any payments that would be characterized as "Bonus" payments for the fiscal years ended December 31, 2018, 2017 and 2016. Amounts listed under the column "Non-Equity Incentive Plan Compensation" constitute annual incentive awards for 2017, 2016 and 2015 that were determined by the Officers-Directors Compensation Committee at its February 20, 2019, February 14, 2018 and February 15, 2017 meetings, respectively, and, to the extent not deferred by an executive, were paid out shortly thereafter.
- (5) The amounts in this column represent the grant date fair value calculated in accordance with FASB ASC Topic 718 for grants occurring in the fiscal years ended December 31, 2018, 2017 and 2016 of performance-based restricted stock units, or PBRsUs, and performance-based total shareholder return contingent shares, or TSRs, granted as part of the long-term incentive components of our compensation program described on page 38. The assumptions used in calculating these amounts for 2018 are set forth in Note 18 to our Financial Statements for the year ended December 31, 2018, which is located on pages 86 through 88 of our Annual Report on Form 10-K. PBRsUs and TSRs are subject to performance conditions, and the grant date fair value shown is based on performance at target levels, which is the probable outcome of such conditions. The value of these awards made in the fiscal year ended December 31, 2018, assuming that the highest level of performance conditions will be achieved, is as follows: Mr. McGarry, \$10,669,646; Mr. Morales, \$1,733,675; Ms. Liebert, \$4,262,196; Mr. Bost, \$1,733,675; and Mr. Knavish, \$1,200,307. The value of these awards made in the fiscal year ended December 31, 2017, assuming that the highest level of performance conditions will be achieved, is as follows: Mr. McGarry \$10,000,058; Mr. Morales, \$1,039,196; Mr. Bost, \$1,733,347; and Mr. Knavish, \$933,436. The value of these awards made in the fiscal year ended December 31, 2016, assuming that the highest level of performance conditions will be achieved, is as follows: Mr. McGarry, \$9,333,492; Mr. Bost, \$1,666,606; and Mr. Knavish, \$666,900.
- (6) The amounts in this column represent the grant date fair value computed in accordance with FASB ASC Topic 718 for stock option grants occurring in the fiscal years ended December 31, 2018, 2017 and 2016 as part of the long-term incentive component of our compensation program described on pages 37 through 40. The assumptions used in calculating these amounts are set forth in Note 18 to our Financial Statements for the year ended December 31, 2018, which is located on pages 86 through 88 of our Annual Report on Form 10-K.
- (7) The amounts in this column reflect the dollar value of annual incentive awards for 2018, 2017 and 2016, as described on pages 33 through 36.
- (8) The amounts in this column reflect the actuarial increase in the present value of the named executive officer's benefits under our qualified and non-qualified pension plans, determined using interest rate and mortality rate assumptions consistent with those used in our financial statements, except that retirement age is assumed to be normal retirement age as defined in the applicable plan. In connection with his transition to Senior Vice President, Law, Compliance and Special Projects, Mr. Bost's non-qualified pension benefit was frozen under the Company's non-qualified defined benefit pension plan effective August 1, 2018, as described on page 49.
- (9) Includes all other compensation as described in the table entitled "All Other Compensation Table" on page 45.



ALL OTHER COMPENSATION TABLE (2018)

	PERQUISITES				OTHER COMPENSATION				TOTAL ALL OTHER COMPENSATION
	PERSONAL USE OF COMPANY AIRCRAFT ⁽¹⁾	FINANCIAL COUNSELING ⁽²⁾	OTHER ⁽³⁾	TOTAL PERQUISITES	EMPLOYEE SAVINGS PLAN CONTRIBUTIONS ⁽⁴⁾	DEFERRED COMPENSATION CONTRIBUTIONS ⁽⁵⁾	DEFERRED DIVIDENDS ⁽⁶⁾	TOTAL OTHER COMPENSATION	
M. H. McGarry	\$ 43,115	\$ 12,010	\$ —	\$ 55,125	\$ 16,500	\$ 59,000	\$ 10,255	\$ 85,755	\$ 140,880
V. J. Morales	\$ —	\$ —	\$ —	\$ —	\$ 16,500	\$ 17,250	\$ 1,233	\$ 34,983	\$ 34,983
R. B. Liebert	\$ —	\$ —	\$ 1,226,368	\$ 1,226,368	\$ 15,812	\$ 12,313	\$ —	\$ 28,125	\$ 1,254,493
G. E. Bost II	\$ —	\$ 12,010	\$ —	\$ 12,010	\$ 15,729	\$ 10,432	\$ 5,350	\$ 31,511	\$ 43,521
T. M. Knavish	\$ —	\$ —	\$ 4,336	\$ 4,336	\$ 16,500	\$ 16,012	\$ 1,738	\$ 34,250	\$ 38,586

- (1) The amounts in this column reflect the aggregate incremental cost to PPG of personal use of corporate aircraft. The aggregate incremental cost to PPG is determined on a per flight basis and includes the cost of fuel, a pro rata share of repairs and maintenance, landing and storage fees, crew-related expenses and other miscellaneous variable costs. A portion of this value attributable to personal use of corporate aircraft (as calculated in accordance with Internal Revenue Service guidelines) is included as compensation on the W-2 of Mr. McGarry.
- (2) The amounts in this column reflect the cost of financial counseling services paid by PPG.
- (3) For Ms. Liebert, the amount in this column reflects a hiring bonus of \$1,200,000 and the cost of relocation assistance of \$26,368. For Mr. Knavish, the amount in this column reflects the cost of relocation assistance.
- (4) The amounts in this column reflect company contributions under the Employee Savings Plan.
- (5) The amounts in this column reflect company contributions under the Deferred Compensation Plan in lieu of Company contributions that could not be made under the Employee Savings Plan because of the Internal Revenue Code limitations.
- (6) The amounts in this column represent dividend equivalents on the TSR award that was paid during 2018.



GRANTS OF PLAN BASED AWARDS (2018)

NAME	GRANT DATE	ESTIMATED FUTURE PAYOUTS UNDER NON-EQUITY INCENTIVE PLAN AWARDS ⁽¹⁾			ESTIMATED FUTURE PAYOUTS UNDER EQUITY INCENTIVE PLAN AWARDS			ALL OTHER STOCK AWARDS:	ALL OTHER OPTION AWARDS:	EXERCISE OR BASE PRICE OF OPTION AWARDS (\$/SH) ⁽²⁾	GRANT DATE FAIR VALUE OF STOCK AND OPTION AWARDS ⁽³⁾
		THRESHOLD (\$)	TARGET (\$)	MAXIMUM (\$)	THRESHOLD (#)	TARGET (#)	MAXIMUM (#)	NUMBER OF SECURITIES UNDERLYING (#)	NUMBER OF SECURITIES UNDERLYING (#)		
M. H. McGarry	N/A	\$ 733,700	\$ 1,834,250	\$ 4,035,350							
	14-Feb-18								105,057	\$ 116.32	\$ 2,666,347
	14-Feb-18				6,051	24,205	43,569 U				\$ 2,668,359
	14-Feb-18				6,878	22,925	50,435 T				\$ 2,666,636
V. J. Morales	N/A	\$ 207,000	\$ 517,500	\$ 1,138,500							
	14-Feb-18								17,072	\$ 116.32	\$ 433,287
	14-Feb-18				983	3,933	7,079 U				\$ 433,574
	14-Feb-18				1,118	3,725	8,195 T				\$ 433,292
R. B. Liebert	N/A	\$ 93,014	\$ 232,534	\$ 511,575							
	25-Jun-18								15,272	\$ 105.11	\$ 333,388
	25-Jun-18				793	3,172	5,710 U				\$ 314,123
	25-Jun-18				952	3,172	6,978 T				\$ 333,409
	25-Jun-18							29,923 ⁽⁴⁾			\$ 3,277,398
G. E. Bost II	N/A	\$ 193,800	\$ 484,500	\$ 1,065,900							
	14-Feb-18								17,072	\$ 116.32	\$ 433,287
	14-Feb-18				983	3,933	7,079 U				\$ 433,574
	14-Feb-18				1,118	3,725	8,195 T				\$ 433,292
T. M. Knavish	N/A	\$ 175,000	\$ 437,500	\$ 962,500							
	14-Feb-18								11,819	\$ 116.32	\$ 299,966
	14-Feb-18				681	2,723	4,901 U				\$ 300,184
	14-Feb-18				774	2,579	5,674 T				\$ 299,989

U—PBRsUs. Estimated future payouts relate to the performance period of 2018 through 2020. For additional information concerning the material terms of these PBRsU grants, see pages 38 through 40.

T—TSR shares. Estimated future payouts relate to the performance period of 2018 through 2020. For additional information concerning the material terms of these TSR grants, see page 38.

- (1) The amounts in these columns reflect the minimum payment level, if an award is achieved, the target payment level and the maximum payment level under our annual incentive award program. For additional information concerning our annual incentive award program, see pages 33 through 36.
- (2) The exercise price of option awards is the closing sale price of PPG common stock reported for the date of grant on the New York Stock Exchange. Option awards vest on the third anniversary of the date of grant. For additional information concerning stock option awards, see page 37.
- (3) Refer to Note 18 to our Financial Statements for the year ended December 31, 2018, which is located on pages 86 through 88 of our Annual Report on Form 10-K, for the relevant assumptions used to determine the valuation of stock-based compensation awards.
- (4) Unvested time-based RSUs vest as to 10,228 units on December 31, 2019; 14,271 units on December 31, 2020; 3,996 units on December 31, 2022; and 1,428 units on December 31, 2023.



Outstanding Equity Awards at Fiscal Year-End (2018)

OPTION AWARDS						EQUITY INCENTIVE PLAN AWARDS: MARKET OR PAYOUT VALUE OF UNEARNED SHARES, UNITS OR OTHER RIGHTS NOT VESTED (\$) ⁽³⁾		
NAME	NUMBER OF SECURITIES UNDERLYING UNEXERCISED OPTIONS (#) EXERCISABLE	NUMBER OF SECURITIES UNDERLYING UNEXERCISED OPTIONS (#) UNEXERCISABLE	OPTION EXERCISE PRICE (\$)	OPTION VEST DATE	OPTION EXPIRATION DATE	EQUITY INCENTIVE PLAN AWARDS: NUMBER OF UNEARNED SHARES, UNITS OR OTHER RIGHTS NOT VESTED (#) ⁽¹⁾⁽²⁾	PERFORMANCE PERIOD	
M. H. McGarry	12,000		\$ 44.97	15-Feb-15	14-Feb-22	24,205 U	2018-2020	2,474,477
	11,916		\$ 55.01	1-Sep-15	31-Aug-22	26,074 U	2017-2019	2,665,545
	30,450		\$ 65.76	20-Feb-16	19-Feb-23	8,620 T	2018-2020	881,223
	21,682		\$ 93.53	19-Feb-17	18-Feb-24	10,074 T	2017-2019	1,029,865
	9,340		\$ 99.20	1-Aug-17	31-Jul-24			
	28,414		\$ 118.12	18-Feb-18	17-Feb-25			
		111,867	\$ 95.00	17-Feb-19	16-Feb-26			
		16,760	\$ 105.98	1-Sep-19	31-Aug-26			
		118,204	\$ 101.50	15-Feb-20	14-Feb-27			
V. J. Morales	3,700		\$ 93.53	19-Feb-17	18-Feb-24	3,933 U	2018-2020	402,071
	3,400		\$ 118.12	18-Feb-18	17-Feb-25	2,625 U	2017-2019	268,354
		5,200	\$ 95.00	17-Feb-19	16-Feb-26	1,401 T	2018-2020	143,224
		12,600	\$ 101.50	15-Feb-20	14-Feb-27	1,074 T	2017-2019	109,795
		17,072	\$ 116.32	14-Feb-21	13-Feb-28			
R. B. Liebert	15,272		\$ 105.11	25-Jun-21	24-Jun-28	3,172 U	2018-2020	324,274
			\$			1,193 T	2018-2020	121,960
			\$			29,923 ⁽⁴⁾		3,059,028
			\$					
G. E. Bost II	14,826		\$ 118.12	18-Feb-18	17-Feb-25	3,933 U	2018-2020	402,071
		23,306	\$ 95.00	17-Feb-19	16-Feb-26	4,520 U	2017-2019	462,080
		20,489	\$ 101.50	15-Feb-20	14-Feb-27	1,401 T	2018-2020	143,224
		17,072	\$ 116.32	14-Feb-21	13-Feb-28	1,746 T	2017-2019	178,494
T. M. Knavish	6,000		\$ 93.53	19-Feb-17	18-Feb-24	2,723 U	2018-2020	278,372
	4,800		\$ 118.12	18-Feb-18	17-Feb-25	2,434 U	2017-2019	248,828
		9,300	\$ 95.00	17-Feb-19	16-Feb-26	970 T	2018-2020	99,163
		11,032	\$ 101.50	15-Feb-20	14-Feb-27	940 T	2017-2019	96,096
		11,819	\$ 116.32	14-Feb-21	13-Feb-28			

U—PBRsUs. For additional information concerning the material terms of these PBRsU grants, see pages 38 through 40.

T—TSR shares. For additional information concerning the material terms of these TSR grants, see page 38.

- (1) The PBRsUs for the 2017 - 2019 performance period reflect an estimated payout of 100%. The PBRsUs for the 2018 - 2020 performance period reflect an estimated payout of 100%.
- (2) The TSRs for the 2017 - 2019 performance period reflect an estimated payout of 40.9%. The TSRs for the 2018 - 2020 performance period reflect an estimated payout of 37.6%.
- (3) Payout value is based on the \$102.23 closing sale price of PPG common stock reported on December 31, 2018 on the New York Stock Exchange Composite Tape.
- (4) Unvested time-based RSUs vest as to 10,228 units on December 31, 2019; 14,271 units on December 31, 2020; 3,996 units on December 31, 2022; and 1,428 units on December 31, 2023.



Option Exercises and Stock Vested (2018)

NAME	OPTION AWARDS		STOCK AWARDS		
	NUMBER OF SHARES ACQUIRED ON EXERCISE (#)	VALUE REALIZED ON EXERCISE (\$) ⁽¹⁾	NUMBER OF SHARES ACQUIRED ON RSU VESTING (#) ⁽²⁾	NUMBER OF SHARES ACQUIRED ON TSR VESTING (#) ⁽³⁾	VALUE REALIZED ON VESTING (\$)
M. H. McGarry	—	\$ —	25,338	3,934	\$ 3,385,478
V. J. Morales	—	\$ —	980	160	\$ 132,534
R. B. Liebert	—	\$ —	—	—	\$ —
G. E. Bost II	—	\$ —	4,595	713	\$ 613,901
T. M. Knavish	—	\$ —	1,755	286	\$ 237,237

- (1) The amounts in this column are calculated by multiplying the number of shares acquired on exercise by the difference between the fair market value of the common stock on the date of exercise and the exercise price of the options.
- (2) The amounts in this column are the number of shares acquired upon the vesting of PBRSU awards granted in 2016. Payout of 2016 PBRSU awards is described on pages 38 through 40.
- (3) The amounts in this column represent the number of shares earned upon the vesting of TSR awards granted in 2016. As described on page 38, TSR awards are paid 50% in shares of PPG common stock and 50% in cash.

Pension Benefits

For certain longer-serving, U.S.-based, salaried employees we maintain both a tax-qualified defined benefit pension plan, called Retirement Plan C, and a non-qualified defined benefit pension plan, called the Non-Qualified Retirement Plan. Employees hired on or after January 1, 2006 are not eligible to participate in these plans. Each of the executive officers named in the Summary Compensation Table participates in these plans, with the exception of Ms. Liebert. The table below shows the present value of accumulated benefits payable to each such named executive officer as of December 31, 2018, including the number of years of service credited to each such named executive officer, under each of Retirement Plan C and the Non-Qualified Retirement Plan, determined using interest rate and mortality rate assumptions consistent with those used in our financial statements. The material terms of Retirement Plan C and the Non-Qualified Retirement Plan are described below.

Pension Benefits Table (2018)

NAME	PLAN NAME	NUMBER OF YEARS CREDITED SERVICE (#)	PRESENT VALUE OF ACCUMULATED BENEFIT (\$)
M. H. McGarry	Retirement Plan C	38.0	\$ 1,162,385
	Non-Qualified Retirement Plan	38.0	\$ 11,253,921 ⁽¹⁾
V. J. Morales	Retirement Plan C	34.0	\$ 754,058
	Non-Qualified Retirement Plan	34.0	\$ 1,438,392
G. E. Bost II	Retirement Plan C	33.8	\$ 1,518,372
	Non-Qualified Retirement Plan	33.8	\$ 5,883,365 ⁽¹⁾
T. M. Knavish	Retirement Plan C	31.7	\$ 753,869
	Non-Qualified Retirement Plan	31.7	\$ 1,592,365

- (1) This officer is eligible to commence a retirement benefit under the Non-Qualified Pension Plan based on the officer's age and years of service as of December 31, 2018. As further described in the narrative discussion following this table, in connection with his transition to Senior Vice President, Law, Compliance and Special Projects, Mr. Bost's non-qualified pension benefit was frozen under the Company's non-qualified defined benefit pension plan effective August 1, 2018. As further described in the narrative discussion following this table, the estimated lump-sum present value under the Non-Qualified Pension Plan to which the officer would be entitled is as follows: Mr. McGarry, \$20,217,638 and Mr. Bost, \$7,384,682.



The values reflected in the “Present Value of Accumulated Benefit” column of the Pension Benefits Table are equal to the actuarial present value of each officer’s accrued benefit under the applicable plan as of December 31, 2018, using the same actuarial factors and assumptions used for financial statement reporting purposes, except that retirement age is assumed to be normal retirement age as defined in the applicable plan. These assumptions are described under Note 13 to our Financial Statements for the year ended December 31, 2018, which is located on pages 72 through 81 of our Annual Report on Form 10-K. In accordance with Item 402(h) of Regulation S-K, the present value amounts are calculated using a 4.42% discount rate for Retirement Plan C and 4.33% discount rate for the Non-Qualified Retirement Plan. The lump-sum payment amounts for the Non-Qualified Pension Plan are calculated in accordance with the relevant provisions of the Non-Qualified Pension Plan using the Pension Benefit Guaranty Corporation discount rate of 1.50% as in effect on December 31, 2018, rather than the 4.33% discount rate used for financial statement reporting purposes. In connection with his transition to Senior Vice President, Law, Compliance and Special Projects, Mr. Bost’s benefit under the Non-Qualified Pension Plan was frozen effective August 1, 2018. Subsequent to August 1, 2018, Mr. Bost will no longer accrue any benefits under the Non-Qualified Pension Plan due to service or pay. From August 1, 2018 through Mr. Bost’s retirement, his frozen benefit will earn interest at 120% of the August 2018 long-term Applicable Federal Rate, as determined by the Internal Revenue Service.

The benefit payable under Retirement Plan C is a function of the participant’s five-year average annual covered base compensation for the highest five consecutive years out of the final ten years immediately prior to retirement and credited years of service. In January 2011, Retirement Plan C was amended such that eligible employees with combined age and service points fewer than 60 and actively employed by the Company as of December 31, 2011 ceased to accrue benefits under Retirement Plan C as of December 31, 2011. Eligible employees with combined age and service points of 60 or more and actively employed by the Company at December 31, 2011 will continue to accrue benefits under Retirement Plan C until the earlier of their retirement date or December 31, 2020. When benefits cease to accrue under Retirement Plan C, eligible employees will earn future retirement benefits through the PPG Industries Employee Savings Plan. The Non-Qualified Retirement Plan’s benefit is supplemental to the qualified plan’s benefit in that the Non-Qualified Retirement Plan provides a benefit that is substantially equal to the difference between the amount that would have been payable under the qualified Retirement Plan C, in the absence of legislation limiting the compensation covered by the plan, and the amount actually payable under Retirement Plan C. The Non-Qualified Retirement Plan also includes a benefit based on bonus awards for certain U.S. management bonus program participants. The benefit payable under the Non-Qualified Plan is determined in the same manner as for Retirement Plan C with regard to credited service and base salary above legislative limits; incentive payments are factored in by using the average of the highest five payments during the last ten years prior to retirement.

Retirement Plan C contains the following material terms:

- The normal form of benefit is a life annuity for unmarried participants and a joint and 50% survivor annuity for married participants;
- A participant may elect out of the normal form of benefit and receive an actuarially-equivalent alternative form of benefit, including a single life annuity (for a married participant) or a joint and survivor annuity with a survivor benefit ranging from 1%-100%, as selected by the participant;
- There is no lump-sum benefit option;
- A participant may elect early retirement up to ten years prior to the participant’s normal retirement age, subject to reduction of the retirement benefit to reflect the early commencement of the benefit; and
- A participant has a fully vested benefit under the plan upon completing five years of service or reaching early retirement age.

The Non-Qualified Plan contains the following material terms:

- A participant is entitled to a distribution upon reaching the later of his or her early retirement date (as defined in the qualified plan) or the participant’s termination of employment;
- The normal form of payment for benefits at retirement for the group of participants that includes each of the executive officers named in the Summary Compensation Table who participates in the plan is a lump-sum payment; and
- A participant has a fully vested benefit under the plan upon completing five years of service or reaching early retirement age, but his or her accrued benefit is subject to forfeiture if the participant engages in any competitive activity, or other activity that is deemed contrary or harmful to the interests of PPG.



Defined Contribution Retirement Plans and Deferred Compensation Plan

Through December 31, 2015, we maintained a tax-qualified defined contribution retirement plan, called the Defined Contribution Retirement Plan, which was established by PPG for certain employees hired on or after January 1, 2006. The plan was funded by contributions made by the Company. Contributions were between 2% and 5% of a participant's eligible plan compensation, based on age and years of service. If contributions made for the benefit of an executive were limited due to requirements of the Internal Revenue Code, we credited such excess contributions to the executive officer's account in the Deferred Compensation Plan. An executive had a fully vested benefit under the plan upon completing three years of service with the Company, and when the employee was within ten years of his or her Social Security normal retirement age or upon termination of employment after reaching early retirement age. On January 1, 2016, the Defined Contribution Retirement Plan was terminated and all balances were transferred to the PPG Industries Employee Savings Plan. Former participants in the Defined Contribution Retirement Plan now receive the same contributions they would have received under the Defined Contribution Retirement Plan as additional Company contributions to the Employee Savings Plan.

The PPG Industries Employee Savings Plan covers substantially all employees in the U.S. The Company makes matching contributions to the Savings Plan, at management's discretion, based upon participants' savings, subject to certain limitations. For most participants not covered by a collective bargaining agreement, Company-matching contributions are established each year at the discretion of the Company and are applied to participant savings up to a maximum of 6% of eligible participant compensation. Employees can contribute from 1% to 50% of eligible plan compensation to the Savings Plan, subject to certain Plan or legal limits that may apply. Employees are always 100% vested in any money employees contribute or the Company contributes to the Savings Plan as a matching contribution. All of our executive officers participate in the Savings Plan. Executive officers and other employees who were participants in the former Defined Contribution Retirement Plan now receive the same contributions they would have received under the Defined Contribution Retirement Plan as an additional Company contribution to the Employee Savings Plan. These contributions vest upon completion of three years of service with the Company.

In the U.S., we maintain the Deferred Compensation Plan to allow participants, including each of the U.S.-based executive officers named in the Summary Compensation Table, to defer a portion of their compensation in a phantom PPG stock account or other phantom investment accounts. The amount deferred earns a return based on the investment options selected by the executive officer. Executive officers may elect to defer up to 50% of their base salary, and up to 100% of any incentive award, TSR share award and restricted stock unit award that the executive officer may be entitled to receive. All dividend equivalents earned on TSR share award grants are deferred into the Deferred Compensation Plan. We also may make certain additional contributions to the executive officer's account. For example, if the executive officer's contributions under the Employee Savings Plan are limited due to requirements of the Internal Revenue Code, we will credit such excess contributions to the executive officer's account under the Deferred Compensation Plan. The executive officer is always fully vested in compensation that he or she elects to have deferred into the plan and any contributions made on behalf of the executive officer related to the Employee Savings Plan. Company contributions are invested proportionally into the investment options chosen by the employee.

The table below shows the Deferred Compensation Plan's current investment options and their respective annual rate of return for the year ended December 31, 2018, as reported by the administrator of the plan.

INVESTMENT OPTION	RATE OF RETURN
PPG Stock Account	(10.88)%
Fidelity Growth Company Fund	(4.53)%
Fidelity Contrafund	(2.13)%
Fidelity US Equity Index Fund	(4.40)%
Fidelity Intermediate Bond Fund	0.51 %
Fidelity Government Money Market	1.47 %

The amount owed to executive officers under the Deferred Compensation Plan is an unfunded and unsecured general obligation of PPG. An executive officer receives a distribution of the balance in his or her plan account upon retirement, death, disability, termination of employment, a scheduled payment date, financial hardship (for amounts deferred prior to January 1, 2005) or unforeseeable emergency (for amounts deferred after December 31, 2004). Distributions can be in the form of a lump sum or installments. Payment can commence at the time of separation or, in certain situations, can be deferred until a later point in time. Compensation deferred prior to January 1, 2005 and related earnings are distributed according to the executive officer's election. Compensation deferred after December 31, 2004 and related earnings are distributed according to the executive officer's election only in the case of retirement (no earlier than six months following retirement). In the case of disability or termination, the distribution is made in a lump sum on the date that is the later of (i) the first day of the first quarter of a plan year that is six months and ten days following the



separation or (ii) January 1 of the year following the separation. In the case of death, a distribution is made to the executive officer's beneficiary as soon as administratively possible. Distributions from the PPG stock account are in the form of PPG common stock and distributions from all other investment options are in cash.

Non-Qualified Deferred Compensation Table (2018)

NAME	PLAN ⁽¹⁾	EXECUTIVE CONTRIBUTIONS (\$) ⁽²⁾	REGISTRANT CONTRIBUTIONS (\$) ⁽³⁾	AGGREGATE EARNINGS (\$) ⁽⁴⁾	AGGREGATE BALANCE (\$) ⁽⁵⁾
M. H. McGarry	DCP	\$ 62,908	\$ 69,255	\$ (81,409)	\$ 1,289,042
V. J. Morales	DCP	\$ 22,492	\$ 18,483	\$ (10,722)	\$ 194,942
R. B. Liebert	DCP	\$ 71,610	\$ 12,313	\$ (4,628)	\$ 79,295
G. E. Bost II	DCP	\$ 11,382	\$ 15,782	\$ (6,448)	\$ 303,135
T. M. Knavish	DCP	\$ 208,606	\$ 17,750	\$ (117,089)	\$ 1,217,188

- (1) All executives participate in the Deferred Compensation Plan, or DCP.
- (2) The amounts in this column are reported as compensation in the "Salary" and "All Other Compensation" columns of the Summary Compensation Table on page 44.
- (3) The amounts in this column are reported in the "All Other Compensation" column of the Summary Compensation Table on page 44.
- (4) None of the amounts in this column are included as compensation in the Summary Compensation Table on page 44.
- (5) The following aggregate amounts were reported in the Summary Compensation Table on page 44 as 2016 and 2017 compensation, as applicable: Mr. McGarry, \$268,345; Mr. Morales, \$33,705; Mr. Bost, \$75,844; and Mr. Knavish, \$522,972.

Compensatory Arrangements with Certain Executive Officers

Rebecca B. Liebert. Rebecca Liebert currently serves as PPG's Senior Vice President, Automotive Coatings. Upon her appointment, Ms. Liebert and PPG agreed to the following compensatory arrangement:

- A signing bonus of \$1,200,000 and cash bonus of \$140,000 paid in February 2019, both of which are subject to repayment should Ms. Liebert resign within two years of the payment of either of these bonuses.
- A starting base salary of \$625,000 per year.
- A prorated, target bonus percentage for 2018 of 70% of Ms. Liebert's salary.
- A grant in June 2018 of stock options, performance-based RSUs and TSR shares with an aggregate value of \$1,000,000 on the grant date pursuant to PPG's Amended and Restated Omnibus Incentive Plan (the "Plan"). The RSUs and TSRs shares vest in February 2021 and the stock options vest on June 25, 2021.
- A grant in February 2019 of stock options, performance-based RSUs and TSR shares with an aggregate value of \$1,000,000 on the grant date pursuant to the Plan.
- A one-time grant of time-based RSUs with an aggregate value of \$3,145,000 on June 25, 2018 pursuant to the Plan with a vesting schedule of: \$1,075,000 on December 31, 2019, \$1,500,000 on December 31, 2020, \$420,000 on December 31, 2022, and \$150,000 on December 31, 2023.
- In the event that Ms. Liebert is not selected by the Board of Directors as the next Chief Executive Officer of the Company as part of the Board of Directors' normal succession planning process and decides to resign as a result, she will be entitled to a severance payment equal to two times her annual base salary under the following conditions:
 - she remains employed and performs at a successful or above level for the 12 month period following the effective date of the appointment;
 - her resignation is effective immediately following the expiration of the 12 month period; and
 - she signs PPG's standard separation agreement.



POTENTIAL PAYMENTS UPON TERMINATION OR CHANGE IN CONTROL

The tables below reflect the amount of compensation to each of our currently serving executive officers named in the Summary Compensation Table in the event of termination of such executive's employment under certain circumstances. The amounts shown assume that such termination was effective as of December 31, 2018, and thus includes amounts earned through such time and are estimates of the amounts that would be paid out to the executives upon their termination. The actual amounts to be paid out can only be determined at the time of such executive's separation from PPG.

For purposes of calculating the estimated potential payments to our officers under the Non-Qualified Pension Plan, as reflected in the tables below, we have used the same actuarial factors and assumptions used for financial statement reporting purposes and set forth under Note 13 to our Financial Statements for the year ended December 31, 2018, which is located on pages 72 through 81 of our Annual Report on Form 10-K. However, the amounts reflected in the tables below for the Non-Qualified Pension Plan are calculated in accordance with the relevant provisions of the Non-Qualified Pension Plan using the 4.33% discount rate for our U.S. non-qualified defined benefit pension plan that is used for financial statement reporting purposes.

Potential Payments and Benefits Upon Termination

The first column of each table below sets forth the payments to which the officer would be entitled, other than accrued but unpaid base salary and any benefits payable or provided under broad-based employee benefit plans and programs, in the event of a termination of the officer's employment for any reason by PPG or the officer, and assuming such termination occurred prior to, or did not otherwise arise in connection with, a change in control of PPG. The second column of each table reflects payments that would be due in the event of the officer's termination of employment due to death prior to a change in control of PPG. In any of these events, we are not obligated to provide other health or welfare benefits or any special severance payments, accelerated vesting of equity compensation or tax gross-ups to the officers. Employees hired on or after January 1, 2006 are not eligible to participate in the Non-Qualified Retirement Plan. Effective January 1, 2012, financial counseling benefits were limited to current participants only.

Change in Control

Voluntary or Involuntary Termination (2018)

	VOLUNTARY OR INVOLUNTARY TERMINATION	DEATH
M. H. McGarry		
Non-Qualified Pension	\$ — ⁽¹⁾	\$ 13,178,132 ⁽²⁾
Financial Counseling	12,010	—
Total	\$ 12,010	\$ 13,178,132
V. J. Morales		
Non-Qualified Pension	\$ 2,622,366 ⁽³⁾	\$ 1,212,844 ⁽⁴⁾
Total	\$ 2,622,366	\$ 1,212,844
G. E. Bost II		
Non-Qualified Pension	\$ — ⁽¹⁾	\$ 4,048,443 ⁽²⁾
Financial Counseling	12,010	—
Total	\$ 12,010	\$ 4,048,443
T. M. Knavish		
Non-Qualified Pension	\$ 2,704,871 ⁽³⁾	\$ 1,291,479 ⁽⁴⁾
Total	\$ 2,704,871	\$ 1,291,479

- (1) This officer is eligible to commence a retirement benefit under the Non-Qualified Pension Plan based on the officer's age and years of service as of December 31, 2018 upon any termination of the officer's employment. The estimated lump-sum present value under the Non-Qualified Pension Plan to which this officer would be entitled is presented in the Pension Benefits Table, which is located on page 48.
- (2) This officer's beneficiary is eligible to commence a beneficiary retirement benefit under the Non-Qualified Pension Plan based on the officer's age and years of service as of December 31, 2018 upon the officer's termination of employment due to death. The amount reflected in this column for this officer is not a present value amount, but the estimated aggregate payments over the lifetime of the eligible beneficiary of the officer, assuming payments commenced following the officer's termination of employment as a result of death on December 31, 2018.



- (3) This officer is not eligible to commence a retirement benefit under the Non-Qualified Pension Plan, based on the officer's age and years of service as of December 31, 2018, until the officer reaches earliest retirement age, as defined under the Non-Qualified Pension Plan. The amount reflected under "Non-Qualified Pension" in the table for this officer is not a present value amount, but the estimated aggregate payments over the officer's lifetime, assuming the officer terminated employment with PPG on December 31, 2018 and payments commenced upon the date that the officer attains the earliest eligible retirement age provided under the Non-Qualified Pension Plan.
- (4) This officer's beneficiary is not eligible to commence a beneficiary retirement benefit under the Non-Qualified Pension Plan, based on the officer's age and years of service as of December 31, 2018, until the date the officer would have reached earliest retirement age, as defined under the Non-Qualified Pension Plan. The amount reflected under "Non-Qualified Pension" in the table for this officer is not a present value amount, but the estimated aggregate payments over the lifetime of the eligible beneficiary of the officer, assuming the officer's employment terminated due to death on December 31, 2018 and payments commenced upon the date that the officer would have attained the earliest eligible retirement age provided under the Non-Qualified Pension Plan.

Potential Payments and Benefits Upon Termination Following, or in Connection with, a Change in Control of PPG

We have entered into change in control agreements with our executive officers named in the Summary Compensation Table and with certain other officers. The change in control agreements have three-year terms, which terms are automatically extended for one year upon each anniversary unless a notice not to extend is given by PPG. If a "change in control" occurs during the term of an agreement, then the agreement becomes operative for a fixed three-year period. The agreements provide generally that the officer's terms and conditions of employment (including position, location, compensation and benefits) will not be adversely changed during the three-year period after a change in control of PPG. The change in control agreements also contain confidentiality provisions prohibiting the officer from divulging or communicating, without our prior consent or except as required by law, any confidential information, knowledge or data relating to PPG or its business during the officer's employment and at all times thereafter. In 2007, 2010, 2012 and 2013, the Officers—Directors Compensation Committee approved certain changes to our change in control agreements, which are described under "Changes to Form of Change in Control Agreement" on pages 54 through 55.

Termination For Cause or Other Than For Good Reason. Under the change in control agreements, in the event of an officer's termination of employment by PPG for cause or by the officer other than for good reason during the three-year period following a change in control, the officer will receive payment only of his or her accrued but unpaid base salary and any benefits payable or provided under broad-based employee benefit plans and programs.

Termination Without Cause or For Good Reason. If PPG terminates the officer's employment (other than for cause, death or disability) or the officer terminates his or her employment for good reason during the three-year period following a change in control, and upon certain terminations prior to a change in control or in connection with or in anticipation of a change in control, the officer is generally entitled to receive the following payments and benefits:

- a pro-rata bonus for the year of the date of termination based on the officer's highest annual bonus during the three years prior to the change in control or the annual bonus for the most recent fiscal year after the change in control, whichever is higher (such higher amount referred to herein as the "highest annual bonus");
- three times the officer's annual base salary;
- three times the officer's highest annual bonus;
- a lump-sum payment having an actuarial present value equal to the additional pension benefits the officer would have received if he or she had continued to be employed by PPG for an additional three years for purposes of both age and service credit, assuming the officer's compensation for each such additional year is equal to his or her annual base salary prior to the change in control (or any higher salary thereafter) and his or her annual bonus is at least equal to the officer's highest annual bonus during the three years prior to the change in control (the "Pension Differential");
- a lump-sum payment equal to the present value of any employer contributions the executive would have received or accrued under PPG's defined contribution retirement plans and arrangements (whether qualified or non-qualified) in which the executive participates if the executive's employment continued for an additional three years in respect of retirement benefits provided in the form of a defined contribution retirement plan, program or arrangement, but excluding any salary or pay deferral contributions to such plans or arrangements that are deemed to be employer contributions under applicable law;



- continued medical, dental and life insurance benefits for three years and continued age and service credit for purposes of determining the officer's eligibility for retiree medical benefits;
- continued payment of financial counseling expenses for the officer for three years; and
- a payment in an amount sufficient to make the officer whole for any excise tax on excess parachute payments imposed under Section 4999 of the Internal Revenue Code.

The table below sets forth the amounts each executive officer named in the Summary Compensation Table would be entitled to receive, other than accrued but unpaid base salary and any benefits payable or provided under broad-based employee benefit plans and programs, in the event of a termination of the executive officer's employment by PPG without cause or by the executive officer for good reason following or in connection with a change in control of PPG.

For purposes of calculating the estimated potential payment to such executive officers with respect to the Pension Differential under the change in control agreements, as reflected in the table below, we have used the same actuarial factors and assumptions used for financial statement reporting purposes and set forth under Note 13 to our Financial Statements for the year ended December 31, 2018, which is located on pages 72 through 81 of our Annual Report on Form 10-K, including a discount rate of 4.42% for Retirement Plan C and 4.33% for our U.S. non-qualified defined benefit pension plan and assuming a lump-sum payment of the Pension Differential.

Termination During the 30-Day Window Period. Under certain of our change in control agreements, if an officer terminates his or her employment for any reason during a 30-day window period following the first anniversary of the change in control, the officer will be entitled to the payments and benefits described above, except that the multiplier of three referenced above would be two for purposes of all payments and benefits for which the multiplier is relevant.

Definitions. For purposes of the agreements, the terms set forth below generally have the meanings described below.

"Change in Control" generally includes the occurrence of any of the following events or circumstances:

- the acquisition of 20% or more of the outstanding shares of PPG or the voting power of the outstanding voting securities of PPG, other than any acquisition from or by PPG or any PPG-sponsored employee benefit plan;
- a change in our Board's composition such that a majority of the Board's members does not include those who were members at the date of the agreement or members whose election or nomination was approved by a majority of directors who were on the Board at the date of the agreement;
- shareholder approval of a reorganization, merger or consolidation or sale of substantially all of the assets of PPG, unless following such transaction PPG's historic shareholders retain at least 60% ownership of the surviving entity, no shareholder acquires a 20% or more ownership interest in the surviving entity and a majority of the surviving entity's board of directors were members of our Board at the time such transaction was approved;
- shareholder approval of a dissolution or liquidation of PPG; or
- a determination by a majority of our Board that a change in control has occurred.

"Cause" generally means (i) the willful and continued failure of the officer to perform his or her duties; or (ii) the willful engaging by the officer in illegal conduct or gross misconduct that is materially and demonstrably injurious to PPG.

"Good reason" generally means (i) the assignment of duties inconsistent with the officer's position, authority, duties or responsibilities in effect at the time of the change in control, or any other action resulting in a diminution in such position, authority, duties or responsibilities, other than isolated and inadvertent action not taken in bad faith that is remedied promptly; (ii) failure to provide the employment compensation and benefits required under the change in control agreement, other than an isolated and inadvertent failure not occurring in bad faith that is remedied promptly; or (iii) a relocation or substantial change in the officer's workplace or the company's requiring the officer to travel on company business to a substantially greater extent than required immediately prior to the change in control.

Changes to Form of Change in Control Agreement. The Officers—Directors Compensation Committee has made modifications to the form of change in control agreement for officers in response to current trends in executive compensation and to a shareholder proposal that was supported by shareholders at the 2007 annual meeting of shareholders. PPG began entering into the revised agreements in 2008 with certain newly hired or promoted officers.



Key revisions to the change in control agreement in 2007 included:

- Modification of the definition of “change in control” to require “consummation” of a reorganization, merger or consolidation or sale of substantially all of the assets of PPG.
- Modification of the definition of “compensation” to include “target” bonus instead of the “highest” bonus over the last three years. This change affects the cash payment and the Pension Differential calculation.
- Modification of certain termination provisions, including elimination of the window period termination.
- Modification of the excise tax and gross-up provision to replace the full gross up with a “conditional” gross up, which provides for a reduction in change in control payments if such payments trigger an excise tax by a limited amount.
- Elimination of the provisions providing for the payment of financial counseling and legal expenses.

In 2010, 2012 and 2013, the Officers—Directors Compensation Committee made additional modifications to the form of change in control agreement for officers in response to current trends in executive compensation. The key revisions to the change in control agreement for 2010 were to eliminate the excise tax gross-up entirely and include a “conditional” payment limitation, which provides for a reduction in change of control payments if such payments would trigger an excise tax, unless a larger amount would be received on an after-tax basis without a payment reduction. The key revisions made in 2012 were to change the definition of Retirement and the associated benefits related to retirement to ensure that all applicable provisions are applied properly for executives who only participated in the former PPG Defined Contribution Retirement Plan and non-U.S. executives who do not participate in either Retirement Plan C or the former Defined Contribution Retirement Plan. The key revision made in 2013 was to eliminate potential double payments under other PPG severance provisions or statutory requirements and the change in control agreement.



Change in Control Involuntary or Good Reason Termination (2018)

	INVOLUNTARY OR GOOD REASON TERMINATION
M. H. McGarry	
Financial Counseling	\$ 38,990
Lump Sum Payment	
Base Salary	3,795,000
Bonus	6,300,000
Pension Differential	1,441,231
Health & Welfare Benefits	50,084
Accelerated Vesting of LTI	10,523,436
Excise Tax and Gross-up	14,158,654
Total	\$ 36,307,395 ⁽¹⁾
V. J. Morales	
Non-Qualified Pension	\$ 2,622,366 ⁽²⁾
Lump Sum Payment	
Base Salary	1,725,000
Bonus	1,552,500
Pension Differential	479,194
Health & Welfare Benefits	56,694
Retiree Medical Benefits	156,253 ⁽³⁾
Accelerated Vesting of LTI	1,002,428
Total	\$ 7,594,435
R. B. Liebert	
Lump Sum Payment	
Base Salary	\$ 1,875,000
Bonus	1,312,500
Health & Welfare Benefits	50,122
Accelerated Vesting of LTI	3,505,262
Total	\$ 6,742,884
G. E. Bost II	
Financial Counseling	\$ 38,990
Lump Sum Payment	
Base Salary	1,710,000
Bonus	2,340,000
Pension Differential	405,799
Health & Welfare Benefits	50,084
Accelerated Vesting of LTI	1,369,328
Total	\$ 5,914,201 ⁽¹⁾
T. M. Knavish	
Non-Qualified Pension	\$ 2,704,871 ⁽²⁾
Lump Sum Payment	
Base Salary	1,875,000
Bonus	1,312,500
Pension Differential	630,768
Health & Welfare Benefits	66,004
Retiree Medical Benefits	155,473 ⁽³⁾
Accelerated Vesting of LTI	841,898
Total	\$ 7,586,514

- (1) This officer is eligible to commence a retirement benefit under the Non-Qualified Pension Plan based on the officer's age and years of service as of December 31, 2018 upon any termination of the officer's employment. The estimated lump-sum present value under the Non-Qualified Pension Plan to which this officer would be entitled is presented in the Pension Benefits Table, which is located on page 48.
- (2) This officer is not eligible to commence a retirement benefit under the Non-Qualified Pension Plan, based on the officer's age and years of service as of December 31, 2018, until the officer reaches earliest retirement age, as defined under the Non-Qualified Pension Plan. The amount reflected in the table for this officer is not a present value amount, but the estimated aggregate payments over the officer's



lifetime, assuming the officer terminated employment with PPG on December 31, 2018 and payments commenced upon the date that the officer attains the earliest eligible retirement age provided under the Non-Qualified Pension Plan.

- (3) This officer is not retirement eligible as of December 31, 2018 and thereby not entitled to receive retiree health and welfare benefits. The amount reflected in the table for this officer is a present value amount for retiree medical benefits of the officer and his beneficiary based on their expected life.

Equity Acceleration

In the event of a change in control of PPG, the Company stock plans and award agreements entered into prior to 2009 provide that the participant will be entitled to full vesting acceleration of his or her unvested stock options, TSR awards and restricted stock units. For award agreements entered into in 2009 and thereafter, in the event of a change in control of PPG, an executive must be terminated (or have a substantial diminution of job duties) to be entitled to full vesting acceleration of unvested stock options, TSR awards and restricted stock units. The table below reflects the calculation of the aggregate dollar values related to acceleration of vesting of the incentive equity awards held by the executive officers named in the Summary Compensation Table in the event of a termination following a change in control, and the total is reflected in the "Accelerated Vesting of LTI" row for each officer in the table above on page 56. The stock option value was calculated by multiplying the number of unvested shares by the difference between the grant price and the closing stock price on December 31, 2018 (\$102.23). If any stock options were underwater as of December 31, 2018, no value was assigned to such options. The TSR share and restricted stock unit value was calculated by multiplying the target number of unvested shares by the closing stock price on December 31, 2018, except as otherwise noted.

Change in Control

Accelerated Vesting of Outstanding Equity (2018)

EXECUTIVE	STOCK OPTIONS (\$)	RESTRICTED STOCK UNITS		TIME VESTED (\$)	TOTAL SHAREHOLDER RETURN SHARES		TOTAL (\$)
		2017 - 2019	2018 - 2020		2017 - 2019	2018 - 2020	
		PERFORMANCE PERIOD (\$) ⁽¹⁾	PERFORMANCE PERIOD (\$) ⁽¹⁾		PERFORMANCE PERIOD (\$) ⁽²⁾	PERFORMANCE PERIOD (\$) ⁽²⁾	
M. H. McGarry	3,472,326	2,665,545	2,474,477	—	1,029,865	881,223	10,523,436
V. J. Morales	78,984	268,354	402,071	—	109,795	143,224	1,002,428
R. B. Liebert	—	—	324,274	3,059,028	—	121,960	3,505,262
G. E. Bost II	183,459	462,080	402,071	—	178,494	143,224	1,369,328
T. M. Knavish	119,439	248,828	278,372	—	96,096	99,163	841,898

- (1) The PBRsUs for the 2017 - 2019 performance period reflect an estimated payout of 100%. The PBRsUs for the 2018 - 2020 performance period reflect an estimated payout of 100%.

- (2) The TSRs for the 2017 - 2019 performance period reflect an estimated payout of 40.9%. The TSRs for the 2018 - 2020 performance period reflect an estimated payout of 37.6%.



PAY RATIO

Section 953(b) of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 requires most companies with publicly traded stock in the United States to identify the median total compensation of their worldwide employee population (other than the chief executive officer) and to compare that amount with the total compensation of their chief executive officer. Total compensation amounts are required to be calculated using the SEC's compensation disclosure rules applicable to reporting compensation in the Summary Compensation Table of the Proxy Statement. Median employee compensation used to calculate the pay ratio is required to be the total compensation paid to an actual employee of the company. We identified our median employee using our total employee population as of October 1, 2018 by applying a consistently applied compensation measure across our global employee population. For our consistently applied compensation measure, we used annual base salary. We used an annual base salary as our consistently applied compensation measure as it represents the primary compensation component paid to all of our employees. As a result, annual base salary provides an accurate depiction of total earnings for the purpose of identifying our median employee. We then calculated the median employee's total annual compensation in accordance with the requirements of the Summary Compensation Table. We did not use any material estimates, assumptions, adjustments or statistical sampling to determine the worldwide median employee.

Our median employee's 2018 compensation was \$39,494. Our Chief Executive Officer's total 2018 compensation was \$11,784,404 as reported in the Summary Compensation Table on page 44. Accordingly, our 2018 CEO to Median Employee Pay Ratio was 298:1. Each individual's total annual compensation can be comprised of different compensation elements and is dependent on where the individual works globally.

Please keep in mind that under the SEC's rules and guidance, there are numerous ways to determine the compensation of a company's median employee, including the employee population sampled, the elements of pay and benefits used, any assumptions made and the use of statistical sampling. In addition, no two companies have identical employee populations or compensation programs, and pay, benefits and retirement plans differ by country even within the same company. As such, our pay ratio may not be comparable to the pay ratio reported by other companies.



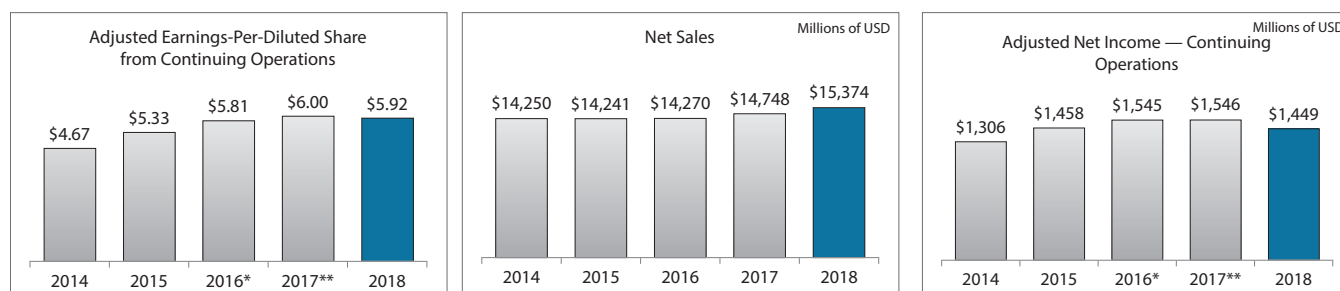
PROPOSAL 3: Advisory Vote on Approval of the Compensation of the Named Executive Officers

Section 14A of the Securities Exchange Act of 1934, as amended, requires that we include in this Proxy Statement a non-binding, advisory shareholder vote on our executive compensation as described in this Proxy Statement (commonly referred to as “say-on-pay”). Based upon the vote of our shareholders at the 2011 and 2017 annual meetings and the Board’s recommendation, PPG has provided this advisory vote on an annual basis.

We encourage shareholders to review the section of this Proxy Statement relating to executive compensation on pages 28 through 57. Executive compensation is based on our pay-for-performance philosophy, which emphasizes executive performance measures that correlate closely with the achievement of both shorter-term performance objectives and longer-term shareholder value. To this end, a substantial portion of our executives’ annual and long-term compensation is performance-based, with the payment being contingent on the achievement of performance goals. We believe our program strikes the appropriate balance between utilizing responsible, measured pay practices and effectively incentivizing our executives to dedicate themselves fully to value creation for our shareholders. This balance is evidenced by the following:

- In 2018, the Company delivered solid financial performance despite significant and persistent raw material and logistics cost inflation, which impacted the entire coatings industry. Total net sales from continuing operations for 2018 were approximately \$15.4 billion, up about 4% compared to 2017, including net favorable foreign currency translation of less than 1%. The Company’s 2018 full-year reported net income from continuing operations was \$1.3 billion, or \$5.40 per diluted share, versus \$1.4 billion, or \$5.31 per diluted share, in 2017. Adjusted net income from continuing operations for 2018 was \$1.45 billion, versus \$1.51 billion in 2017.
- In September, the Company raised the per-share dividend by 7%—paying approximately \$450 million in dividends in 2018. The Company also repurchased approximately \$1.7 billion of stock in 2018.
- In 2018, the Company completed several acquisitions, increasing both geographic and product scope. Cash spending for these acquisitions totaled approximately \$380 million.

The following charts contain adjusted earnings-per-diluted share from continuing operations, net sales from continuing operations and adjusted net income from continuing operations as used for determining the compensation of our executive officers for each of the last five fiscal years:



* 2016 Adjusted Net Income and Adjusted Earnings Per Diluted Share include \$46 million (\$0.17) for the results of the flat glass business through September 30, 2016, which has been recast as discontinued operations for all periods presented but which is included in the Compensation metric.

**2017 Adjusted Net Income and Adjusted Earnings Per Diluted Share include \$15 million (\$0.06) for the results of the North American fiber glass business through August 31, 2017, which has been recast as discontinued operations for all periods presented, but which is included in the Compensation metric. These figures also include \$20 million (\$0.08) for the impact of raw materials and Puerto Rican business resulting from the 2017 natural disasters.

Adjusted earnings-per-diluted share from continuing operations and adjusted net income from continuing operations are not recognized financial measures determined in accordance with U.S. generally accepted accounting principles (U.S. GAAP) and should not be considered a substitute for earnings-per-diluted share or net income or other financial measures as computed in accordance with U.S. GAAP. PPG’s management considers this information useful in providing insight into the company’s ongoing operating performance because it excludes the impact of items that cannot reasonably be expected to recur on a quarterly basis or that are not attributable to our primary operations. A Regulation G reconciliation of adjusted earnings-per-diluted share from continuing operations and adjusted net income from continuing operations to reported earnings-per-diluted share from continuing operations and net income from continuing operations is included in Annex A to this Proxy Statement.

- Although we had strong performance in 2018, we did not achieve our adjusted earnings-per-diluted share target or our sales volume/mix growth target. As a result, annual incentive awards were paid to executive officers ranged from



37% to 116% of target. Our total shareholder return over the past three years when measured against the S&P 500 was in the 31st percentile resulting in the payment of long-term TSR share awards at 32.5% of target.

- Between 70% and 89% of the named executive officers' target total direct compensation opportunity for 2018 was in the form of performance-based variable compensation and long-term incentives motivating them to deliver strong business performance and create shareholder value.
- Base salary and annual incentive targets for our executive officers are established annually to maintain parity with the competitive market for executives in comparable positions. Target total annual compensation for each position is set at or near the market median.
- PPG's compensation programs are reviewed annually to identify any inherent material risks to PPG created by these programs. Based on the results of the 2018 review, we concluded that the design of our compensation programs does not encourage our employees to take unnecessary or excessive risks that could harm the long-term value of PPG.
- At the 2018 annual meeting, we held a shareholder advisory vote on the compensation of our named executive officers, commonly referred to as a say-on-pay vote. Our shareholders overwhelmingly approved the compensation of our named executive officers, with approximately 93% of shareholder votes cast in favor of our 2018 say-on-pay resolution. Following its review of this vote, the Officers—Directors Compensation Committee recommended to the full Board that we retain our general approach to executive compensation, with an emphasis on short- and long-term incentive compensation that rewards our executive officers when they deliver value for our shareholders. Consistent with this philosophy:
 - Our performance metrics are focused on increasing shareholder value and are tied to measures impacting both shorter-term and longer-term performance. Shorter-term performance metrics include adjusted earnings-per-diluted share from continuing operations, cash flow from operating activities—continuing operations, pre-tax, pre-interest income, working capital reduction, and sales volume/mix growth. Longer-term performance metrics include total shareholder return, adjusted earnings-per-diluted share growth, cash flow return on capital and stock price appreciation.
 - Payment of long-term incentive awards is based solely on Company performance. We have three-year award and payout cycles for both performance-based restricted stock units, or PBRsUs, and total shareholder return shares, or TSR shares. We also have three-year vesting for stock options.
- We provide very limited perquisites to our executive officers.
- Our officers are subject to stock ownership requirements. Our Chief Executive Officer must own shares of PPG common stock with a value of six times his base salary, and the other executive officers must own shares of PPG common stock with a value of three times his or her base salary. Officers are expected to meet these ownership requirements within five years of election. Those officers who have not yet met this requirement are paid 20% of their annual incentive in PPG stock, which is restricted from sale for a period of two to five years. In addition, for officers who have been subject to the policy for more than five years at their current requirement level and have not met the ownership requirement, 100% of the vested shares delivered from the PBRsU award and TSR share award must be held by the officer for a minimum of one year and until the requirement is met. The executive officers named in the Summary Compensation Table have met their ownership requirement, except for Ms. Liebert who joined the Company in June 2018. Ms. Liebert is within the five-year compliance period.
- Our officers may not engage in transactions that are contrary to the interests of shareholders, such as "short sales," "short sales against the box," "put" and "call" options and hedging transactions designed to minimize an executive's risk inherent in owning PPG stock. In addition, officers may not hold PPG stock in a margin account and may not pledge PPG stock as collateral for a loan.
- Executive officers are subject to a "clawback" policy that is designed to recoup incentive compensation when a financial restatement occurs and certain other conditions exist.
- We do not provide tax gross-ups on perquisites to our named executive officers.



Accordingly, you are asked to vote on the following resolution:

RESOLVED: The Board strongly endorses the Company's executive compensation program and recommends that the shareholders vote in favor of the following resolution: that the shareholders approve the compensation of the Company's named executive officers as described in this Proxy Statement on pages 28 through 57 and disclosed in accordance with rules of the Securities and Exchange Commission, including the Compensation Discussion and Analysis and the tabular and narrative disclosure contained therein.

Because the vote is advisory, it will not be binding upon the Board or the Officers—Directors Compensation Committee, and neither the Board nor the Officers—Directors Compensation Committee will be required to take any action as a result of the outcome of the vote on this proposal. However, the Officers—Directors Compensation Committee will carefully consider the outcome of the vote when considering future executive compensation programs.

Vote Required

Adoption of the resolution approving the compensation of the Company's named executive officers will require the affirmative vote of more than one-half of the shares present, either in person or by proxy, and entitled to vote and voting (excluding abstentions) at the Annual Meeting.

**THE BOARD RECOMMENDS THAT SHAREHOLDERS VOTE FOR THE APPROVAL OF THE
COMPENSATION OF THE COMPANY'S NAMED EXECUTIVE OFFICERS
AS DESCRIBED IN THIS PROXY STATEMENT.**



PROPOSAL 4: Proposal to Amend the Articles of Incorporation to Provide for the Annual Election of Directors

PPG's Board of Directors has unanimously approved and is recommending that shareholders approve an amendment to PPG's Restated Articles of Incorporation, as amended, to provide for the phased-in elimination of the classified board of directors structure and the annual election of directors. At PPG's 2012, 2013 and 2018 annual meetings of shareholders, PPG presented the same proposal for approval by the Company's shareholders. In 2012, 2013 and 2018, the proposal received the affirmative vote of approximately 99% of the votes cast, but only approximately 67%, 68% and 74%, respectively, of the outstanding shares of the Company's common stock. Since PPG's Articles of Incorporation require the affirmative vote of at least 80% of the shares of the Company's outstanding common stock to approve a proposal to amend the Articles of Incorporation to declassify the Board, the proposals failed to receive the required vote. For the reasons discussed below, the Board of Directors has resolved to present this proposal to the Company's shareholders again at this year's Annual Meeting.

In its review of our classified board structure, the Board has carefully weighed the advantages and disadvantages of maintaining a classified board structure. The Board considered that many U.S. public companies have eliminated their classified board structures in recent years in favor of annual elections and that many investors now consider the election of directors to be the primary means for shareholders to influence corporate governance policies and to increase a board's accountability.

The Nominating and Governance Committee regularly considers and evaluates a broad range of corporate governance issues affecting PPG and takes into consideration feedback we receive from our shareholders. Our Board has responded to shareholder feedback on our classified board structure by placing management proposals to eliminate our classified board before our shareholders. By placing the weight of management behind these proposals, these proposals were more likely to achieve a successful vote than had the Board decided only to include shareholder proposals on this topic in our Proxy Statements, as exemplified by the 74% vote received at the 2018 Annual Meeting – six percent higher than in 2013.

After carefully weighing these considerations, including shareholder opinion on this topic and the increased vote received on this proposal at PPG's 2018 annual meeting, the Board concluded that the annual election of all directors will both enhance our corporate governance practices and be an effective way to maintain and enhance the accountability of the Board. Accordingly, the Board, upon the recommendation of the Nominating and Governance Committee, has unanimously determined that it is in the best interests of the Company to eliminate the classified board structure.

PPG's Articles of Incorporation currently provide that the Board shall be divided into three classes as nearly equal in number as possible with members of each class serving for three-year terms. If this proposal is approved, all directors will be elected annually beginning at the 2022 annual meeting. The directors to be elected at the 2019 Annual Meeting into the class whose term expires in 2022 will be elected to serve a full three-year term. The directors to be elected at the 2020 annual meeting will be elected to serve a two-year term. The directors to be elected at the 2021 annual meeting will be elected to serve a one-year term. At the 2022 annual meeting and at each meeting of shareholders thereafter, all directors will be elected annually. Because the declassification process discussed in this proposal would not be complete until the 2022 annual meeting, it would not operate to shorten the upcoming term of any of our directors nominated for election at the 2019 Annual Meeting, ensuring a smooth transition to annual elections of all of our directors. All directors elected to fill vacancies will hold office for a term expiring at the annual meeting at which the term of the class to which they have been elected expires.

Complete Text of the Proposed Amendment

The general description of the proposed amendment to PPG's Articles of Incorporation set forth above is qualified in its entirety by reference to the text of the proposed amendments to the Articles of Incorporation, which are attached as Annex B to this Proxy Statement.



Vote Required

The affirmative vote of the holders of at least 80% of the shares of the Company's outstanding common stock entitled to vote (including abstentions) at the Annual Meeting will be required for approval of this proposal. If approved, the amendment of the Articles of Incorporation will become effective upon its filing with the Secretary of the Commonwealth of Pennsylvania, which we intend to do following the Annual Meeting. If the proposal is approved, the Board will make conforming amendments to our Bylaws. If this proposal is not approved, the Board will remain classified.

THE BOARD OF DIRECTORS RECOMMENDS THAT SHAREHOLDERS VOTE *FOR* THE AMENDMENT OF PPG'S ARTICLES OF INCORPORATION TO PROVIDE FOR THE ANNUAL ELECTION OF DIRECTORS.



PROPOSAL 5: Proposal to Amend the Articles of Incorporation and Bylaws to Replace the Supermajority Voting Requirements

PPG's Board of Directors has unanimously approved and is recommending that shareholders approve an amendment to PPG's Restated Articles of Incorporation, as amended, and PPG's Amended and Restated Bylaws to replace the supermajority voting requirements set forth therein.

In 2014 and 2015, the Board considered this proposal, including the amount of shareholder support it received in the past, and proposed to amend PPG's Articles of Incorporation and Bylaws to replace the supermajority voting requirements with a simple majority vote or the closest standard to a simple majority vote allowed by Pennsylvania law. At our 2014 and 2015 annual meetings, the Board's proposal to amend PPG's Articles and Bylaws received the support of the holders of approximately 99% of the votes cast at the meeting but only approximately 67% and 68%, respectively, of the outstanding shares of the Company's common stock. Since PPG's Articles of Incorporation and certain sections of PPG's Bylaws require the affirmative vote of at least 80% of the shares of the Company's outstanding common stock to approve a proposal to replace the supermajority voting requirements, the proposals failed to receive the required vote.

Considering the vote received at the 2014 and 2015 annual meetings and shareholder opinion on this topic, including a shareholder proposal received this year, the Board is again proposing to amend PPG's Articles of Incorporation and Bylaws to replace the supermajority voting requirements with a simple majority vote or the closest standard to a simple majority vote allowed by Pennsylvania law. The Pennsylvania Business Corporation Law (the "Pennsylvania BCL") provides that whenever any corporate action is to be taken by vote of the shareholders of a business corporation, it will be authorized upon receiving the affirmative vote of a majority of the votes cast by all shareholders entitled to vote thereon.

PPG's Articles of Incorporation currently require the affirmative vote of at least 80% of the shares of PPG's outstanding common stock entitled to vote for shareholders to approve the following actions:

- repealing the classified board structure;
- changing the size of the Board beyond the parameters set forth in the Articles of Incorporation;
- removing a director from office outside of the annual meeting process;
- amending the provision of the Articles of Incorporation requiring a supermajority vote to approve certain business combinations with a party that owns 20% or more of PPG's shares; and
- amending the director indemnification provisions.

PPG's Bylaws currently require the affirmative vote of at least 80% of the shares of PPG's outstanding common stock entitled to vote in order for shareholders to approve the following actions:

- repealing the classified board structure;
- removing a director from office outside the annual meeting process; and
- amending the director liability and indemnification provisions.

The proposed amendment to the Articles of Incorporation and Bylaws would reduce the voting requirements for these actions to require a vote of a majority of the votes cast by all shareholders entitled to vote in each circumstance described above other than the business combination provision. The Pennsylvania BCL requires that certain business combinations between PPG and a person who owns 20% or more of PPG's shares (an interested shareholder) receive the affirmative vote of no less than the majority of the votes cast if the transaction meets certain criteria. However, depending on the form of the transaction, approval may require the affirmative vote of a majority of the shares of outstanding common stock, excluding the votes of the interested shareholders, or may require the affirmative vote of all of the shares of outstanding common stock. Therefore, the vote required to approve such a transaction would be reduced to the minimum vote required by the Pennsylvania BCL.

The Nominating and Governance Committee and the Board carefully considered the advantages and disadvantages of maintaining the supermajority voting requirements in PPG's Articles of Incorporation and Bylaws. Proponents of the elimination of supermajority voting requirements posit that these requirements impede accountability to shareholders and contribute to Board and management entrenchment. They argue that a minority of shareholders can block an initiative supported by a majority of shareholders and that a simple majority vote requirement should be sufficient for



any corporate action requiring shareholder approval. In this regard, the Board gave considerable weight to the fact that the 2014 and 2015 management proposals each received a substantial majority of votes in favor of the proposal and to the opinion of current PPG shareholders on this topic.

After carefully reviewing these considerations, the Nominating and Governance Committee determined, and the Board of Directors agreed, that it is in the best interest of PPG to replace the supermajority voting requirements. The Board concluded that replacement of the supermajority voting provisions will both enhance our corporate governance practices and be an effective way to maintain and enhance the accountability of PPG to its shareholders. Accordingly, the Board, upon the recommendation of the Nominating and Governance Committee, has unanimously determined that it is in the best interests of the Company to amend PPG's Articles of Incorporation and Bylaws to replace the supermajority voting requirements set forth therein.

Conforming Changes to PPG's Bylaws

PPG's Bylaws also include supermajority voting provisions relating to the repeal of the classified board structure, removal of a director from office outside of the annual meeting process and amendment of the director liability and indemnification provisions that are consistent with the same provisions in the Articles of Incorporation. Conditional upon approval by the shareholders of the amendment to the Articles of Incorporation and Bylaws described in this proposal, PPG's Board has voted to remove the supermajority voting standards from the Bylaws and replace them with a standard requiring the affirmative vote of a majority of the votes cast and entitled to vote.

Complete Text of Proposed Amendment

The general description of the proposed amendment to PPG's Articles of Incorporation and the proposed amendment to PPG's Bylaws set forth above is qualified in its entirety by reference to the text of the proposed amendments to the Articles of Incorporation and the Bylaws, which are attached as Annex C and Annex D, respectively, to this Proxy Statement. Proposed additions are underlined, and proposed deletions are stricken through.

Vote Required

The affirmative vote of the holders of at least 80% of the shares of the Company's outstanding common stock entitled to vote (including abstentions) at the Annual Meeting will be required for approval of this proposal. If approved, the amendment of the Articles of Incorporation will become effective upon its filing with the Secretary of the Commonwealth of Pennsylvania, which we intend to do following the Annual Meeting. If the proposal is approved, the Board will make conforming amendments to our Bylaws. If this proposal is not approved, the Articles of Incorporation and Bylaws will remain unchanged.

**THE BOARD OF DIRECTORS RECOMMENDS THAT SHAREHOLDERS
VOTE *FOR* THE AMENDMENT OF PPG'S ARTICLES OF INCORPORATION AND BYLAWS
TO REPLACE THE SUPERMAJORITY VOTING REQUIREMENTS.**



INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Service Fees Paid to the Independent Registered Public Accounting Firm

During 2017 and 2018, we retained PricewaterhouseCoopers LLP as the Company's independent registered public accounting firm. In 2017 and 2018, PricewaterhouseCoopers LLP provided services in the following categories and amounts:

	MILLIONS OF DOLLARS	
	2018	2017
Audit fees ⁽¹⁾	\$ 10.7	\$ 8.6
Audit-related fees ⁽²⁾	\$ 0.2	\$ 1.4
Tax fees ⁽³⁾	\$ 1.5	\$ 2.9
All other fees	\$ —	\$ —
Total All Fees	\$ 12.4	\$ 12.9

- (1) Fees related to the audit of the consolidated financial statements and internal control over financial reporting pursuant to Section 404 of the Sarbanes-Oxley Act of 2002, comfort letters, statutory and regulatory audits, consents, quarterly reviews and consultations concerning financial accounting and reporting standards arising during the audits. The increase in Audit fees primarily relates to work surrounding the restatement disclosed in the 2017 Form 10-K/A.
- (2) Fees related to non-recurrent projects primarily related to acquisitions and divestitures.
- (3) Fees related to tax compliance, planning and advice.

The majority of services performed by PricewaterhouseCoopers LLP in 2018 were pre-approved in accordance with the Audit Committee pre-approval policy and procedures adopted at its February 14, 2018 meeting. Additional services were approved during the year as needed, in accordance with this policy. In so doing, the committee determined that the provision of these services is compatible with maintaining the principal accountant's independence. In 2018, no services (which pursuant to Securities and Exchange Commission regulations were considered *de minimis*) were provided by PricewaterhouseCoopers LLP that were approved by the committee after such services were performed.

Audit Committee Pre-approval Policy

The pre-approval policy describes the permitted audit, audit-related, tax and other services that PricewaterhouseCoopers LLP may perform and lists a range of fees for these services (referred to as the Service List). The service and fee ranges listed in the pre-approval policy are pre-approved by the Audit Committee. If a type of service to be provided by PricewaterhouseCoopers LLP is not included in the Service List, the committee must specifically pre-approve it. Normally, pre-approval is provided at regularly scheduled meetings. However, the authority to pre-approve engagements has been delegated to the committee chair to accommodate time sensitive service proposals. Any pre-approval decisions made by the chair must be communicated to the full committee at the next scheduled meeting.



PROPOSAL 6: Ratification of Independent Registered Public Accounting Firm

The Audit Committee of the Board of Directors has appointed PricewaterhouseCoopers LLP as our independent registered public accounting firm for 2019. Representatives of PricewaterhouseCoopers LLP are expected to be present at the Annual Meeting and, while they do not plan to make a statement (although they will have the opportunity if they desire to do so), they will be available to respond to appropriate questions from shareholders.

It is intended that the shares represented by each proxy will be voted, in the discretion of the persons appointed as proxies, **FOR** the ratification. If the selection of PricewaterhouseCoopers LLP is not ratified, the Audit Committee will reconsider the appointment of the Company's independent registered public accounting firm. Even if the selection of PricewaterhouseCoopers LLP is ratified by our shareholders, the Audit Committee in its discretion could decide to terminate the engagement of PricewaterhouseCoopers LLP and engage another firm if the committee determines such action to be necessary or desirable.

Vote Required

The ratification of PricewaterhouseCoopers LLP as our independent registered public accounting firm for 2019 will require the affirmative vote of more than one-half of the shares present, either in person or by proxy, and entitled to vote and voting (excluding abstentions) at the Annual Meeting.

**THE BOARD RECOMMENDS THAT SHAREHOLDERS VOTE *FOR* THE
RATIFICATION OF PRICEWATERHOUSECOOPERS LLP AS OUR
INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FOR 2019.**



EQUITY COMPENSATION PLAN INFORMATION

The following table provides information as of December 31, 2018 regarding the number of shares of PPG common stock that may be issued under PPG's equity compensation plans:

PLAN CATEGORY	NUMBER OF SECURITIES TO BE ISSUED UPON EXERCISE OF OUTSTANDING OPTIONS, WARRANTS AND RIGHTS (A)	WEIGHTED-AVERAGE EXERCISE PRICE OF OUTSTANDING OPTIONS, WARRANTS AND RIGHTS (B)	NUMBER OF SECURITIES REMAINING AVAILABLE FOR FUTURE ISSUANCE UNDER EQUITY COMPENSATION PLANS (EXCLUDING SECURITIES REFLECTED IN COLUMN (A)) (C) ⁽²⁾
Equity compensation plans approved by security holders ⁽¹⁾	4,473,435	\$ 90.10	11,827,860
Equity compensation plans not approved by security holders ⁽³⁾	—	\$ —	—
Total	4,473,435	\$ 90.10	11,827,860

(1) All securities were granted under the PPG Industries, Inc. Amended and Restated Omnibus Incentive Plan.

(2) Represents securities remaining available for future issuance under the PPG Industries, Inc. Amended and Restated Omnibus Incentive Plan and includes 268,490 securities that represent the incremental increase above target for a maximum payout.

(3) Excluded from the information presented here are common stock equivalents held under the PPG Industries, Inc. Deferred Compensation Plan and the PPG Industries, Inc. Deferred Compensation Plan for Directors, neither of which are equity compensation plans. As supplemental information, there were 697,345 common stock equivalents held under such plans as of December 31, 2018.



BENEFICIAL OWNERSHIP

Beneficial Ownership Tables

As of the close of business on the record date, February 22, 2019, there were outstanding 236,101,706 shares of PPG common stock, par value \$1.66% per share. Set forth below is certain information concerning the beneficial owners of more than 5% of PPG's outstanding shares:

NAME AND ADDRESS OF BENEFICIAL OWNER	NUMBER OF SHARES BENEFICIALLY OWNED	PERCENT OF SHARES OUTSTANDING
BlackRock, Inc. and/or certain other entities 55 East 52nd Street New York, NY 10055	14,628,186 ⁽¹⁾	6.2 %
Massachusetts Financial Services Company and/or certain other entities 111 Huntington Avenue Boston, MA 02199	24,281,234 ⁽²⁾	10.2 %
The Vanguard Group, Inc. and/or certain other entities 100 Vanguard Boulevard Malvern, PA 19355	20,287,041 ⁽³⁾	8.6 %

- (1) Based solely on a Schedule 13G/A filed with the Securities and Exchange Commission on February 6, 2019, BlackRock, Inc. and/or certain affiliated entities reported aggregate beneficial ownership of 14,628,186 shares of PPG common stock as of December 31, 2018. Blackrock, Inc. reported that it possessed sole voting power over 12,234,077 shares and sole dispositive power over all of such shares. BlackRock, Inc. also reported that it did not possess shared voting or shared dispositive power over any shares beneficially owned.
- (2) Based solely on a Schedule 13G/A filed with the Securities and Exchange Commission on February 13, 2019 Massachusetts Financial Services Company ("MFS") and/or certain affiliated entities reported aggregate beneficial ownership of 24,281,234 shares of PPG common stock as of December 31, 2018. MFS reported that it possessed sole voting power over 22,555,813 shares and sole dispositive power over all of such shares. MFS also reported that it did not possess shared voting or shared dispositive power over any shares beneficially owned.
- (3) Based solely on a Schedule 13G/A filed with the Securities and Exchange Commission on February 12, 2019. The Vanguard Group and/or certain affiliated entities reported aggregate beneficial ownership of 20,287,041 shares of PPG common stock as of December 31, 2018. The Vanguard Group reported that it possessed sole voting power over 278,395 shares, sole dispositive power over 19,947,391 shares, shared dispositive power over 339,650 shares and shared voting power over 62,391 shares.



The following table sets forth all shares of PPG common stock beneficially owned, as of February 22, 2019, by each director, director appointee and executive officer named in the Summary Compensation Table, as well as all directors, director appointees and executive officers of the Company as a group.

NAME OF BENEFICIAL OWNER	SHARES OF BENEFICIALLY OWNED COMMON STOCK AND COMMON STOCK EQUIVALENTS ⁽¹⁾		
	BENEFICIALLY OWNED COMMON STOCK ⁽²⁾	COMMON STOCK EQUIVALENTS ⁽³⁾	TOTAL ⁽⁴⁾
Stephen F. Angel	2,227	26,918	29,145
James G. Berges	15,292	36,102	51,394
Steven A. Davis	—	—	—
John V. Faraci	1,427	14,668	16,095
Hugh Grant	2,227	67,704	69,931
Victoria F. Haynes	1,901	43,920	45,821
Melanie L. Healey	1,327	2,283	3,610
Gary R. Heminger	1,727	988	2,715
Michele J. Hooper	19,067	32,528	51,595
Michael W. Lamach	2,227	3,754	5,981
Michael H. McGarry	347,619	3,042	350,661
Martin H. Richenhagen	23,064	—	23,064
Catherine R. Smith	—	—	—
Glenn E. Bost II	80,332	802	81,134
Timothy M. Knavish	36,676	8,753	45,429
Rebecca B. Liebert	—	99	99
Vincent J. Morales	30,659	528	31,187
All Directors and Executive Officers as a Group ⁽⁵⁾	631,124	242,089	873,213

- (1) Each of the named beneficial owners has sole voting power and sole investment power as to all the shares beneficially owned by them with the exception of (i) shares held by certain of them jointly with, or directly by, their spouses and children and (ii) the common stock equivalents shown in the second column, and described more fully below, which have no voting power.
- (2) Shares of common stock considered to be “beneficially owned” include both common stock actually owned and shares of common stock as to which there is a right to acquire ownership on, or within 60 days after, February 22, 2019. These amounts reflect shares subject to options exercisable within 60 days of February 22, 2019: as follows: Mr. McGarry, 225,669; Mr. Bost, 38,132; Mr. Knavish, 20,100; and Mr. Morales, 12,300. These amounts also include shares held in the PPG Industries, Employee Savings Plan as of February 22, 2019 as follows: Mr. McGarry, 14,575; Mr. Bost, 22; Mr. Knavish, 4,725; and Mr. Morales, 6,150. In April 2018, each director received 1,227 time-based restricted stock units. The directors’ restricted stock units granted in 2018 vest on April 17, 2019 and are included in the table because these restricted stock units vest within 60 days of February 22, 2019. To the Company’s knowledge, none of the shares reflected in the table have been pledged.
- (3) Certain directors hold common stock equivalents in their accounts in the Deferred Compensation Plan for Directors, which is described under “Deferred Compensation” on pages 26 through 27. Certain executive officers hold common stock equivalents in their accounts in the Deferred Compensation Plan, which is described under “Defined Contribution Retirement Plans and Deferred Compensation Plan” on pages 50 through 51. Common stock equivalents are hypothetical shares of common stock having a value on any given date equal to the value of a share of common stock. Common stock equivalents earn dividend equivalents that are converted into additional common stock equivalents, but carry no voting rights or other rights afforded to a holder of common stock. Upon leaving the Company, the common stock equivalents are made available for distribution, and all distributions are made in the form of one share of PPG common stock for each common stock equivalent credited to the person’s deferred account.
- (4) This is the sum of the beneficially owned common stock and the common stock equivalents as shown in the previous two columns. None of the identified beneficial owners holds more than 1.0% of the voting securities of PPG outstanding. The beneficial owners as a group hold less than 1.0% of the voting securities of PPG outstanding.
- (5) The group consists of 20 persons: the directors and executive officers named in this Proxy Statement and PPG’s remaining executive officers: Messes. Amy R. Ericson and Anne M. Foulkes and Mr. Ramaprasad Vadlamannati.



SECTION 16(a) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

The directors and executive officers of PPG are required to file reports of initial ownership and changes of ownership of PPG securities with the Securities and Exchange Commission and the New York Stock Exchange. As a practical matter, PPG assists its directors and executive officers by monitoring transactions and completing and filing such reports on their behalf. To PPG's knowledge, for the fiscal year ended December 31, 2018, the required filings of all such directors and executive officers were timely filed, except for one Form 3 and 11 Form 4 filings by Mark C. Kelly, the Company's former Vice President and Controller, reporting 21 total transactions for the period from March 2017 through April 2018 and one Form 4 inadvertently filed late by the Company on behalf of each of directors Stephen F. Angel and Hugh Grant, each reporting one transaction.



GENERAL MATTERS

When and where is the Annual Meeting?

The Annual Meeting will be held on Thursday, April 18, 2019, at 11:00 a.m., Eastern Time, at the Fairmont Pittsburgh, Grand Ballroom, 510 Market Street, Pittsburgh, Pennsylvania 15222.

Why am I receiving these proxy materials?

In connection with the solicitation of proxies by our Board of Directors to be voted at the 2019 Annual Meeting of Shareholders, these materials have been made available to you on the Internet or, upon your request or under certain other circumstances, have been delivered to you by mail in printed form.

If your shares were registered directly in your name with our transfer agent, Computershare Investor Services, as of the close of business on February 22, 2019, you are considered a shareholder of record, and we have sent you these proxy materials.

If your shares were held in the name of a bank, brokerage account or other nominee as of the close of business on February 22, 2019, you are considered a beneficial owner of the shares held in street name. Your bank, broker or other nominee has sent you these proxy materials. You should direct your bank, broker or other nominee on how to vote your shares, and we encourage you to make such direction. If you do not make a direction with respect to Proposals 1, 2, 3, 4 or 5, your bank, broker or other nominee **will not** be able to vote your shares on your behalf with respect to such proposals.

What is included in these materials?

These proxy materials include:

- Our Notice of Annual Meeting and Proxy Statement for the 2019 Annual Meeting; and
- Our 2018 Annual Report to shareholders, which includes our audited consolidated financial statements.

If you received printed versions of these materials by mail, these materials also include the proxy card or vote instruction form for the Annual Meeting.

Why did I receive a notice in the mail regarding the Internet availability of proxy materials instead of printed proxy materials?

In accordance with the rules of the Securities and Exchange Commission, instead of mailing a printed copy of our proxy materials to our shareholders, we have elected to furnish these materials by providing access to these documents over the Internet. Accordingly, on or about March 7, 2019, we sent a Notice of Internet Availability of Proxy Materials ("Notice of Internet Availability") to our shareholders of record and beneficial owners. All shareholders have the ability to access the proxy materials on a website referred to in the Notice of Internet Availability.

What does it mean if I receive more than one set of proxy materials?

It means you have multiple accounts at the transfer agent or with banks, brokers or other nominees. If you received more than one Notice of Internet Availability, you may need to enter separate electronic control voting numbers when voting by the Internet to ensure that all of your shares have been voted. If you received more than one proxy card or vote instruction form, please complete and provide your voting instructions for all proxy cards and vote instruction forms that you receive.

How can I get electronic access to the proxy materials?

The Notice of Internet Availability provides you with instructions regarding how to (1) view our proxy materials for the Annual Meeting on the Internet; (2) vote your shares after you have viewed our proxy materials; and (3) request a printed copy of the proxy materials.

Our proxy materials are also available online at www.ppg.com/investor.



What am I voting on?

You are voting on six proposals. Details of each proposal are included in this Proxy Statement.

- Proposal 1: To elect as directors the four nominees named in this Proxy Statement as directors to serve in a class whose term expires in 2022: James G. Berges, John V. Faraci, Gary R. Heminger and Michael H. McGarry;
- Proposal 2: To approve the appointment of two director appointees to serve in a class whose term expires in 2021: Steven A. Davis and Catherine R. Smith;
- Proposal 3: To vote on a nonbinding resolution to approve the compensation of the Company's named executive officers on an advisory basis;
- Proposal 4: To vote on an amendment of our Articles of Incorporation to provide for the annual election of directors;
- Proposal 5: To vote on an amendment of our Articles of Incorporation and Bylaws to replace the supermajority voting requirements; and
- Proposal 6: To ratify the appointment of PricewaterhouseCoopers LLP as our independent registered public accounting firm for 2019.

What are the Board's recommendations on how I should vote my shares?

The Board of Directors recommends that you vote your shares as follows:

- Proposal 1: FOR the election of four directors to serve in a class whose term expires in 2022;
- Proposal 2: FOR the approval of two director appointees to serve in a class whose term expires in 2021;
- Proposal 3: FOR the approval of the compensation of the Company's named executive officers on an advisory basis;
- Proposal 4: FOR the amendment of our Articles of Incorporation to provide for the annual election of directors;
- Proposal 5: FOR the amendment of our Articles of Incorporation and Bylaws to replace the supermajority voting requirements; and
- Proposal 6: FOR the ratification of PricewaterhouseCoopers LLP as our independent registered public accounting firm for 2019.

What are my choices when voting?

- Proposal 1: You may cast your vote in favor of or against election of each of the nominees or you may elect to abstain from voting your shares. Abstentions and broker non-votes will not be taken into account to determine the outcome of the election of directors.
- Proposal 2: You may cast your vote in favor of or against approval of the appointment of each of the director appointees or you may elect to abstain from voting your shares. Abstentions and broker non-votes will not be taken into account to determine the outcome of the vote to approve the director appointees.
- Proposals 3 and 6: You may cast your vote in favor of or against each proposal, or you may elect to abstain from voting your shares. Abstentions and broker non-votes will have no effect on the outcome of these proposals.
- Proposals 4 and 5: You may cast your vote in favor of or against each proposal, or you may elect to abstain from voting your shares. Abstentions and broker non-votes will have the effect of a vote against these proposals.

What vote is needed for the proposals to be adopted?

As of the record date, February 22, 2019, there were 236,101,706 shares of PPG common stock issued and outstanding. Each shareholder is entitled to one vote for each share of common stock held.

- Quorum: In order to conduct the Annual Meeting, more than one-half of the outstanding shares must be present or be represented by proxy. This is referred to as a quorum. If you vote by Internet or by telephone, or submit a properly executed proxy card or vote instruction form, you will be considered part of the quorum. Abstentions and broker non-votes on any proposal to be acted on by shareholders will be treated as present at the Annual Meeting for purposes of a quorum.



- Proposal 1: Each director nominee who receives a majority of the votes cast (the number of shares voted “for” the director must exceed 50% of the votes cast with respect to that director) at the Annual Meeting will be elected as a director.
- Proposal 2: Each director appointee who receives a majority of the votes cast (the number of shares voted “for” the director appointee must exceed 50% of the votes cast with respect to that director appointee) at the Annual Meeting will be approved to serve as a director.
- Proposal 3: More than one-half of the shares present, either in person or by proxy, and entitled to vote and voting (excluding abstentions) at the Annual Meeting must vote for the proposal for it to be adopted. The advisory vote on this proposal is nonbinding. However, the Board of Directors will take into account the outcome of the vote on this proposal when making future decisions about the Company’s executive compensation arrangements, policies and procedures. Abstentions and broker non-votes will have no effect on the outcome of this proposal.
- Proposals 4 and 5: At least 80% of the shares of the Company’s outstanding common stock entitled to vote (including abstentions) at the Annual Meeting must vote for the proposals for them to be adopted. Abstentions and broker non-votes will have the effect of a vote against these proposals.
- Proposal 6: More than one-half of the shares present, either in person or by proxy, and entitled to vote and voting (excluding abstentions) at the Annual Meeting must vote for the proposal for it to be adopted. Abstentions and broker non-votes will have no effect on the outcome of this proposal.

How do I vote?

You may vote your shares by any one of the following methods:

- By Internet: Log onto the website indicated in the Notice of Internet Availability or on the proxy card or vote instruction form.
- By telephone: Call the toll-free number shown on the proxy card or vote instruction form and follow the voice prompts.
- By mail: Mark your votes, sign and return the proxy card or vote instruction form in the postage-paid envelope provided.
- By ballot: Attend the Annual Meeting in person and use a ballot to cast your vote.

If you vote by the Internet or by telephone, you do not need to send in a proxy card or vote instruction form. The deadline for Internet and telephone voting will be 11:59 p.m., Eastern Time, on April 17, 2019. If your shares are held in the name of a bank, broker or other nominee, and you wish to vote your shares in person at the Annual Meeting, you will need to contact your bank, broker or other nominee to obtain a legal proxy form that you must bring with you to the Meeting to exchange for a ballot.

What happens if I do not give specific voting instructions?

The Board of Directors is asking for your proxy. Giving us your proxy means that you authorize us to vote your shares at the Annual Meeting in the manner you direct. If you (1) choose the “submit your vote” option without voting on each individual proposal when voting on the Internet or by telephone or (2) if you are a shareholder of record and sign and return a proxy card without giving specific voting instructions, then your shares will be voted in the manner recommended by our Board on all matters presented in this Proxy Statement.

If your shares are held by a broker, bank or other nominee, the broker, bank or nominee will ask you how you want to vote your shares. If you give the broker, bank or nominee instructions, your shares will be voted as you direct. If you do not give instructions, your broker, bank or nominee may vote your shares in its discretion for the ratification of the appointment of PricewaterhouseCoopers LLP as our independent registered public accounting firm for 2019 (Proposal 6), but your broker, bank or nominee **will not** vote your shares at all with respect to any of the other proposals. We encourage you to provide instructions to your bank, broker or nominee by carefully following the instructions provided. This will ensure that your shares are voted at the Annual Meeting as you direct.



How can I change or revoke my vote after I have voted?

You have the right to change your vote or revoke your proxy before it is exercised at the Annual Meeting. You may vote again on a later date on the Internet or by telephone (only your latest Internet or telephone proxy submitted prior to the Annual Meeting will be counted), by signing and returning a new proxy card or vote instruction form with a later date, or by attending the Meeting and voting in person. However, your attendance at the Annual Meeting will not automatically revoke your proxy unless you vote again at the Annual Meeting or specifically request in writing that your prior proxy be revoked. Please note that any re-votes by mail or proxy revocations must be received by our corporate secretary at PPG Industries, Inc., One PPG Place, Pittsburgh, Pennsylvania 15272 prior to the Annual Meeting in order to be effective.

How will shares in employee benefit plans be voted?

This Proxy Statement is being used to solicit voting instructions from you with respect to shares of PPG common stock that you own, but which are held by the trustees of a retirement or savings plan for the benefit of you and other plan participants. Shares held in the benefit plans that are entitled to vote will be voted by the trustees pursuant to your instructions. Shares held in any employee benefit plan that you are entitled to vote, but do not vote, will not be voted by the trustees. You must instruct the trustees to vote your shares by utilizing one of the voting methods described above.

Who will count and certify the votes?

Representatives of Corporate Election Services and the staff of our corporate secretary and Investor Relations offices will count the votes and certify the election results. The results will be publicly filed with the Securities and Exchange Commission on a Form 8-K within four business days after the Annual Meeting.

How can I attend the Annual Meeting?

If you plan to attend the Annual Meeting, you must be a PPG shareholder on the record date of February 22, 2019, and you will need to bring an Admission Card and photo ID to the meeting.

If you are a shareholder of record or a participant in a retirement or savings plan maintained by PPG and wish to attend the Annual Meeting, please indicate this desire when voting via the Internet or by telephone, so that we may send you an Admission Card. If you have a paper proxy card because you received the proxy materials in paper form, there is an Admission Card on the top half of the proxy card. Please tear off the Admission Card and bring it with you to the Annual Meeting, along with a photo ID.

If your shares are held in the name of a bank, broker or other nominee, and you wish to attend the Annual Meeting, Admission Cards can be printed by accessing Shareholder Meeting Registration at www.ProxyVote.com and following the instructions provided. You will need the 16 digit number included on your proxy card, voter instruction form or notice. If you are unable to print your Admission Card, please contact Broadridge at 1-855-449-0994 for assistance. You may also bring a legal proxy obtained from your bank, broker or other nominee. Alternatively, you may obtain an Admission Card by sending your request and a copy of your proof of ownership to Investor Relations at PPG Industries, Inc., One PPG Place, 40th Floor, Pittsburgh, Pennsylvania 15272. Please bring your Admission Card and a photo ID to the Annual Meeting.

For security purposes, no cameras, recording equipment, electronic devices, large bags, backpacks, briefcases or packages, other than for use by PPG, will be permitted in the meeting room or adjacent areas, and other items will be subject to search.

How do I obtain a copy of materials related to corporate governance?

Our Corporate Governance Guidelines, charters of each standing committee of our Board of Directors, Global Code of Ethics, Code of Ethics for Senior Financial Officers and other materials related to our corporate governance are published on the Corporate Governance section of our website at www.ppg.com/investor.

Who is soliciting my vote and what are the solicitation expenses?

This solicitation is being made on behalf of our Board of Directors, but may also be made without additional compensation by our directors, officers or employees by telephone, facsimile, e mail or personal interview. We will bear the expense of the preparation, printing and mailing of the Notice of Internet Availability and these proxy materials. We have hired D.F. King & Company to help us send out the proxy materials and to solicit proxies for the Annual Meeting at an estimated cost of \$400,000 to \$500,000 plus reimbursement of certain additional out of pocket expenses. We will



request brokers, banks and other nominees who hold shares of PPG common stock in their names to furnish proxy materials to beneficial owners of the shares. We will reimburse these brokers, banks and nominees for their reasonable out of pocket expenses incurred in forwarding solicitation materials to such beneficial owners.

How can I submit a proposal for consideration at the 2020 annual meeting of shareholders?

To be considered for the 2020 annual meeting, shareholder proposals must be submitted in writing to our corporate secretary at PPG Industries, Inc., One PPG Place, Pittsburgh, Pennsylvania 15272. No proposal can be included in our Proxy Statement for the 2020 annual meeting unless it is received by our corporate secretary no later than November 8, 2019. The proposal must also comply with the rules of the Securities and Exchange Commission relating to shareholder proposals.

Any shareholder whose proposal is not included in our Proxy Statement relating to the 2020 annual meeting and who intends to present business for consideration at the 2020 annual meeting must give notice to our corporate secretary in accordance with Section 1.5 of our Bylaws (which are available on the Corporate Governance section of our website at www.ppg.com/investor) and such business must otherwise be a proper matter for shareholder action. If, as expected, the 2020 annual meeting of shareholders is held on April 16, 2020, then the notice must be received by our corporate secretary on or before January 17, 2020.

How can I recommend someone as a candidate for director?

A shareholder who wishes to recommend or nominate a candidate for director of PPG may write to the chairman of the Nominating and Governance Committee of the Board of Directors, in care of our corporate secretary at PPG Industries, Inc., One PPG Place, Pittsburgh, Pennsylvania 15272.

To be effective for consideration at the 2020 annual meeting, the recommendation or nomination must be received by our corporate secretary by the deadlines set forth in our Bylaws and must include information required under our Bylaws, including information about the nominating shareholder and information about the nominee that would be required to be included in a Proxy Statement under the rules of the Securities and Exchange Commission. Director nominations submitted pursuant to PPG's proxy access Bylaw for consideration at the 2020 annual meeting must be received by PPG no earlier than October 9, 2019 and no later than November 8, 2019. For additional information regarding the nomination procedure, see "Corporate Governance—Shareholder Recommendations or Nominations for Director and Proxy Access" on page 22.

OTHER INFORMATION

Householding Information

PPG and some banks, brokers and other nominees are participating in the practice of "householding" proxy materials. This means that shareholders who share the same address may not receive separate copies of proxy materials, unless we have received instructions to the contrary. If, at any time, you no longer wish to participate in householding and would prefer to receive a separate set of the proxy materials, or if you are receiving multiple copies of the proxy materials and wish to receive only one, please notify your bank, broker or other nominee if your shares are held in a brokerage account or us if you hold registered shares. We will promptly deliver an additional copy of the proxy materials to you, without charge, if you write to Investor Relations at PPG Industries, Inc., One PPG Place, 40th Floor, Pittsburgh, Pennsylvania 15272, or call us at (412) 434-3318.

Other Matters

So far as is known, no matters other than those described herein are expected to come before the Annual Meeting. It is intended, however, that the proxies solicited hereby will be voted on any other matters that may properly come before the Annual Meeting, or any adjournment thereof, in the discretion of the person or persons voting such proxies unless the shareholder has indicated on the proxy card that the shares represented thereby are not to be voted on such other matters.

Pittsburgh, Pennsylvania
March 7, 2019



ANNEX A

RECONCILIATION OF NON-GAAP FINANCIAL MEASURES

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

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

FOR THE YEAR-ENDED (MILLIONS, EXCEPT PER SHARE AMOUNTS)	2018		2017		2016		2015		2014	
	NET INCOME		NET INCOME		NET INCOME		NET INCOME		NET INCOME	
	\$	EPS	\$	EPS	\$	EPS	\$	EPS	\$	EPS
Net income from continuing operations (attributable to PPG)	\$ 1,323	\$ 5.40	\$ 1,369	\$ 5.31	\$ 543	\$ 2.04	\$ 1,311	\$ 4.79	\$ 1,067	\$ 3.82
Net tax (benefit)/charge related to U.S. Tax Cuts and Jobs Act	(13)	(0.05)	134	0.52	—	—	—	—	—	—
Charges related to transaction-related costs	4	0.02	6	0.02	5	0.03	30	0.10	36	0.13
Charges related to a customer assortment change	14	0.05	—	—	—	—	—	—	—	—
Charges related to pension settlements	—	—	38	0.14	616	2.31	5	0.02	5	0.02
Gain from sale of business	—	—	(24)	(0.09)	—	—	—	—	—	—
Charge/(gain) related to legacy legal settlements	8	0.03	(11)	(0.04)	—	—	—	—	—	—
Charges related to accounting investigation costs	11	0.05	—	—	—	—	—	—	—	—
Charge related to impairment of a non-manufacturing asset	7	0.03	—	—	—	—	—	—	—	—
Gains from the sale of non-operating assets	(20)	(0.08)	(8)	(0.03)	—	—	—	—	(59)	(0.21)
Net charges related to business restructuring	46	0.18	—	—	141	0.53	105	0.39	—	—
Charges related to environmental remediation and other costs	58	0.24	—	—	51	0.20	—	—	86	0.30
Net gain from disposals of ownership interests in business affiliates	—	—	—	—	(30)	(0.12)	—	—	—	—
Accelerated depreciation from restructuring actions	7	0.03	—	—	—	—	—	—	—	—
Net tax effect of asbestos settlement funding	—	—	—	—	151	0.57	—	—	—	—
Benefit from favorable foreign tax ruling	—	—	—	—	—	—	—	—	(29)	(0.11)
Charge related to brand rationalization	4	0.02	—	—	—	—	—	—	—	—
Charge related to debt refinancing	—	—	—	—	—	—	—	—	200	0.72
Charge related to early retirement of debt	—	—	—	—	5	0.02	—	—	—	—
Charge related to equity affiliate debt refinancing	—	—	—	—	—	—	7	0.03	—	—
Charges related to asset write-downs	—	—	7	0.03	17	0.06	—	—	—	—
Adjusted net income from continuing operations (attributable to PPG)	\$ 1,449	\$ 5.92	\$ 1,511	\$ 5.86	\$ 1,499	\$ 5.64	\$ 1,458	\$ 5.33	\$ 1,306	\$ 4.67



ANNEX B

PROPOSED AMENDMENT OF ARTICLE SIXTH OF THE RESTATED ARTICLES OF INCORPORATION, AS AMENDED, OF PPG INDUSTRIES, INC. TO DECLASSIFY THE BOARD OF DIRECTORS

Section 6.1 of Article Sixth of the Restated Articles of Incorporation, as amended, of PPG Industries, Inc. is proposed to be amended and restated in its entirety as follows:

SIXTH. The business and affairs of the corporation shall be managed by a Board of Directors comprised as follows:

- (a) The Board of Directors shall consist of not less than 9 nor more than 17 persons, the exact number to be fixed from time to time by the Board of Directors pursuant to a resolution adopted by a majority vote of the directors then in office;
- (b) Each director who is serving as a director immediately following the 2019 Annual Meeting of Shareholders, or is elected thereafter as a director, shall hold office until the expiration of the term for which he or she has been elected, and until his or her successor shall be elected and shall qualify, subject, however, to prior death, resignation, retirement, disqualification, or removal from office. At the 2020 Annual Meeting of Shareholders, the successors to the class of directors whose terms expire at that meeting shall be elected for a two-year term expiring at the 2022 Annual Meeting of Shareholders. At the 2021 Annual Meeting of Shareholders, the successors to the class of directors whose terms expire at that meeting shall be elected for a one-year term expiring at the 2022 Annual Meeting of Shareholders. At the 2022 Annual Meeting of Shareholders, and at each meeting of shareholders thereafter, each director shall be elected for a one-year term expiring at the next Annual Meeting of Shareholders. Each director shall hold office until the expiration of the term for which he or she is elected, and until his or her successor shall have been elected and shall qualify, subject, however, to prior death, resignation, retirement, disqualification, or removal from office;
- (c) Subject to the rights of the holders of any series of Preferred Stock then outstanding, any director, any class of directors, or the entire Board of Directors, may be removed from office by shareholder vote at any time, with or without assigning any cause, but only if shareholders entitled to cast at least 80% of the votes which all shareholders would be entitled to cast at an annual election of directors or of such class of directors shall vote in favor of such removal; and
- (d) Subject to the rights of the holders of any series of Preferred Stock then outstanding, vacancies in the Board of Directors, including vacancies resulting from an increase in the number of directors, shall be filled only by a majority vote of the remaining directors then in office, though less than a quorum, except that vacancies resulting from removal from office by a vote of the shareholders may be filled by the shareholders at the same meeting at which such removal occurs. All directors elected to fill vacancies shall hold office for a term expiring at the Annual Meeting of Shareholders at which the term of the class to which they have been elected expires, or in the case of directors elected at the 2022 Annual Meeting of Shareholders and thereafter, the next Annual Meeting of Shareholders, subject, however, to prior death, resignation, retirement, disqualification, or removal from office. No decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent director.



ANNEX C

PROPOSED AMENDMENT TO THE RESTATED ARTICLES OF INCORPORATION, AS AMENDED, OF PPG INDUSTRIES, INC. TO REPLACE THE SUPERMAJORITY VOTING REQUIREMENTS

The Restated Articles of Incorporation, as amended, of PPG Industries, Inc. are proposed to be amended as follows. Proposed additions are underlined, and proposed deletions are ~~stricken through~~.

RESTATED ARTICLES OF INCORPORATION OF PPG INDUSTRIES, INC.

FIRST. The name of the corporation is PPG Industries, Inc.

SECOND. The location and post office address of its registered office in the Commonwealth of Pennsylvania is One PPG Place, Pittsburgh, Pennsylvania 15272.

THIRD. The purpose or purposes of the corporation, which exists under the Business Corporation Law of 1933, as amended, are:

- (a) To manufacture, buy, sell, install, and deal in goods, wares, and merchandise of all descriptions;
- (b) To mine, contract, quarry, drill, or bore for, produce, buy, and sell coal, limestone, sand, clay, gypsum, oil, ores, mineral salt, natural gas (sales to be made at the mouth of the well and at wholesale only), and other minerals and mineral substances;
- (c) To engage in building construction, as contractor or otherwise; and
- (d) To engage in research, engineering, and developmental work.

The corporation shall also have unlimited power to engage in and to do any lawful act concerning any or all lawful business for which corporations may be incorporated under the Business Corporation Law of 1933, as amended.

FOURTH. The term of its existence is perpetual.

FIFTH. 5.1 The aggregate number of shares of all classes of capital stock which the corporation shall have authority to issue is 1,210,000,000, of which 10,000,000 shares shall be Preferred Stock, without par value, issuable in one or more series and 1,200,000,000 shares shall be Common Stock, par value \$1.66 2/3 per share.

5.2 The Board of Directors is hereby expressly authorized, at any time or from time to time, to divide any or all of the shares of Preferred Stock into one or more series, and in the resolution or resolutions establishing a particular series, before issuance of any of the shares thereof, to fix and determine the number of shares and the designation of such series, so as to distinguish it from the shares of all other series and classes, and to fix and determine the preferences, voting rights, qualifications, privileges, limitations, options, conversion rights, restrictions and other special or relative rights of the Preferred Stock or of such series, to the fullest extent now or hereafter permitted by the laws of the Commonwealth of Pennsylvania, including, but not limited to, the variations between different series in the following respects:

- (a) the distinctive designation of such series and the number of shares which shall constitute such series, which number may be increased or decreased (but not below the number of shares thereof then outstanding) from time to time by the Board of Directors;
- (b) the annual dividend rate for such series, and the date or dates from which dividends shall commence to accrue;
- (c) the price or prices at which, and the terms and conditions on which, the shares of such series may be made redeemable;



- (d) the purchase or sinking fund provisions, if any, for the purchase or redemption of shares of such series;
- (e) the preferential amount or amounts payable upon shares of such series in the event of the liquidation, dissolution or winding up of the corporation;
- (f) the voting rights, if any, of shares of such series;
- (g) the terms and conditions, if any, upon which shares of such series may be converted and the class or classes or series of shares of the corporation or other securities into which such shares may be converted;
- (h) the relative seniority, parity or junior rank of such series as to dividends or assets with respect to any other classes or series of stock then or thereafter to be issued; and
- (i) such other terms, qualifications, privileges, limitations, options, restrictions, and special or relative rights and preferences, if any, of shares of such series as the Board of Directors may, at the time of such resolution or resolutions, lawfully fix and determine under the laws of the Commonwealth of Pennsylvania.

Unless otherwise provided in a resolution or resolutions establishing any particular series, the aggregate number of authorized shares of Preferred Stock may be increased by an amendment of the Restated Articles approved solely by a majority vote of the outstanding shares of Common Stock (or solely with a lesser vote of the Common Stock, or solely by action of the Board of Directors, if permitted by law at the time).

All shares of any one series shall be alike in every particular, except with respect to the accrual of dividends prior to the date of issuance.

5.3 Except for and subject to those rights expressly granted to the holders of Preferred Stock or any series thereof by resolution or resolutions adopted by the Board of Directors pursuant to Section 5.2 of this Article Fifth and except as may be provided by the laws of the Commonwealth of Pennsylvania, the holders of Common Stock shall have exclusively all other rights of shareholders.

5.4 No holder of Common Stock or of any other class of stock of the corporation shall be entitled as such, as a matter of right, to subscribe for or purchase any part of any new or additional issue of stock of any class or of securities convertible into any stock of any class, whether now or hereafter authorized and whether issued for cash or other consideration or by way of dividend, and the corporation may issue shares, option rights or securities having option or conversion rights without first offering them to shareholders of any class. No holder of Common Stock or of any other class of stock of the corporation shall have the right of cumulative voting in any election of directors.

SIXTH. 6.1 The business and affairs of the corporation shall be managed by a Board of Directors comprised as follows:

- (a) The Board of Directors shall consist of not less than 9 nor more than 17 persons, the exact number to be fixed from time to time by the Board of Directors pursuant to a resolution adopted by a majority vote of the directors then in office;
- (b) Directors shall, from and after the annual meeting of shareholders held in 1987, continue to be classified with respect to the time for which they shall severally hold office by dividing them into 3 classes, as nearly equal in number as possible. At such meeting and at each succeeding annual meeting of shareholders, the class of directors then being elected shall be elected to hold office for a term of 3 years. Each director shall hold office for the term for which elected and until his or her successor shall have been elected and qualified;
- (c) Subject to the rights of the holders of any series of Preferred Stock then outstanding, any director, any class of directors, or the entire Board of Directors, may be removed from office by shareholder vote at any time, with or without assigning any cause, ~~but only if shareholders entitled to cast at least 80% of the votes which all shareholders would be entitled to cast at an annual election of directors or of such class of directors shall vote in favor of such removal~~; provided, however, that no individual director shall be removed (unless the entire Board of Directors or any class of directors be removed) in case the votes cast against such removal would be sufficient, if voted cumulatively for such director, to elect him or her to the class of directors of which he or she is a member; and



- (d) Subject to the rights of the holders of any series of Preferred Stock then outstanding, vacancies in the Board of Directors, including vacancies resulting from an increase in the number of directors, shall be filled only by a majority vote of the remaining directors then in office, though less than a quorum, except that vacancies resulting from removal from office by a vote of the shareholders may be filled by the shareholders at the same meeting at which such removal occurs. All directors elected to fill vacancies shall hold office for a term expiring at the annual meeting of shareholders at which the term of the class to which they have been elected expires. No decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent director.

~~6.2 Notwithstanding any other provisions of law, the Restated Articles or the Bylaws of the corporation, the affirmative vote of the holders of at least 80% of the voting power of the then outstanding shares of capital stock of the corporation entitled to vote in an annual election of directors, voting together as a single class, shall be required to amend or repeal, or to adopt any provision inconsistent with, this Article Sixth.~~

~~(a) In addition to any affirmative vote required by law or the Restated Articles, and except as otherwise expressly provided in Section 7.2 of this Article Seventh:~~

SEVENTH. 7.1(a) In addition to any affirmative vote required by law or the Restated Articles, and except as otherwise expressly provided in Section 7.2 of this Article Seventh, the affirmative vote of a majority of the votes cast by all shareholders entitled to vote thereon in an annual election of directors (the "Voting Stock"), voting together as a single class, shall be required for certain Business Combinations (as defined herein) as follows:

- (1) any merger or consolidation of the corporation or any Subsidiary with (A) any Interested Shareholder or with (B) any other corporation (whether or not itself an Interested Shareholder) which is, or after such merger or consolidation would be, an Affiliate or Associate of an Interested Shareholder;
- (2) any sale, lease, exchange, mortgage, pledge, transfer or other disposition (in one transaction or a series of transactions) to or with any Interested Shareholder or any Affiliate or Associate of any Interested Shareholder of any assets of the corporation or any Subsidiary having an aggregate Fair Market Value of \$10,000,000 or more;
- (3) the issuance or sale by the corporation or any Subsidiary (in one transaction or a series of transactions) of any securities of the corporation or any Subsidiary to any Interested Shareholder or any Affiliate or Associate of any Interested Shareholder in exchange for cash, securities or other consideration (or a combination thereof) having an aggregate Fair Market Value of \$10,000,000 or more;
- (4) the adoption of any plan or proposal for the liquidation or dissolution of the corporation proposed by or on behalf of any Interested Shareholder or any Affiliate or Associate of any Interested Shareholder; or
- (5) any reclassification of securities (including any reverse stock split), or recapitalization of the corporation, or any merger or consolidation of the corporation with any of its Subsidiaries or any other transaction (whether or not with or into or otherwise involving an Interested Shareholder) which has 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 the corporation or any Subsidiary which is directly or indirectly owned by any Interested Shareholder or any Affiliate or Associate of any Interested Shareholder; ~~shall require the affirmative vote of the holders of at least 80% of the voting power of the then outstanding shares of capital stock of the corporation entitled to vote in an annual election of directors (the "Voting Stock"), voting together as a single class.~~

Such affirmative vote shall be required notwithstanding the fact that no vote may be required, or that a lesser percentage may be specified, by law or in any agreement with any national securities exchange or otherwise.

- (b) The term "Business Combination" as used in this Article Seventh shall mean any transaction which is referred to in any one or more of clauses (1) through (5) of paragraph (a) of Section 7.1 of this Article Seventh.



7.2 The provisions of Section 7.1 of this Article Seventh shall not be applicable to any Business Combination, and such Business Combination shall require only such affirmative vote (if any) as is required by law, any other provision of the Restated Articles or any agreement with any national securities exchange, if all of the conditions specified in either of the following paragraphs (a) or (b) are met:

- (a) The Business Combination shall have been approved by a majority of the Continuing Directors; or
- (b) All of the following six conditions shall have been met:
 - (1) The transaction constituting the Business Combination shall provide for a consideration to be received by holders of Common Stock in exchange for their stock, and the aggregate amount of the cash and the Fair Market Value as of the date of the consummation of the Business Combination of consideration other than cash to be received per share by holders of Common Stock in such Business Combination shall be at least equal to the highest of the following:
 - (A) (if applicable) the highest per share price (including any brokerage commissions, transfer taxes and soliciting dealers' fees) paid in order to acquire any shares of Common Stock beneficially owned by the Interested Shareholder which were acquired (i) within the two-year period immediately prior to the first public announcement of the proposed Business Combination (the "Announcement Date") or (ii) in the transaction in which it became an Interested Shareholder, whichever is higher;
 - (B) the Fair Market Value per share of Common Stock on the Announcement Date or on the date on which the Interested Shareholder became an Interested Shareholder (the "Determination Date"), whichever is higher; and
 - (C) (if applicable) the price per share equal to the Fair Market Value per share of Common Stock determined pursuant to clause (B) immediately preceding, multiplied by the ratio of (i) the highest per share price (including any brokerage commissions, transfer taxes and soliciting dealers' fees) paid in order to acquire any shares of Common Stock beneficially owned by the Interested Shareholder which were acquired within the two-year period immediately prior to the Announcement Date to (ii) the Fair Market Value per share of Common Stock on the first day in such two-year period on which the Interested Shareholder beneficially owned any shares of Common Stock.
 - (2) If the transaction constituting the Business Combination shall provide for a consideration to be received by holders of any class of outstanding Voting Stock other than Common Stock and other than Institutional Voting Stock, the aggregate amount of the cash and the Fair Market Value as of the date of the consummation of the Business Combination of consideration other than cash to be received per share by holders of shares of such Voting Stock shall be at least equal to the highest of the following (it being intended that the requirements of this clause (b)(2) shall be required to be met with respect to every class of outstanding Voting Stock (other than Institutional Voting Stock), whether or not the Interested Shareholder beneficially owns any shares of a particular class of Voting Stock):
 - (A) (if applicable) the highest per share price (including any brokerage commissions, transfer taxes and soliciting dealers' fees) paid in order to acquire any shares of such class of Voting Stock beneficially owned by the Interested Shareholder which were acquired (i) within the two-year period immediately prior to the Announcement Date or (ii) in the transaction in which it became an Interested Shareholder, whichever is higher;
 - (B) (if applicable) the highest preferential amount per share to which the holders of shares of such class of Voting Stock are entitled in the event of any voluntary or involuntary liquidation, dissolution or winding up of the corporation;
 - (C) the Fair Market Value per share of such class of Voting Stock on the Announcement Date or on the Determination Date, whichever is higher; and



- (D) (if applicable) the price per share equal to the Fair Market Value per share of such class of Voting Stock determined pursuant to clause (C) immediately preceding, multiplied by the ratio of (i) the highest per share price (including any brokerage commissions, transfer taxes and soliciting dealers' fees) paid in order to acquire any shares of such class of Voting Stock beneficially owned by the Interested Shareholder which were acquired within the two-year period immediately prior to the Announcement Date to (ii) the Fair Market Value per share of such class of Voting Stock on the first day in such two-year period on which the Interested Shareholder beneficially owned any shares of such class of Voting Stock.
- (3) The consideration to be received by holders of a particular class of outstanding Voting Stock (including Common Stock) shall be in cash or in the same form as was previously paid in order to acquire shares of such class of Voting Stock which are beneficially owned by the Interested Shareholder. If the Interested Shareholder beneficially owns shares of any class of Voting Stock which were acquired with varying forms of consideration, the form of consideration to be received by holders of such class of Voting Stock shall be either cash or the form used to acquire the largest number of shares of such class of Voting Stock beneficially owned by it.
- (4) After such Interested Shareholder has become an Interested Shareholder and prior to the consummation of such Business Combination: (A) except as approved by a majority of the Continuing Directors, there shall have been no failure to declare and pay at the regular date therefor any full quarterly dividends (whether or not cumulative) on any outstanding Preferred Stock; (B) there shall have been (i) no reduction in the annual rate of dividends paid on the Common Stock (except as necessary to reflect any subdivision of the Common Stock), except as approved by a majority of the Continuing Directors, and (ii) an increase in such annual rate of dividends (as necessary to prevent any such reduction) in the event of any reclassification (including any reverse stock split), recapitalization, reorganization or any similar transaction which has the effect of reducing the number of outstanding shares of the Common Stock, unless the failure so to increase such annual rate is approved by a majority of the Continuing Directors; and (C) such Interested Shareholder shall not have become the beneficial owner of any additional shares of Voting Stock except as part of the transaction in which it became an Interested Shareholder.
- (5) After such Interested Shareholder has become an Interested Shareholder, such Interested Shareholder shall not have received the benefit, directly or indirectly (except proportionately as a shareholder), of any loans, advances, guarantees, pledges or other financial assistance or any tax credits or other tax advantages provided by the corporation, whether in anticipation of or in connection with such Business Combination or otherwise.
- (6) A proxy or information statement describing the proposed Business Combination and complying with the requirements of the Securities Exchange Act of 1934 and the rules and regulations thereunder (or any subsequent provisions replacing such Act, rules or regulations) shall be mailed to public shareholders of the corporation at least 30 days prior to the consummation of such Business Combination (whether or not such proxy or information statement is required to be mailed pursuant to such Act or subsequent provisions).

7.3 For the purposes of this Article Seventh:

- (a) A "person" shall mean any individual, firm, corporation or other entity.
- (b) "Interested Shareholder" at any particular time shall mean any person (other than the corporation or any Subsidiary) who or which:
 - (1) is at such time the beneficial owner, directly or indirectly, of more than 20% of the voting power of the outstanding Voting Stock;
 - (2) is at such time a director of the corporation and at any time within the two-year period immediately prior to such time was the beneficial owner, directly or indirectly, of more than 20% of the voting power of the then outstanding Voting Stock; or
 - (3) is at such time an assignee of or has otherwise succeeded to the beneficial ownership of any shares of Voting Stock which were at any time within the two-year period immediately prior to



such time beneficially owned by any Interested Shareholder, if such assignment or succession shall have occurred in the course of a transaction or series of transactions not involving a public offering within the meaning of the Securities Act of 1933.

- (c) A person shall be a "beneficial owner" of any shares of Voting Stock:
 - (1) which such person or any of its Affiliates or Associates beneficially owns, directly or indirectly;
 - (2) which such person or any of its Affiliates or Associates has (A) the right to acquire (whether or not such right is exercisable immediately) pursuant to any agreement, arrangement or understanding or upon the exercise of conversion rights, exchange rights, warrants or options, or otherwise, or (B) the right to vote pursuant to any agreement, arrangement or understanding; or
 - (3) which are beneficially owned, directly or indirectly, by any other person with which such person or any of its Affiliates or Associates has any agreement, arrangement or understanding for the purpose of acquiring, holding, voting or disposing of any shares of Voting Stock.
- (d) For the purposes of determining whether a person is an Interested Shareholder pursuant to paragraph (b) of this Section 7.3, the number of shares of Voting Stock deemed to be outstanding shall include shares deemed owned by an Interested Shareholder through application of paragraph (c) of this Section 7.3 but shall not include any other shares of Voting Stock which may be issuable pursuant to any agreement, arrangement or understanding, or upon the exercise of conversion rights, exchange rights, warrants or options, or otherwise.
- (e) "Affiliate" or "Associate" shall have the respective meanings ascribed to such terms in Rule 12b-2 of the General Rules and Regulations under the Securities Exchange Act of 1934, as in effect on February 17, 1983 (the term "registrant" in said Rule 12b-2 meaning in this case the corporation).
- (f) "Subsidiary" means any corporation of which a majority of any class of equity security is owned, directly or indirectly, by the corporation; provided, however, that for the purposes of the definition of Interested Shareholder set forth in paragraph (b) of this Section 7.3, the term "Subsidiary" shall mean only a corporation of which a majority of each class of equity security is owned, directly or indirectly, by the corporation.
- (g) "Continuing Director" means any member of the Board of Directors of the corporation who is unaffiliated with, and not a representative of, the Interested Shareholder and was a member of the Board of Directors prior to the time that the Interested Shareholder became an Interested Shareholder, and any successor of a Continuing Director who is unaffiliated with, and not a representative of, the Interested Shareholder and is recommended to succeed a Continuing Director by a majority of the Continuing Directors then on the Board of Directors.
- (h) "Fair Market Value" means: (1) in the case of stock, the highest closing sale price during the 30-day period immediately preceding the date in question of a share of such stock on the Composite Tape for New York Stock Exchange-Listed Stocks, or, if such stock is not quoted on the Composite Tape, on the New York Stock Exchange, or, if such stock is not listed on such Exchange, on the principal United States securities exchange registered under the Securities Act of 1934 on which such stock is listed, or, if such stock is not listed on any such exchange, the highest closing bid quotation with respect to a share of such stock during the 30-day period preceding the date in question on the National Association of Securities Dealers, Inc. Automated Quotations System or any system then in use, or if no such quotations are available, the fair market value on the date in question of a share of such stock as determined by the Board of Directors in good faith; and (2) in the case of property other than cash or stock, the fair market value of such property on the date in question as determined by the Board of Directors in good faith.
- (i) "Institutional Voting Stock" shall mean any class of Voting Stock which was issued to and continues to be held solely by one or more insurance companies, pension funds, commercial banks, savings banks or similar financial institutions or institutional investors.
- (j) In the event of any Business Combination in which the corporation survives, the phrase "consideration other than cash to be received" as used in paragraph (b) of Section 7.2 of this Article Seventh shall include the shares of Common Stock and/or the shares of any other class of outstanding Voting Stock retained by the holders of such shares.



7.4 The Board of Directors shall have the power and duty to determine for the purposes of this Article Seventh, on the basis of information known to them after reasonable inquiry, (a) whether a person is an Interested Shareholder, (b) the number of shares of Voting Stock beneficially owned by any person, (c) whether a person is an Affiliate or Associate of another, (d) whether a class of Voting Stock is Institutional Voting Stock and (e) whether the assets which are the subject of any Business Combination have, or the consideration to be received for the issuance or transfer of securities by the corporation or any Subsidiary in any Business Combination has, an aggregate Fair Market Value of \$10,000,000 or more. Any such determination made in good faith shall be binding and conclusive on all parties.

7.5 Nothing contained in this Article Seventh shall be construed to relieve any Interested Shareholder from any fiduciary obligation imposed by law.

~~7.6 Notwithstanding any other provisions of law, the Restated Articles or the Bylaws of the corporation, the affirmative vote of the holders of at least 80% of the voting power of the then outstanding shares of Voting Stock, voting together as a single class, shall be required to amend or repeal, or to adopt any provision inconsistent with, this Article Seventh.~~

EIGHTH. To the fullest extent that the laws of the Commonwealth of Pennsylvania, as in effect on January 27, 1987, or as thereafter amended, permit the elimination or limitation of the liability of directors, no director of the corporation shall be personally liable for monetary damages as such for any action taken, or any failure to take any action, as a director. This Article Eighth shall not apply to any actions filed prior to January 27, 1987, nor to any breach of performance of duty or any failure of performance of duty by any director occurring prior to January 27, 1987. The provisions of this Article Eighth shall be deemed to be a contract with each director of the corporation who serves as such at any time while such provisions are in effect, and each such director shall be deemed to be serving as such in reliance on such provisions. Any amendment to or repeal of this Article Eighth, or adoption of any other Article or Bylaw of the corporation, which has the effect of increasing director liability ~~shall require the affirmative vote of at least 80% of the voting power of the then outstanding shares of capital stock of the corporation entitled to vote in an annual election of directors, voting together as a single class.~~ Any such amendment or repeal, or other Article or Bylaw, shall operate prospectively only and shall not have effect with respect to any action taken, or any failure to act, by a director prior thereto.



ANNEX D

PROPOSED AMENDMENT TO THE AMENDED AND RESTATED BYLAWS OF PPG INDUSTRIES, INC. TO REPLACE THE SUPERMAJORITY VOTING REQUIREMENTS

The Amended and Restated Bylaws of PPG Industries, Inc. are proposed to be amended as follows. Proposed additions are underlined, and proposed deletions are ~~stricken through~~.

BYLAWS OF PPG INDUSTRIES, INC.

(Incorporated under the Laws of the Commonwealth of Pennsylvania)

Amended and Restated, effective December 10, 2015



BYLAWS
OF
PPG INDUSTRIES, INC.

(Incorporated under the Laws of the Commonwealth of Pennsylvania)

ARTICLE I

MEETINGS OF SHAREHOLDERS

Section 1.1 Annual Meetings. An annual meeting of the shareholders shall be held each year on such day as the Board of Directors of the Corporation (the "Board of Directors") may designate, or, if not so designated, on the third Thursday in April if not a legal holiday, and if a legal holiday, then on the next business day following. Annual meetings shall be held at such geographic location, within or without the Commonwealth of Pennsylvania, as designated by the Board of Directors.

Section 1.2 Business at Annual Meetings. The business at each annual meeting of the shareholders shall include: (a) a review of the business of the preceding year; (b) the election of directors; and (c) such other business as may properly be brought before the meeting. No business may be transacted at any annual meeting other than (i) matters referred to in the notice of the meeting or any supplement thereto, (ii) matters otherwise properly brought before the meeting by or at the direction of the Board of Directors, (iii) matters properly brought before the meeting by one or more shareholders, but only in accordance and upon compliance with the provisions of the proxy rules of the Securities and Exchange Commission and the notice provisions of Section 1.3, Section 1.4 and Section 1.5 of these bylaws (including, in the case of nominations, the completed and signed questionnaire, representation and agreement required by Section 1.14 of these bylaws) and (iv) matters which are incidental or germane to any of the foregoing. Except as otherwise provided by law, the Restated Articles of Incorporation, as amended from time to time (the "Restated Articles of Incorporation") or these bylaws, the Chairman or, in the Chairman's absence, the presiding officer of any annual or special meeting (as provided for in Section 1.12 of these bylaws) shall have the power to determine whether a nomination or any other business proposed to be brought before the meeting was made or proposed, as the case may be, in accordance with these bylaws and, if any proposed nomination or other business is not in compliance with these bylaws, to declare that no action shall be taken on such nomination or other business and such nomination or other business shall be disregarded.

Section 1.3 Nominations of Director Candidates.

(a) Nominations for the election of directors at a meeting of shareholders may be made only (i) by the Board of Directors or a committee appointed by the Board of Directors, (ii) provided that the Board of Directors has determined that directors shall be elected at such a meeting, by a holder of record of stock entitled to vote in the election of the directors to be elected and who has complied with the provisions of this Section 1.3, or (iii) provided that the Board of Directors has determined that directors shall be elected at such a meeting, by an Eligible Shareholder (as defined in Section 1.4 of these bylaws) entitled to vote in the election of the directors to be elected who has complied with the requirements and procedures set forth in Section 1.4 of these bylaws (and, to the extent applicable, Section 1.3 of these bylaws) and whose nominees are included in the Corporation's proxy materials with respect to such meeting. Clauses (ii) and (iii) of the immediately preceding sentence shall be the exclusive means for a shareholder to make nominations before a meeting of shareholders.

(b) For nominations to be properly brought before a meeting of shareholders pursuant to clause (ii) of Section 1.3(a) of these bylaws, such nomination (other than a nomination to fill a vacancy resulting from removal from office by a vote of the shareholders under Article Sixth of the Restated Articles of Incorporation) may be made by a shareholder only if written notice of such nomination is given, either by personal delivery or by United States mail, postage prepaid, to the Secretary and has been received by the Secretary at the principal executive offices of the Corporation not later than (1) with respect to an election to be held at an annual meeting of shareholders held on the third Thursday in April, 90 days prior to such annual meeting and (2) with respect to an election to be held at an annual meeting of shareholders held on a date other than the third Thursday in April or an election to be held at a special meeting of the shareholders, the later of 90 days prior to such meeting or the close of business on the tenth day



following the date of the first public disclosure of the date of such meeting. In addition, to be considered timely, a shareholder's notice shall further be updated and supplemented, if necessary, so that the information provided or required to be provided in such notice shall be true and correct as of the record date for the meeting and as of the date that is ten business days prior to the meeting or any adjournment or postponement thereof, and such update and supplement shall be delivered to the Secretary at the principal executive offices of the Corporation not later than five business days after the record date for the meeting in the case of the update and supplement required to be made as of the record date, and not later than eight business days prior to the date for the meeting or any adjournment or postponement thereof in the case of the update and supplement required to be made as of ten business days prior to the meeting or any adjournment or postponement thereof. No such supplement or update may include any new nominees who were not named in the original notice of nomination or be deemed to cure any defects or limit the remedies (including without limitation under these bylaws) available to the Corporation relating to any defect. In no event shall any adjournment or postponement of an annual or special meeting, or the public announcement thereof, commence a new time period for the giving of a shareholder's notice as described above. For purposes of this Section 1.3, the first public disclosure of the date of any special meeting of shareholders or any annual meeting of shareholders held on a date other than the third Thursday in April shall be when disclosure of such meeting date is first made in a filing made by the Corporation with the Securities and Exchange Commission, in any notice given to the New York Stock Exchange, or in a news release reported by the Dow Jones News Service, Reuters, Bloomberg, the Associated Press or comparable national news service.

(c) As to each person, if any, whom the shareholder proposes to nominate for election or reelection to the Board of Directors pursuant to clauses (ii) or (iii) of Section 1.3(a) of these bylaws, a shareholder's notice must, in addition to the matters set forth in Section 1.6 of these bylaws, set forth: (i) all information relating to such person that would be required to be disclosed in a proxy statement or other filings required to be made in connection with solicitations of proxies for election of directors in a contested election pursuant to Section 14 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and the rules and regulations promulgated thereunder (including such person's written consent to being named in the proxy statement as a nominee and to serving as a director if elected), (ii) a description of all direct and indirect compensation and other material monetary agreements, arrangements and understandings during the past three years, and any other material relationships, between or among such shareholder and the beneficial owner on whose behalf the nomination is made, if any, and their respective affiliates and associates, or others acting in concert therewith, on the one hand, and each proposed nominee, and his or her respective affiliates and associates, or others acting in concert therewith, on the other hand, including, without limitation, all information that would be required to be disclosed pursuant to Rule 404 promulgated under Regulation S-K of the Securities and Exchange Commission if the shareholder making the nomination and the beneficial owner on whose behalf the nomination is made, if any, or any affiliate or associate thereof or person acting in concert therewith, were the "registrant" for purposes of such rule and the nominee were a director or executive officer of such registrant; and (iii) a completed and signed questionnaire, representation and agreement as required by Section 1.14 of these bylaws. The Corporation may require any proposed nominee to furnish such other information as may reasonably be required by the Corporation to determine (A) the eligibility of such proposed nominee to serve as an independent director of the Corporation or that could be material to a reasonable shareholder's understanding of the independence, or lack thereof, of such nominee, (B) whether the proposed nominee has any direct or indirect relationship with the Corporation other than those relationships that have been deemed categorically immaterial pursuant to the Corporation's corporate governance guidelines or its Policy and Procedures With Respect to Related Person Transactions, (C) whether the proposed nominee would, by serving on the Board of Directors, violate or cause the Corporation to be in violation of these bylaws, the Restated Articles of Incorporation, the rules and listing standards of the principal U.S. exchange upon which the common stock of the Corporation is listed or any applicable law, rule or regulation, and (D) whether the proposed nominee is or has been subject to any event specified in Item 401(f) of Regulation S-K (or successor rule) of the Securities and Exchange Commission. The presiding officer of the meeting may refuse to acknowledge the nomination of any person by a shareholder not made in compliance with the foregoing procedure. Subject to Rule 14a-8 under the Exchange Act and Section 1.4 of these bylaws, nothing in these bylaws shall be construed to permit any shareholder, or give any shareholder the right, to include or have disseminated or described in the Corporation's proxy statement any nomination of a director or directors or any other business proposal.

Section 1.4 Inclusion of Shareholder Director Nominations in the Corporation's Proxy Materials. Subject to the terms and conditions set forth in these bylaws, the Corporation shall include in its proxy materials for a meeting of shareholders, provided that the Board of Directors has determined that directors shall be elected at such a meeting, the name, together with the Required Information (as defined below), of any person nominated for election (the "Shareholder Nominee") to the Board of Directors by a shareholder or group of shareholders that satisfy the requirements of this Section 1.4, including qualifying as an Eligible Shareholder (as defined in paragraph (d) below), and that expressly elects at the time of providing the written notice required by this Section 1.4 (a "Proxy Access



Notice”) to have its nominee included in the Corporation’s proxy materials pursuant to this Section 1.4. For the purposes of this Section 1.4:

(1) “Voting Stock” shall mean outstanding shares of capital stock of the Corporation entitled to vote generally for the election of Directors;

(2) “Constituent Holder” shall mean any shareholder, collective investment fund included within a Qualifying Fund (as defined in paragraph (d) below) or beneficial holder whose stock ownership is counted for the purposes of qualifying as holding the Proxy Access Request Required Shares (as defined in paragraph (d) below) or qualifying as an Eligible Shareholder (as defined in paragraph (d) below);

(3) “affiliate” and “associate” shall have the meanings ascribed thereto in Rule 405 under the Securities Act of 1933, as amended; provided, however, that the term “partner” as used in the definition of “associate” shall not include any limited partner that is not involved in the management of the relevant partnership; and

(4) a shareholder (including any Constituent Holder) shall be deemed to “own” only those outstanding shares of Voting Stock as to which the shareholder itself (or such Constituent Holder itself) possesses both (a) the full voting and investment rights pertaining to the shares and (b) the full economic interest in (including the opportunity for profit and risk of loss on) such shares. The number of shares calculated in accordance with the foregoing clauses (a) and (b) shall be deemed not to include (and to the extent any of the following arrangements have been entered into by affiliates of the shareholder (or of any Constituent Holder), shall be reduced by) any shares (x) sold by such shareholder or Constituent Holder (or any of either’s affiliates) in any transaction that has not been settled or closed, including any short sale, (y) borrowed by such shareholder or Constituent Holder (or any of either’s affiliates) for any purposes or purchased by such shareholder or Constituent Holder (or any of either’s affiliates) pursuant to an agreement to resell, or (z) subject to any option, warrant, forward contract, swap, contract of sale, other derivative or similar agreement entered into by such shareholder or Constituent Holder (or any of either’s affiliates), whether any such instrument or agreement is to be settled with shares or with cash based on the notional amount or value of Voting Stock, in any such case which instrument or agreement has, or is intended to have, or if exercised by either party thereto would have, the purpose or effect of (i) reducing in any manner, to any extent or at any time in the future, such shareholder’s or Constituent Holder’s (or either’s affiliate’s) full right to vote or direct the voting of any such shares, and/or (ii) hedging, offsetting or altering to any degree gain or loss arising from the full economic ownership of such shares by such shareholder or Constituent Holder (or either’s affiliate), other than any such arrangements solely involving an exchange listed multi-industry market index fund in which Voting Stock represents at the time of entry into such arrangement less than 10% of the proportionate value of such index. A shareholder (including any Constituent Holder) shall “own” shares held in the name of a nominee or other intermediary so long as the shareholder itself (or such Constituent Holder itself) retains the right to instruct how the shares are voted with respect to the election of Directors and the right to direct the disposition thereof and possesses the full economic interest in the shares. A shareholder’s (including any Constituent Holder’s) ownership of shares shall be deemed to continue during any period in which such person has loaned such shares so long as such person has retained the power to recall such shares at any time by the shareholder upon giving requisite notice or delegated any voting power over such shares by means of a proxy, power of attorney or other instrument or arrangement which in all such cases of such proxy, power of attorney or other instrument or arrangement is revocable at any time by the shareholder. The terms “owned,” “owning” and other variations of the word “own” shall have correlative meanings.

(a) For purposes of this Section 1.4, the “Required Information” that the Corporation will include in its proxy statement is (1) the information concerning the Shareholder Nominee and the Eligible Shareholder that the Corporation determines is required to be disclosed in the Corporation’s proxy statement by the regulations promulgated under the Exchange Act; and (2) if the Eligible Shareholder so elects, a Statement (as defined in paragraph (g) below). The Corporation shall also include the name of the Shareholder Nominee in its proxy card. For the avoidance of doubt, and any other provision of these bylaws notwithstanding, the Corporation may in its sole discretion solicit against, and include in the proxy statement its own statements or other information relating to, any Eligible Shareholder and/or Shareholder Nominee, including any information provided to the Corporation with respect to the foregoing.

(b) To be timely, a shareholder’s Proxy Access Notice must be delivered to the principal executive offices of the Corporation not more than 150 days and not less than 120 days prior to the anniversary of the date (as stated in



the Corporation's proxy materials) the definitive proxy statement was first mailed to shareholders in connection with the preceding year's annual meeting of shareholders. In no event shall any adjournment or postponement of an annual meeting, the date of which has been announced by the Corporation, commence a new time period for the giving of a Proxy Access Notice.

(c) The number of Shareholder Nominees (including Shareholder Nominees that were submitted by an Eligible Shareholder for inclusion in the Corporation's proxy materials pursuant to this Section 1.4 but either are subsequently withdrawn or that the Board of Directors decides to nominate as Board of Directors' nominees) appearing in the Corporation's proxy materials with respect to an annual meeting of shareholders shall not exceed the greater of (x) two and (y) the largest whole number that does not exceed 20% of the number of directors in office as of the last day on which a Proxy Access Notice may be delivered in accordance with the procedures set forth in this Section 1.4 (such greater number, the "Permitted Number"); provided, however, that the Permitted Number shall be reduced by:

(i) the number of such director candidates for which the Corporation shall have received one or more shareholder notices nominating director candidates pursuant to Section 1.3(b) of these bylaws plus the number of directors in office that were elected to the Board after being nominated at any of the two preceding annual meetings pursuant to such Section 1.3(b);

(ii) the number of directors in office or director candidates that in either case were elected or appointed to the Board or will be included in the Corporation's proxy materials with respect to such annual meeting as an unopposed (by the Corporation) nominee pursuant to an agreement, arrangement or other understanding with a shareholder or group of shareholders (other than any such agreement, arrangement or understanding entered into in connection with an acquisition of Voting Stock, by such shareholder or group of shareholders, from the Corporation), other than any such director referred to in this clause (ii) who at the time of such annual meeting will have served as a director continuously, as a nominee of the Board of Directors, for at least one full three-year term, but only to the extent the Permitted Number after such reduction with respect to this clause (ii) equals or exceeds one; and

(iii) the number of directors in office for whom access to the Corporation's proxy materials was previously provided (or requested) pursuant to this Section 1.4, other than (A) any such director referred to in this clause (iii) whose term of office will expire at such annual meeting and who is not seeking (or agreeing) to be nominated at such meeting for another term of office and (B) any such director referred to in this clause (iii) who at the time of such annual meeting will have served as a director continuously, as a nominee of the Board of Directors, for at least one full three-year term;

provided, that in no circumstance shall the Permitted Number exceed the number of directors to be elected at the applicable annual meeting as noticed by the Corporation; and provided, further, that in the event the Board of Directors resolves to reduce the size of the Board of Directors effective on or prior to the date of the annual meeting, the Permitted Number shall be calculated based on the number of directors in office as so reduced. In the event that the number of Shareholder Nominees submitted by Eligible Shareholders pursuant to this Section 1.4 exceeds the Permitted Number, each Eligible Shareholder will promptly upon request of the Corporation select one Shareholder Nominee for inclusion in the Corporation's proxy materials until the Permitted Number is reached, going in order of the amount (largest to smallest) of shares of Voting Stock each Eligible Shareholder disclosed as owned in its Proxy Access Notice submitted to the Corporation. If the Permitted Number is not reached after each Eligible Shareholder has selected one (1) Shareholder Nominee, this selection process will continue as many times as necessary, following the same order each time, until the Permitted Number is reached.

(d) An "Eligible Shareholder" is one or more shareholders of record who own and have owned, or are acting on behalf of one or more beneficial owners who own and have owned (in each case as defined above), in each case continuously for at least three (3) years as of both the date that the Proxy Access Notice is received by the Corporation pursuant to this Section 1.4, and as of the record date for determining shareholders eligible to vote at the annual meeting, at least three percent (3%) of the aggregate voting power of the Voting Stock (the "Proxy Access Request Required Shares"), and who continue to own the Proxy Access Request Required Shares at all times between the date such Proxy Access Notice is received by the Corporation and the date of the applicable annual meeting, provided that the aggregate number of shareholders, and, if and to the extent that a shareholder is acting on behalf of one or more beneficial owners, of such beneficial owners, whose stock ownership is counted for the purpose of satisfying the foregoing ownership requirement shall not exceed twenty (20). Two or more collective investment funds that are (I) part of the same family of funds or sponsored by the same employer or (II) a "group of investment companies" as such term is defined in Section 12(d)(1)(G)(ii) of the Investment Company Act of 1940 (a "Qualifying



Fund”) shall be treated as one shareholder for the purpose of determining the aggregate number of shareholders in this paragraph (d), provided that each fund included within a Qualifying Fund otherwise meets the requirements set forth in this Section 1.4. No shares may be attributed to more than one group constituting an Eligible Shareholder under this Section 1.4 (and, for the avoidance of doubt, no shareholder may be a member of more than one group constituting an Eligible Shareholder). A record holder acting on behalf of one or more beneficial owners will not be counted separately as a shareholder with respect to the shares owned by beneficial owners on whose behalf such record holder has been directed in writing to act, but each such beneficial owner will be counted separately, subject to the other provisions of this paragraph (d), for purposes of determining the number of shareholders whose holdings may be considered as part of an Eligible Shareholder’s holdings. For the avoidance of doubt, Proxy Access Request Required Shares will qualify as such if and only if the beneficial owner of such shares as of the date of the Proxy Access Notice has itself individually beneficially owned such shares continuously for the three-year (3 year) period ending on that date and through the other applicable dates referred to above (in addition to the other applicable requirements being met).

(e) No later than the final date when a nomination pursuant to this Section 1.4 may be delivered to the Corporation, an Eligible Shareholder (including each Constituent Holder) must provide the information set forth in Section 1.6 of these bylaws to the Secretary of the Corporation and also provide following information in writing to the Secretary of the Corporation:

(i) with respect to each Constituent Holder, the name and address of, and number of shares of Voting Stock owned by, such person;

(ii) one or more written statements from the record holder of the shares (and from each intermediary through which the shares are or have been held during the requisite three-year (3 year) holding period) verifying that, as of a date within seven (7) calendar days prior to the date the Proxy Access Notice is delivered to the Corporation, such person owns, and has owned continuously for the preceding three (3) years, the Proxy Access Request Required Shares, and such person’s agreement to provide:

(A) within ten (10) days after the record date for the annual meeting, written statements from the record holder and intermediaries verifying such person’s continuous ownership of the Proxy Access Request Required Shares through the record date, together with any additional information reasonably requested to verify such person’s ownership of the Proxy Access Request Required Shares; and

(B) immediate notice if the Eligible Shareholder ceases to own any of the Proxy Access Request Required Shares prior to the date of the applicable annual meeting of shareholders;

(iii) any information relating to such Eligible Shareholder (including any Constituent Holder) and their respective affiliates or associates or others acting in concert therewith, and any information relating to such Eligible Shareholder’s Shareholder Nominee(s), in each case that would be required to be disclosed in a proxy statement and form of proxy or other filings required to be made in connection with solicitations of proxies for the election of such Shareholder Nominee(s) in a contested election pursuant to Section 14 of the Exchange Act and the rules and regulations promulgated thereunder;

(iv) a description of all direct and indirect compensation and other material monetary agreements, arrangements and understandings during the past three (3) years, and any other material relationships, between or among the Eligible Shareholder (including any Constituent Holder) and its or their respective affiliates and associates, or others acting in concert therewith, on the one hand, and each of such Eligible Shareholder’s Shareholder Nominee(s), and his or her respective affiliates and associates, or others acting in concert therewith, on the other hand, including without limitation all information that would be required to be disclosed pursuant to Rule 404 promulgated under Regulation S-K if the Eligible Shareholder (including any Constituent Holder), or any affiliate or associate thereof or person acting in concert therewith, were the “registrant” for purposes of such rule and the Shareholder Nominee were a director or executive officer of such registrant;

(v) a representation that such person:

(A) acquired the Proxy Access Request Required Shares in the ordinary course of business and not with the intent to change or influence control of the Corporation, and does not presently have such intent;



(B) has not nominated and will not nominate for election to the Board of Directors at the annual meeting any person other than the Shareholder Nominee(s) being nominated pursuant to this Section 1.4;

(C) has not engaged and will not engage in, and has not and will not be a “participant” in another person’s, “solicitation” within the meaning of Rule 14a-1(l) under the Exchange Act in support of the election of any individual as a director at the annual meeting other than its Shareholder Nominee(s) or a nominee of the Board of Directors;

(D) will not distribute to any shareholder any form of proxy for the annual meeting other than the form distributed by the Corporation; and

(E) will provide facts, statements and other information in all communications with the Corporation and its shareholders that are and will be true and correct in all material respects and do not and will not omit to state a material fact necessary in order to make the statements made, in light of the circumstances under which they were made, not misleading, and will otherwise comply with all applicable laws, rules and regulations in connection with any actions taken pursuant to this Section 1.4;

(vi) in the case of a nomination by a group of shareholders that together is such an Eligible Shareholder, the designation by all group members of one group member that is authorized to act on behalf of all members of the nominating shareholder group with respect to the nomination and matters related thereto, including withdrawal of the nomination; and

(vii) an undertaking that such person agrees to:

(A) assume all liability stemming from, and indemnify and hold harmless the Corporation and each of its directors, officers, and employees individually against any liability, loss or damages in connection with any threatened or pending action, suit or proceeding, whether legal, administrative or investigative, against the Corporation or any of its directors, officers or employees arising out of any legal or regulatory violation arising out of the Eligible Shareholder’s communications with the shareholders of the Corporation or out of the information that the Eligible Shareholder (including such person) provided to the Corporation; and

(B) file with the Securities and Exchange Commission any solicitation by the Eligible Shareholder of shareholders of the Corporation relating to the annual meeting at which the Shareholder Nominee will be nominated.

In addition, no later than the final date on which a Proxy Access Notice may be submitted under this Section 1.4, a Qualifying Fund whose stock ownership is counted for purposes of qualifying as an Eligible Shareholder must provide to the Secretary of the Corporation documentation reasonably satisfactory to the Board of Directors that demonstrates that the funds included within the Qualifying Fund are either part of the same family of funds or sponsored by the same employer. In order to be considered timely, any information required by this Section 1.4 to be provided to the Corporation must be supplemented (by delivery to the Secretary of the Corporation) (1) no later than ten (10) days following the record date for the applicable annual meeting, to disclose the foregoing information as of such record date, and (2) no later than the fifth day before the annual meeting, to disclose the foregoing information as of the date that is no earlier than ten (10) days prior to such annual meeting. For the avoidance of doubt, the requirement to update and supplement such information shall not permit any Eligible Shareholder or other person to change or add any proposed Shareholder Nominee or be deemed to cure any defects or limit the remedies (including without limitation under these bylaws) available to the Corporation relating to any defect.

(f) The Eligible Shareholder may provide to the Secretary of the Corporation, at the time the information required by this Section 1.4 is originally provided, a written statement for inclusion in the Corporation’s proxy statement for the annual meeting, not to exceed five hundred (500) words, in support of the candidacy of such Eligible Shareholder’s Shareholder Nominee (the “Statement”). Notwithstanding anything to the contrary contained in this Section 1.4, the Corporation may omit from its proxy materials any information or Statement that it, in good faith, believes is materially false or misleading, omits to state any material fact, or would violate any applicable law or regulation.

(g) No later than the final date when a nomination pursuant to this Section 1.4 may be delivered to the Corporation, each Shareholder Nominee must provide the information set forth in Section 1.3(c) of these bylaws, the



completed and signed questionnaire, representation and agreement required by Section 1.14 of these bylaws, and such additional information as necessary to permit the Board of Directors to determine if any of the matters contemplated by paragraph (i) below apply.

In the event that any information or communications provided by the Eligible Shareholder (or any Constituent Holder) or the Shareholder Nominee to the Corporation or its shareholders ceases to be true and correct in all material respects or omits a material fact necessary to make the statements made, in light of the circumstances under which they were made, not misleading, each Eligible Shareholder or Shareholder Nominee, as the case may be, shall promptly notify the Secretary of the Corporation of any defect in such previously provided information and of the information that is required to correct any such defect; it being understood for the avoidance of doubt that providing any such notification shall not be deemed to cure any such defect or limit the remedies (including without limitation under these bylaws) available to the Corporation relating to any such defect.

(h) Any Shareholder Nominee who is included in the Corporation's proxy statement for a particular annual meeting of shareholders, but subsequently is determined not to satisfy the eligibility requirements of this Section 1.4 or any other provision of these bylaws, the Corporation's Restated Articles of Incorporation or other applicable regulation any time before the annual meeting of shareholders, will not be eligible for election at the relevant annual meeting of shareholders.

(i) The Corporation shall not be required to include, pursuant to this Section 1.4, a Shareholder Nominee in its proxy materials for any annual meeting of shareholders, or, if the proxy statement already has been filed, to allow the nomination of a Shareholder Nominee, notwithstanding that proxies in respect of such vote may have been received by the Corporation:

(i) who is not independent under the listing standards of the principal U.S. exchange upon which the common stock of the Corporation is listed, any applicable rules of the Securities and Exchange Commission and any publicly disclosed standards used by the Board of Directors in determining and disclosing independence of the Corporation's directors, in each case as determined by the Board of Directors;

(ii) whose service as a member of the Board of Directors would violate or cause the Corporation to be in violation of these bylaws, the Restated Articles of Incorporation, the rules and listing standards of the principal U.S. exchange upon which the common stock of the Corporation is traded, or any applicable law, rule or regulation;

(iii) if the Eligible Shareholder (or any Constituent Holder) or applicable Shareholder Nominee otherwise breaches or fails to comply in any material respect with its obligations pursuant to this Section 1.4 or any agreement, representation or undertaking required by this Section; or

(iv) if the Eligible Shareholder ceases to be an Eligible Shareholder for any reason, including but not limited to not owning the Proxy Access Request Required Shares through the date of the applicable annual meeting.

For the purposes of this paragraph (i), clauses (i) and (ii) and, to the extent related to a breach or failure by the Shareholder Nominee, clause (iii) will result in the exclusion from the proxy materials pursuant to this Section 1.4 of the specific Shareholder Nominee to whom the ineligibility applies, or, if the proxy statement already has been filed, the ineligibility of such Shareholder Nominee to be nominated; provided, however, that clause (iv) and, to the extent related to a breach or failure by an Eligible Shareholder (or any Constituent Holder), clause (iii) will result in the Voting Stock owned by such Eligible Shareholder (or Constituent Holder) being excluded from the Proxy Access Request Required Shares (and, if as a result the Proxy Access Notice shall no longer have been filed by an Eligible Shareholder, the exclusion from the proxy materials pursuant to this Section 1.4 of all of the applicable shareholder's Shareholder Nominees from the applicable annual meeting of shareholders or, if the proxy statement has already been filed, the ineligibility of all of such shareholder's Shareholder Nominees to be nominated).

Section 1.5 Other Matters Brought by Shareholders. For business, other than nominations of director candidates, to be properly brought before an annual meeting by a shareholder pursuant to clause (c) of Section 1.2 of these bylaws, the shareholder must give timely notice thereof, and timely updates and supplements with respect thereto, in writing to the Secretary and such business must otherwise be a proper matter for shareholder action. The immediately preceding sentence shall be the exclusive means for a shareholder to bring business other than nominations of director candidates (and other than matters properly submitted pursuant to Rule 14a-8 under the



Exchange Act and included in the Corporation's notice of meeting) before an annual meeting of shareholders. To be timely, a shareholder's notice shall be given, either by personal delivery or by United States mail, postage prepaid, to the Secretary and received by the Secretary at the principal executive offices of the Corporation not later than 90 days prior to such annual meeting, provided that, if such annual meeting is held on a date other than the third Thursday in April, such written notice must be given not later than the later of 90 days prior to such annual meeting or the close of business on the tenth day following the date of the first public disclosure of the date of such meeting. For purposes of this Section 1.5, the first public disclosure of the date of any annual meeting of shareholders held on a date other than the third Thursday in April shall be when disclosure of such meeting date is first made in a filing by the Corporation with the Securities and Exchange Commission, in any notice given to the New York Stock Exchange, or in a news release reported by the Dow Jones News Service, Reuters, Bloomberg, the Associated Press or comparable national news service. In no event shall any adjournment or postponement of an annual meeting, or the public announcement thereof, commence a new time period for the giving of a shareholder's notice as described above. In addition, to be considered timely, a shareholder's notice shall further be updated and supplemented, if necessary, so that the information provided or required to be provided in such notice shall be true and correct as of the record date for the meeting and as of the date that is ten business days prior to the meeting or any adjournment or postponement thereof, and such update and supplement shall be delivered to the Secretary at the principal executive offices of the Corporation not later than five business days after the record date for the meeting in the case of the update and supplement required to be made as of the record date, and not later than eight business days prior to the date for the meeting or any adjournment or postponement thereof in the case of the update and supplement required to be made as of ten business days prior to the meeting or any adjournment or postponement thereof. No such supplement or update may include any new business to be brought before the annual meeting that was not specified in the original notice. Such shareholder's notice shall set forth, in addition to the matters set forth in Section 1.6 of these bylaws, (a) as to each matter a brief description of the business desired to be brought before the meeting, the reasons for conducting such business at the meeting and any material interest in such business of such shareholder; (b) the text of the proposal or business (including the text of any resolutions proposed for consideration and, in the event that such proposal or business includes a proposal to amend the bylaws of the Corporation, the text of the proposed amendment); (c) the beneficial owner, if any, on whose behalf the notice is given and a specific representation that the shareholder intends to be present at the meeting in person or by proxy to present and speak as to such business; and (d) a description of all agreements, arrangements and understandings between such shareholder and beneficial owner, if any, and any other person or persons (including their names) in connection with the proposal of such business by such shareholder. The presiding officer of the meeting may refuse to permit any business to be brought before an annual meeting by a shareholder without compliance with the procedure set forth in this Section 1.5.

Section 1.6 Disclosure Requirements. To be in proper form, a shareholder's notice (whether given pursuant to Section 1.3, Section 1.4 or Section 1.5 of these bylaws) to the Secretary must, as to the shareholder giving the notice and the beneficial owner, if any, on whose behalf the nomination or proposal is made, set forth: (i) the name and address of such shareholder, as they appear on the Corporation's books, of such beneficial owner, if any, and of their respective affiliates or associates or any others acting in concert therewith, (ii) (A) the class or series and number of shares of the Corporation which are, directly or indirectly, owned beneficially and of record by such shareholder, such beneficial owner and their respective affiliates or associates or any others acting in concert therewith, (B) any option, warrant, convertible security, stock appreciation right, or similar right with an exercise or conversion privilege or a settlement payment or mechanism at a price related to any class or series of shares of the Corporation or with a value derived in whole or in part from the value of any class or series of shares of the Corporation, or any derivative or synthetic arrangement having the characteristics of a long position in any class or series of shares of the Corporation, or any contract, derivative, swap or other transaction or series of transactions designed to produce economic benefits and risks that correspond substantially to the ownership of any class or series of shares of the Corporation, including due to the fact that the value of such contract, derivative, swap or other transaction or series of transactions is determined by reference to the price, value or volatility of any class or series of shares of the Corporation, whether or not such instrument, contract or right shall be subject to settlement in the underlying class or series of shares of the Corporation, through the delivery of cash or other property, or otherwise, and without regard to whether the shareholder of record, the beneficial owner, if any, or their respective affiliates or associates or any others acting in concert therewith, may have entered into transactions that hedge or mitigate the economic effect of such instrument, contract or right, or any other direct or indirect opportunity to profit or share in any profit derived from any increase or decrease in the value of shares of the Corporation (any of the foregoing, a "Derivative Instrument") directly or indirectly owned beneficially by such shareholder, the beneficial owner, if any, or their respective affiliates or associates or any others acting in concert therewith, (C) any proxy, contract, arrangement, understanding, or relationship pursuant to which such shareholder has a right to vote any class or series of shares of the Corporation, (D) any agreement, arrangement, understanding, relationship or otherwise, including any repurchase or similar so-called "stock borrowing" agreement or arrangement, involving such shareholder, directly or indirectly, the purpose or effect of which is to mitigate loss, to reduce the



economic risk (of ownership or otherwise) of any class or series of the shares of the Corporation, to manage the risk of share price changes for, or increase or decrease the voting power of, such shareholder with respect to any class or series of the shares of the Corporation, or which provides, directly or indirectly, the opportunity to profit or share in any profit derived from any decrease in the price or value of any class or series of the shares of the Corporation (any of the foregoing, a "Short Interest"), (E) any rights to dividends on the shares of the Corporation owned beneficially by such shareholder that are separated or separable from the underlying shares of the Corporation, (F) any proportionate interest in shares of the Corporation or Derivative Instruments held, directly or indirectly, by a general or limited partnership in which such shareholder is a general partner or, directly or indirectly, beneficially owns an interest in a general partner of such general or limited partnership, (G) any performance-related fees (other than an asset-based fee) that such shareholder is entitled to based on any increase or decrease in the value of shares of the Corporation or Derivative Instruments, if any, including without limitation any such interests held by members of such shareholder's immediate family sharing the same household, (H) any significant equity interests or any Derivative Instruments or Short Interests in any principal competitor of the Corporation held by such shareholder, and (I) any direct or indirect interest of such shareholder in any contract with the Corporation, any affiliate of the Corporation or any principal competitor of the Corporation (including, in any such case, any employment agreement, collective bargaining agreement or consulting agreement), and (iii) any other information relating to such shareholder and beneficial owner, if any, that would be required to be disclosed in a proxy statement and form of proxy or other filings required to be made in connection with solicitations of proxies for, as applicable, the proposal and/or for the election of directors in a contested election pursuant to Section 14 of the Exchange Act and the rules and regulations promulgated thereunder.

Section 1.7 Special Meetings. Special meetings of the shareholders may be called at any time, for the purpose or purposes set forth in the call, by the Board of Directors or by the Chairman of the Board of Directors. Special meetings shall be held at the registered office of the Corporation, or at such other places, within or without the Commonwealth of Pennsylvania, as may be designated by the Board of Directors or the Chairman of the Board of Directors. No business may be transacted at any special meeting of the shareholders other than matters referred to in the notice of the meeting or any supplement thereto and matters which are incidental or germane thereto.

Section 1.8 Notice. Notice specifying the geographic location, date and time and the general nature of business to be transacted at each meeting of the shareholders shall be given by the Secretary to each shareholder of record entitled to vote at such meeting.

Section 1.9 Quorum; Adjournment. A shareholders' meeting shall not be organized for the transaction of business unless a quorum is present. At any meeting, the presence in person or by proxy of shareholders entitled to cast the minimum number of votes required by law to constitute a quorum on a particular matter in the absence of a bylaw to the contrary, or if no such number is required by law, at least a majority of the votes which all shareholders are entitled to cast on such matter, shall be necessary and sufficient to organize a meeting for the purpose of considering such matter. If a proxy casts a vote on behalf of a shareholder on any issue other than a procedural motion considered at a meeting of shareholders, the shareholder shall be deemed to be present during the entire meeting for purposes of determining whether a quorum is present for consideration of any other issue. Notwithstanding the withdrawal of enough shareholders to leave less than the number of votes required by the preceding sentence, the shareholders who continue to be present at a duly organized meeting shall constitute a quorum in order to continue to do business until adjournment. If a meeting cannot be organized because a quorum has not attended, those present in person or by proxy may by majority vote adjourn the meeting to such time and place as they may determine. The Chairman of the Board of Directors or the President may adjourn the meeting from time to time, whether or not there is a quorum, and it shall not be necessary to give notice of such adjourned meeting or the business to be transacted at such meeting to any shareholder other than by announcement at the meeting at which such adjournment is taken, unless the Board of Directors fixes a new record date for the adjourned meeting or as otherwise required by applicable law.

Section 1.10 Voting. In order to vote at any meeting, a shareholder must be personally present or vote by proxy. When authorized by the presiding officer, the voting at a meeting of the shareholders may be by voice; but at any meeting of shareholders any qualified voter may demand a stock vote on a matter properly before the meeting, whereupon (i) with respect to any matter specifically set forth in the notice of meeting, such stock vote shall be taken by ballot, and (ii) in the case of any other vote, such stock vote may be taken by ballot, by show of hands, or by any other manner selected by the presiding officer. If the vote is taken by ballot, each ballot shall state the name of the shareholder voting and the number of shares voted by such shareholder, and if such ballot be cast by proxy, it shall state the name of the proxy voting and the number of shares voted as proxy. Each shareholder shall be entitled to one vote for each share having voting power registered in such shareholder's name on the books of the Corporation as of the record date for the determination of the shareholders entitled to vote at the meeting, and it may be voted by the



shareholder or such shareholder's duly authorized proxy. When a stock vote is demanded, all questions shall be decided by a vote of shareholders present, in person or by proxy, entitled to cast at least a majority of the votes which all shareholders present and voting (excluding abstentions) are entitled to cast on the particular matter, unless otherwise especially provided in these bylaws, in the Restated Articles of Incorporation or by law, and except that in the case of privileged, subsidiary or incidental motions or questions involving the convenience of the shareholders present, the presiding officer may call for a per capita vote, either by voice or by show of hands. Where a proxy or proxies represent the holders of shares entitled to cast in aggregate a sufficient number of votes to adopt a particular resolution, the vote of such proxy or proxies may, in the discretion of the presiding officer, constitute action by the shareholders.

A complete list of the shareholders entitled to vote at any meeting of shareholders, arranged in alphabetical order with the address of and the number of shares held by each, shall be prepared by the Secretary and shall be produced and kept open at the time and place of the meeting and shall be subject to the inspection of any shareholder during the whole time of the meeting. In lieu of the making of a list, the Corporation may make the information therein available at the meeting by any other means.

Section 1.11 Proxies. Every shareholder entitled to vote at a meeting of the shareholders or to express consent or dissent to corporate action in writing without a meeting may authorize another person or persons, but not more than three, to act for such shareholder by proxy. Every proxy shall be executed or authenticated by the shareholder or by such shareholder's duly authorized attorney-in-fact, in a manner authorized by applicable law and filed with or transmitted to the Secretary or the designated agent of the Corporation.

Section 1.12 Meeting Procedure. At all meetings of shareholders, the Chairman of the Board of Directors shall preside, but in the absence of the Chairman of the Board of Directors, the presiding officer shall be designated by the Board of Directors, or if not so designated, selected by the shareholders present. The Secretary shall take the minutes of the meeting, but in the absence of the Secretary or an Assistant Secretary, the presiding officer shall designate any person to take the minutes of the meeting. The presiding officer of any meeting shall determine the order of business and the procedure at the meeting, including such regulation of the conduct of discussion as seems to such officer in order. The conduct of meetings shall be governed by accepted corporate practice (not Roberts' Rules), the fundamental rule being that all who are entitled to take part shall be treated with fairness and good faith.

Section 1.13 Election and Resignation of Directors.

(a) Subject to any rights of the holders of any class or series of shares of the Corporation to elect directors separately, each director shall be elected by a vote of the majority of the votes cast with respect to that director at any meeting for the election of directors at which a quorum is present, in accordance with Section 1.9 of these bylaws; provided, that, if, at the close of the notice period set forth in Section 1.3 of these bylaws, the number of nominees exceeds the number of directors to be elected, the directors shall be elected by the vote of a plurality of the votes cast and entitled to vote on the election of directors in person or by proxy at any such meeting. For purposes of this Section 1.13, a vote of the majority of the votes cast means that the number of shares voted "for" a director must exceed 50% of the votes cast "for" or "against" that director.

(b) If an incumbent director is running uncontested and is not elected as provided in subsection (a) of this Section 1.13, such director shall promptly offer to tender his or her irrevocable resignation to the Board. The Nominating and Governance Committee, or such other committee designated by the Board, will recommend to the Board of Directors whether to accept or reject the resignation, or whether other action should be taken. The Board of Directors will act on the Committee's recommendation and publicly disclose its decision and the rationale behind it within 90 days following the date of the certification of the election results. The director who tenders his or her resignation will not participate in the Board of Directors' decision with respect to such resignation.

(c) Any director may resign at any time by delivering written notice to the Chairman of the Board of Directors, if any, or to the Chief Executive Officer, the President or the Secretary of the Corporation. Such resignation shall take effect at the time specified in the notice or, if no time is specified, immediately. Unless such notice is provided pursuant to subsection (b) of this Section 1.13, or acceptance is otherwise specified in such notice, the acceptance of such resignation shall not be necessary to make it effective.

Section 1.14 Submission of Questionnaire, Representation and Agreement. To be eligible to be a nominee for election or reelection as a director of the Corporation pursuant to Section 1.3(a) of these bylaws, a person must deliver (in accordance with the time periods prescribed for delivery of notice under these bylaws) to the Secretary



at the principal executive offices of the Corporation a written questionnaire with respect to the background and qualification of such person and the background of any other person or entity on whose behalf the nomination is being made (which questionnaire shall be provided by the Secretary upon written request), and a written representation and agreement (in the form provided by the Secretary upon written request) that such person (A) is not and will not become a party to (1) any agreement, arrangement or understanding with, and has not given any commitment or assurance to, any person or entity as to how such person, if elected as a director of the Corporation, will act or vote on any issue or question (a "Voting Commitment") that has not been disclosed to the Corporation or (2) any Voting Commitment that could limit or interfere with such person's ability to comply, if elected as a director of the Corporation, with such person's fiduciary duties under applicable law, (B) is not and will not become a party to any agreement, arrangement or understanding with any person or entity other than the Corporation with respect to any direct or indirect compensation, reimbursement or indemnification in connection with service or action as a director that has not been disclosed therein; (C) beneficially owns, or agrees to purchase prior to being elected as a director of the Corporation, not less than 100 common shares of the Corporation (the "Qualifying Shares") (subject to adjustment for any stock splits or stock dividends occurring after date of such representation or agreement), will not dispose of such minimum number of shares so long as such person is a director, and has disclosed therein whether all or any portion of the Qualifying Shares were purchased with any financial assistance provided by any other person and whether any other person has any interest in the Qualifying Shares; and (D) will serve as a director of the Corporation if so elected and, in such person's individual capacity and on behalf of any person or entity on whose behalf the nomination is being made, that such person would be in compliance, if elected as a director of the Corporation, and will comply, with all applicable corporate governance, conflict of interest, confidentiality and stock ownership and trading policies and guidelines of the Corporation publicly disclosed from time to time and with the requirements of Section 1.13 of these bylaws.

ARTICLE II

BOARD OF DIRECTORS

Section 2.1 Number, Classification and Removal; Vacancies. Article Sixth of the Restated Articles of Incorporation reads as follows:

"SIXTH. 6.1 The business and affairs of the corporation shall be managed by a Board of Directors comprised as follows:

(a) The Board of Directors shall consist of not less than 9 nor more than 17 persons, the exact number to be fixed from time to time by the Board of Directors pursuant to a resolution adopted by a majority vote of the directors then in office;

(b) Directors shall, from and after the annual meeting of shareholders held in 1987, continue to be classified with respect to the time for which they shall severally hold office by dividing them into 3 classes, as nearly equal in number as possible. At such meeting and at each succeeding annual meeting of shareholders, the class of directors then being elected shall be elected to hold office for a term of 3 years. Each director shall hold office for the term for which elected and until his or her successor shall have been elected and qualified;

(c) Subject to the rights of the holders of any series of preferred stock then outstanding, any director, any class of directors, or the entire Board of Directors, may be removed from office by shareholder vote at any time, with or without assigning any cause, ~~but only if shareholders entitled to cast at least 80% of the votes which all shareholders would be entitled to cast at an annual election of directors or of such class of directors shall vote in favor of such removal~~; provided, however, that no individual director shall be removed (unless the entire Board of Directors or any class of directors be removed) in case the votes cast against such removal would be sufficient, if voted cumulatively for such director, to elect him or her to the class of directors of which he or she is a member; and

(d) Subject to the rights of the holders of any series of preferred stock then outstanding, vacancies in the Board of Directors, including vacancies resulting from an increase in the number of directors, shall be filled only by a majority vote of the remaining directors then in office, though less than a quorum, except that vacancies resulting from removal from office by a vote of the shareholders may be filled by the shareholders at the same meeting at which such removal occurs. All directors elected to fill vacancies shall hold office for a term expiring at the annual meeting of shareholders at which the term of the class to which they have been elected expires. No decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent director.



~~6.2 Notwithstanding any other provisions of law, the Restated Articles of Incorporation or the bylaws of the corporation, the affirmative vote of the holders of at least 80% of the voting power of the then outstanding shares of capital stock of the corporation entitled to vote in an annual election of directors, voting together as a single class, shall be required to amend or repeal, or to adopt any provision inconsistent with, this Article Sixth."~~

Section 2.2 Qualifications and Powers. No person shall be elected a director unless such person owns at least 100 shares of Common Stock of the Corporation. In addition to the powers and authority expressly conferred upon it by these bylaws and the Restated Articles of Incorporation, the Board of Directors may exercise all such powers of the Corporation and do all such lawful acts and things in the management of the Corporation as are not, by these bylaws, by the Restated Articles of Incorporation, or by law directed or required to be exercised or done by the shareholders.

Section 2.3 Organizational Meeting. The first regular meeting of each newly-elected Board of Directors shall be held immediately following the annual meeting of the shareholders, and no notice of such meeting shall be necessary in order legally to constitute the meeting, provided that a quorum of the Board of Directors shall be present. At such meeting the Board of Directors shall organize itself, and may elect officers, appoint members of standing committees and transact any other business.

Section 2.4 Regular Meetings; Notice. Regular meetings of the Board of Directors shall be held at such time and place as shall be designated by the Board of Directors from time to time. Notice of such regular meetings of the Board of Directors shall not be required to be given, except as otherwise expressly required in these bylaws or by law. However, whenever the time or place of regular meetings shall be initially fixed or changed, notice of such action shall be given to each director not participating in such action. Any business may be transacted at any regular meeting.

Section 2.5 Special Meetings; Notice. Special meetings of the Board of Directors may be called at any time by the Chairman of the Board of Directors or, in the absence or during the inability to act of the Chairman of the Board of Directors, by the Chief Executive Officer or, in the absence or during the inability of either to act, by the Vice Chairman of the Board of Directors or, in the absence or during the inability of any of them to act, by the President, or by any four directors of the Corporation, by giving notice to the Secretary. Notice of every special meeting of the Board of Directors stating the place, day and hour thereof shall be given by the Secretary to each director by being mailed by first class mail at least five days, or express mail or sent by courier service at least three days, or sent by telex, telegram, facsimile transmission, e-mail or other electronic communication, or given personally or by telephone at least 24 hours, before the time at which the meeting is to be held. Any business may be transacted at any special meeting.

Section 2.6 Quorum; Action. A meeting of the Board of Directors shall not be organized for the transaction of business unless a quorum is present. At any meeting, a majority of the directors then in office shall be necessary and sufficient to organize the meeting. A meeting at which a quorum is not present may be adjourned from time to time by a majority vote of those present to such time and place as they may determine, and it shall not be necessary to give notice of such adjourned meeting or the business to be transacted thereat other than by announcement at the meeting at which such adjournment is taken. Notwithstanding the withdrawal of enough directors to leave less than a majority, the directors who continue to be present at a duly organized meeting shall constitute a quorum in order to continue to do business. Unless otherwise provided in these bylaws, in the Restated Articles of Incorporation or by law, the acts of a majority of the directors present and voting (excluding abstentions) at a duly organized meeting shall be the acts of the Board of Directors. The yeas and nays shall be taken and recorded in the minutes at the request of any director present at a meeting.

Section 2.7 Fees and Expenses. The Board of Directors shall fix the compensation of each director (except for those directors who are officers of the Corporation, whose compensation is to be fixed by the Officers-Directors Compensation Committee). Directors shall be reimbursed for the expenses of attendance at any meeting of the Board of Directors or any committee.

Section 2.8 Charitable Contributions. The Board of Directors may authorize contributions out of the income of the Corporation for the public welfare or for religious, charitable, scientific, or educational purposes.

Section 2.9 Catastrophe. Notwithstanding any other provisions of law, the Restated Articles of Incorporation or these bylaws, during any emergency period caused by a national catastrophe or local disaster, a majority of the surviving members (or the sole survivor) of the Board of Directors who have not been rendered incapable



of acting because of incapacity or the difficulty of communication or transportation to the place of meeting, shall constitute a quorum for the sole purpose of electing directors to fill such emergency vacancies or to reduce the size of the full Board of Directors or both; and a majority of the directors (or the sole survivor) present at such a meeting may take such action. Directors so elected shall serve until such absent directors are able to attend meetings or until the shareholders act to elect directors for such purpose. During such an emergency period, if the Board of Directors and the Executive Committee are unable to or fail to meet, any action appropriate to the circumstances may be taken by such officers of the Corporation as may be present and able. Questions as to the existence of a national catastrophe or local disaster and the number of surviving members capable of acting shall be conclusively determined at the time by the directors or the officers so acting.

Section 2.10 Limitation of Liability. To the fullest extent that the laws of the Commonwealth of Pennsylvania, as in effect on January 27, 1987, or as thereafter amended, permit the elimination or limitation of the liability of directors, no director of the Corporation shall be personally liable for monetary damages as such for any action taken, or any failure to take any action, as a director. This Section 2.10 shall not apply to any actions filed prior to January 27, 1987, nor to any breach of performance of duty or any failure of performance of duty by any director occurring prior to January 27, 1987. The provisions of this Section 2.10 shall be deemed to be a contract with each director of the Corporation who serves as such at any time while such provisions are in effect, and each such director shall be deemed to be serving as such in reliance on such provisions. Any amendment to or repeal of this Section 2.10, or adoption of any other Article or bylaw of the Corporation, which has the effect of increasing director liability shall require ~~the affirmative vote of at least 80% of the voting power of the then outstanding shares of capital stock of the Corporation entitled to vote in an annual election of directors, voting together as a single class the~~ affirmative vote of a majority of the votes cast by all shareholders entitled to vote thereon. Any such amendment or repeal, other Article or bylaw, shall operate prospectively only and shall not have effect with respect to any action taken, or any failure to act, by a director prior thereto.

ARTICLE III

COMMITTEES

Section 3.1 Standing Committees. The Board of Directors, upon the recommendation of the Nominating and Governance Committee, shall appoint the members of the following standing committees:

(a) Audit Committee, comprised of independent, non-employee members of the Board of Directors, which shall be responsible for appointing, retaining or terminating, compensating, and overseeing the work of the independent public accountants for the Corporation; review with the independent public accountants and the internal auditors the scope and plan of their respective future audit programs and their respective reports and recommendations concerning audit findings; meet with the officers of the Corporation and separately with the independent public accountants and with the internal auditors to review audits, annual financial statements prior to their release, accounting and financial controls and compliance with appropriate codes of conduct; report on its meetings to the Board of Directors together with its comments and recommendations; and have such other powers and perform such other duties as the Board of Directors may specify.

(b) Nominating and Governance Committee, comprised of non-employee members of the Board of Directors, which shall recommend to the Board of Directors (i) the persons to be nominated by the Board of Directors to stand for election as directors at the annual meeting of the shareholders, (ii) the person or persons to be elected by the Board of Directors to fill any vacancy or vacancies in the Board of Directors, (iii) the persons to be elected by the Board of Directors to the offices of the Chairman of the Board of Directors, Chief Executive Officer, Vice Chairman of the Board of Directors, President and any office which would cause such person to be an executive officer (as defined under the Exchange Act) of the Corporation, (iv) the persons to be appointed by the Board of Directors as members of the Executive Committee, (v) actions to be taken regarding the structure, organization and functioning of the Board of Directors and (vi) the directors to be appointed to serve as members, and as chairmen, of the standing and other committees established by the Board of Directors; and have such other powers and perform such other duties as the Board of Directors may specify.

(c) Officers-Directors Compensation Committee, comprised of non-employee members of the Board of Directors, which shall approve, adopt, administer, interpret, amend, suspend or terminate the compensation plans of the Corporation applicable to, and fix the compensation and benefits of, (i) all officers of the Corporation serving as



directors of the Corporation and (ii) all executive officers (as defined under the Exchange Act) of the Corporation; and have such other powers and perform such other duties as the Board of Directors may specify.

(d) Technology and Environment Committee, comprised of non-employee members of the Board of Directors, which shall (i) assess the science and technology capabilities of the Corporation; (ii) consult with management concerning technologies that can have a material impact on the Corporation; (iii) review the status of the Corporation's environment, health, safety and product stewardship policies, programs and practices; (iv) consult with management concerning current and emerging environment, health, safety and product stewardship issues that can have a material impact on the Corporation; and have such other powers and perform such other duties as the Board of Directors may specify.

Section 3.2 Other Committees. The Board of Directors shall establish the Executive Committee and may establish such other committees as it may deem appropriate, all of which committees shall have such powers and perform such duties as the Board of Directors may specify and have such membership, which may or may not include directors, as the Board of Directors may appoint.

Section 3.3 Organization of and Action by Committees; Quorum. All committee members appointed by the Board of Directors shall serve at the pleasure of the Board of Directors. All committees shall determine their own organization, procedures and times and places of meeting, unless otherwise directed by the Board of Directors. Any action taken by any committee shall be subject to alteration or revocation by the Board of Directors; provided, however, that third parties shall not be prejudiced by such alteration or revocation. For any committee consisting of four members, two members shall constitute a quorum of that committee. For any other committee, a majority of the members of the committee shall constitute a quorum.

ARTICLE IV

OFFICERS

Section 4.1 Election. The Board of Directors shall elect a Chairman of the Board of Directors, a Secretary and a Treasurer. In addition, the Board of Directors may elect a Chief Executive Officer, Vice Chairman of the Board of Directors, President and Controller, or any one or more of them, and may elect one or more Vice Presidents or other officers. Each officer elected by the Board of Directors shall serve until the next organizational meeting of the Board of Directors and until his or her successor, if any, shall have been elected, unless his or her resignation or removal shall expressly be effective earlier. Each officer appointed by the Executive Committee shall serve until his or her successor, if any, shall have been appointed, unless his or her resignation or removal shall expressly be effective earlier. Any officer of the Corporation may be removed by the Board of Directors with or without cause.

Section 4.2 Chairman. The Chairman of the Board of Directors shall have general control and direction of the business of the Corporation. The Chairman of the Board of Directors shall preside at all meetings of shareholders and directors and shall have such other powers and perform such other duties as the Board of Directors may specify. The Chairman of the Board of Directors shall be an ex officio member, without the right to vote, of the Audit, Nominating and Governance, Officers-Directors Compensation and Technology and Environment Committees.

Section 4.3 Chief Executive Officer. Subject to the control of the Chairman of the Board of Directors, the Chief Executive Officer shall have general control and direction of the business of the Corporation. If no person is elected to the office of the Chief Executive Officer, the Chairman of the Board of Directors shall be the Chief Executive Officer.

Section 4.4 Vice Chairman. The Vice Chairman of the Board of Directors shall have such powers and perform such duties as the Board of Directors or the Chairman of the Board of Directors may specify.

Section 4.5 President. The President shall have such powers and perform such duties as the Board of Directors or the Chairman of the Board of Directors may specify. If the office of President is vacant, the Chairman of the Board of Directors shall have all of the powers and perform all acts incident to the office of the President.

Section 4.6 Vice Presidents and Other Officers. The Vice Presidents and other officers elected by the Board of Directors shall have such powers and perform such duties as the Board of Directors, the Chairman of the



Board of Directors, the Chief Executive Officer, the Vice Chairman of the Board of Directors or the President may specify. In the absence of the Chairman of the Board of Directors, the Chief Executive Officer, the Vice Chairman of the Board of Directors and the President, or during their inability to act, such Vice Presidents and other officers may exercise, subject to the control of the Board of Directors, the powers and duties of the Chairman of the Board of Directors, the Chief Executive Officer, the Vice Chairman of the Board of Directors and the President. The Vice Presidents and other officers appointed by the Executive Committee shall have such powers and perform such duties as the entity that appointed them or any officers to whom they report, directly or indirectly, may specify.

Section 4.7 Secretary. The Secretary shall attend all meetings of the shareholders and of the Board of Directors and shall keep careful records of all such meetings, the proceedings of which shall be transcribed into the minute book of the Corporation over the Secretary's signature. The Secretary shall have custody of the corporate seal and of all books, documents, and papers of the Corporation committed to his or her charge. The Secretary shall cause all notices to be given to shareholders and to directors of the Corporation as may be required by law or these bylaws. The Secretary shall make such reports, have such other powers and perform such other duties as are authorized or required by law or as the Board of Directors may specify. The Secretary may delegate to one or more Assistant Secretaries any of the Secretary's powers and duties. In the absence of the Secretary or during the Secretary's inability to act, the Secretary's powers and duties shall be performed by one or more Assistant Secretaries.

Section 4.8 Treasurer. The Treasurer shall have the custody and care of, and shall manage and invest, all the money, securities, and funds of the Corporation. To the extent not invested in stocks, bonds or other securities, the Treasurer shall deposit the money and funds of the Corporation in such bank or banks or depositories as the Board of Directors may designate, provided that the Board of Directors may delegate to the Treasurer, subject to such limitations as it may from time to time prescribe, the power to designate such bank or banks or depositories. Under the direction of the Board of Directors, the Treasurer shall pay out and dispose of all drafts, notes, checks, warrants, and orders for the payment of money; render such statements to the Board of Directors as it shall require; and have such other powers and perform such other duties as the Board of Directors may specify or which are authorized or required of the Treasurer by law. The Treasurer may delegate any of the Treasurer's powers and duties to one or more Assistant Treasurers and, if authorized by the Board of Directors, any officer or agent of the Corporation. If required by the Board of Directors, the Treasurer and any Assistant Treasurer shall give bond for the faithful discharge of his or her duties in such amount as may be fixed by the Board of Directors and with such surety as may be approved by the Board of Directors. In the absence of the Treasurer or during the Treasurer's inability to act, the Treasurer's powers and duties shall be performed by one or more Assistant Treasurers.

Section 4.9 Controller. The Controller shall keep or cause to be kept all books of account and accounting records of the Corporation. The Controller shall periodically render to the Board of Directors financial statements and reports covering the results of the operations of the Corporation. Subject to the control of the Board of Directors, the Controller shall determine all accounting policies and procedures, including, without limiting the generality of the foregoing, matters relating to depreciation, depletion, valuation of inventories, the method of creating reserves and accruals, and the establishment of the value of land, buildings, equipment, securities and other assets and shall perform all other acts authorized or required of the Controller by law and shall have such other powers and perform such other duties as the Board of Directors may specify. The Controller may delegate to one or more Assistant Controllers any of the Controller's powers and duties. In the absence of the Controller or during Controller's inability to act, the Controller's powers and duties shall be performed by one or more Assistant Controllers. If the office of Controller is vacant, the Controller's duties shall be performed by the officer designated by the Board of Directors.

Section 4.10 Vacancies. Vacancy in any office or position by reason of death, resignation, removal, disqualification or any other cause, shall be filled in the manner provided in this Article for regular election or appointment to such office.

Section 4.11 Delegation of Duties. In case of the absence of any officer of the Corporation, or for any other reason that the Board of Directors may deem sufficient, the Board of Directors may delegate for the time being the powers and duties, or any of them, of such officer to any other officer or director or other person whom it may select.



ARTICLE V

MISCELLANEOUS CORPORATE TRANSACTIONS AND DOCUMENTS

Section 5.1 Borrowing. No officer, agent or employee of the Corporation shall have any power or authority to borrow money on its behalf, to guarantee or pledge its credit, or to mortgage or pledge any of its real or personal property, except within the scope and to the extent of such authority as may be delegated by the Board of Directors. Authority may be granted by the Board of Directors for any of the above purposes and may be general or limited to specific instances.

Section 5.2 Execution of Instruments. All properly authorized notes, bonds, drafts, acceptances, checks, endorsements (other than for deposit), guarantees, and all evidences of indebtedness of the Corporation whatsoever, and all deeds, mortgages, contracts and other instruments requiring execution by the Corporation may be signed by the Chairman of the Board of Directors, the Chief Executive Officer, the Vice Chairman of the Board of Directors, the President, any Vice President or the Treasurer; and authority to sign any such instruments, which may be general or confined to specific instances, may be conferred by the Board of Directors upon any other person or persons, subject to such requirements as to countersignature or other conditions, as the Board of Directors may from time to time determine. Facsimile signatures may be used on checks, notes, bonds or other instruments. Any person having authority to sign on behalf of the Corporation may delegate, from time to time, by instrument in writing, all or any part of such authority to any person or persons if authorized so to do by the Board of Directors. Unless otherwise delegated, the Board of Directors retains the authority to approve any and all transactions entered into on behalf of the Corporation.

Section 5.3 Voting and Acting with Respect to Stock and Other Securities Owned by the Corporation. The Chairman of the Board of Directors, the Chief Executive Officer, the Vice Chairman of the Board of Directors, the President, any Vice President or the Treasurer of the Corporation shall have the power and authority to vote and act with respect to all stock and other securities in any other corporation owned by the Corporation, unless the Board of Directors confers such authority, which may be general or confined to specific instances, upon some other officer or person. Any person so authorized shall have the power to appoint an attorney or attorneys, with general power of substitution, as proxies for the Corporation, with full power to vote and act on behalf of the Corporation with respect to such stock and other securities.

ARTICLE VI

INDEMNIFICATION

Section 6.1 Entitlement to Indemnification. The Corporation shall, to the extent that a determination of entitlement is made pursuant to, or to the extent that entitlement to indemnification is otherwise accorded by, this Article, indemnify every person who was or is a director, officer or employee of the Corporation (hereinafter referred to as the "Indemnitee") who was or is involved in any manner (including, without limitation, as a party or a witness), or is threatened to be made so involved, in any threatened, pending or completed investigation, claim, action, suit or proceeding, whether civil, criminal, administrative or investigative (including, without limitation, any investigation, claim, action, suit or proceeding by or in the right of the Corporation) by reason of the fact that the Indemnitee is or was a director, officer or employee of the Corporation, or is or was serving at the request of the Corporation as a director, officer, employee, fiduciary or other representative of another corporation, partnership, joint venture, trust, employee benefit plan or other entity (such investigation, claim, action, suit or proceeding hereinafter being referred to as a "Proceeding") against any expenses and any liability actually and in good faith paid or incurred by such person in connection with such Proceeding; provided, that indemnification may be made with respect to a Proceeding brought by an Indemnitee against the Corporation only as provided in the last sentence of this Section 6.1. As used in this Article, the term "expenses" shall include fees and expenses of counsel and all other expenses (except any liability) and the term "liability" shall include amounts of judgments, fines or penalties and amounts paid in settlement. Indemnification may be made under this Article for expenses incurred in connection with any Proceeding brought by an Indemnitee against the Corporation only if (1) the Proceeding is a claim for indemnification under this Article or otherwise, (2) the Indemnitee is successful in whole or in part in the Proceeding for which expenses are claimed, or (3) the indemnification for expenses is included in a settlement of, or is awarded by a court in, a Proceeding to which the Corporation is a party.



Section 6.2 Advancement of Expenses. All expenses incurred in good faith by or on behalf of the Indemnitee with respect to any Proceeding shall, upon written request submitted to the Secretary of the Corporation, be advanced to the Indemnitee by the Corporation prior to final disposition of such Proceeding, subject to any obligation which may be imposed by law or by provision in the Articles, bylaws, an agreement or otherwise to repay the Corporation in certain events.

Section 6.3 Indemnification Procedure.

(a) To obtain indemnification under this Article, an Indemnitee shall submit to the Secretary of the Corporation a written request, including such supporting documentation as is reasonably available to the Indemnitee and reasonably necessary to the making of a determination of whether and to what extent the Indemnitee is entitled to indemnification. The Secretary of the Corporation shall promptly thereupon advise the General Counsel in writing of such request.

(b) The Indemnitee's entitlement to indemnification shall be determined by a Referee (selected as hereinafter provided) in a written opinion. The Referee shall find the Indemnitee entitled to indemnification unless the Referee finds that the Indemnitee's conduct was such that, if so found by a court, indemnification would be prohibited by Pennsylvania law.

(c) "Referee" means an attorney with substantial expertise in corporate law who neither presently is, nor in the past five years has been, retained to represent: (i) the Corporation or the Indemnitee, or an affiliate of either of them, in any matter material to either such party, except to act as a Referee in similar proceedings, or (ii) any other party to the Proceeding giving rise to a claim for indemnification under this Article. The Corporation's General Counsel, if Disinterested (as hereinafter defined), or if not, the Corporation's senior officer who is Disinterested, shall propose a Referee. The Secretary of the Corporation shall notify the Indemnitee of the name of the Referee proposed, whose appointment shall become final unless the Indemnitee, within 10 days of such notice, reasonably objects to such Referee as not being qualified, independent or unbiased. If the Corporation and the Indemnitee cannot agree on the selection of a Referee, or if the Corporation fails to propose a Referee, within 45 days of the submission of a written request for indemnification, the Referee shall be selected by the American Arbitration Association. The General Counsel or a senior officer shall be deemed "Disinterested" if not a party to the Proceeding and not alleged in the pleadings as to the Proceeding to have participated in the action, or participated in the failure to act, which is the basis for the relief sought in the Proceeding.

(d) Notwithstanding any other provision of this Article, to the extent that there has been a determination by a court as to the conduct of an Indemnitee such that indemnification would not be prohibited by Pennsylvania law, or if an Indemnitee would be entitled by Pennsylvania law to indemnification, the Indemnitee shall be entitled to indemnification hereunder.

(e) A determination under this Section 6.3 shall be conclusive and binding on the Corporation but not on the Indemnitee.

Section 6.4 Partial Indemnification. If an Indemnitee is entitled under any provision of this Article to indemnification by the Corporation of a portion, but not all, of the expenses or liability resulting from a Proceeding, the Corporation shall nevertheless indemnify the Indemnitee for the portion thereof to which the Indemnitee is entitled.

Section 6.5 Insurance. The Corporation may purchase and maintain insurance to protect itself and any Indemnitee against expenses and liability asserted or incurred by any Indemnitee in connection with any Proceeding, whether or not the Corporation would have the power to indemnify such person against such expense or liability by law, under an agreement or under this Article. The Corporation may create a trust fund, grant a security interest or use other means (including, without limitation, a letter of credit) to ensure the payment of such amounts as may be necessary to effect indemnification.

Section 6.6 Agreements. The Corporation may enter into agreements with any director, officer or employee of the Corporation, which agreements may grant rights to the Indemnitee or create obligations of the Corporation in furtherance of, different from, or in addition to, but not in limitation of, those provided in this Article, without shareholder approval of any such agreement. Without limitation of the foregoing, the Corporation may obligate itself (1) to maintain insurance on behalf of the Indemnitee against certain expenses and liabilities and (2) to contribute



to expenses and liabilities incurred by the Indemnitee in accordance with the application of relevant equitable considerations to the relative benefits to, and the relative fault of, the Corporation.

Section 6.7 Miscellaneous. The entitlement to indemnification and advancement of expenses provided for in this Article (1) shall be a contract right, (2) shall not be exclusive of any other rights to which an Indemnitee may otherwise be entitled under any Article, bylaw, agreement, vote of shareholders or directors or otherwise, (3) shall continue as to a person who has ceased to be a director, officer or employee and (4) shall inure to the benefit of the heirs and legal representatives of any person entitled to indemnification or advancement of expenses under this Article.

Section 6.8 Construction. If any provision of this Article shall be held to be invalid, illegal or unenforceable for any reason (1) such provision shall be invalid, illegal or unenforceable only to the extent of such prohibition and the validity, legality and enforceability of the remaining provisions of this Article shall not in any way be affected or impaired thereby, and (2) to the fullest extent possible, the remaining provisions of this Article shall be construed so as to give effect to the intent manifested by the provision held invalid, illegal or unenforceable.

Section 6.9 Effectiveness. This Article shall apply to every Proceeding other than a Proceeding filed prior to January 27, 1987, except that it shall not apply to the extent that Pennsylvania law does not permit its application to any breach of performance of duty or any failure of performance of duty by an Indemnitee occurring prior to January 27, 1987.

Section 6.10 Amendment. This Article may be amended or repealed at any time in the future by vote of the directors without shareholder approval; provided, that any amendment or repeal, or adoption of any Article of the Restated Articles or any other bylaw of the Corporation, which has the effect of limiting the rights granted to directors under this Article, shall require ~~the affirmative vote of at least 80% of the voting power of the then outstanding shares of capital stock of the Corporation entitled to vote in an annual election of directors, voting together as a single class~~ the affirmative vote of a majority of the votes cast by all shareholders entitled to vote thereon. Any amendment or repeal, or such Article or other bylaw, limiting the rights granted under this Article shall operate prospectively only, and shall not limit in any way the indemnification provided for herein with respect to any action taken, or failure to act, by an Indemnitee prior thereto.

ARTICLE VII

CAPITAL STOCK

Section 7.1 Share Certificates. Every holder of fully-paid stock of the Corporation shall be entitled to a certificate or certificates, to be in such form as the Board of Directors may from time to time prescribe, and signed (in facsimile or otherwise, as permitted by law) by the Chairman of the Board of Directors, the Chief Executive Officer, the Vice Chairman of the Board of Directors, the President or any Vice President and also by the Secretary or the Treasurer or an Assistant Secretary or an Assistant Treasurer, which certificate or certificates shall represent and certify the number of shares of stock owned by such holder. In case any officer, transfer agent or registrar who has signed (in facsimile or otherwise, as permitted by law) any share certificate shall cease to be such officer, transfer agent or registrar before the certificate is issued, it may be issued by the Corporation with the same effect as if the officer, transfer agent or registrar had not ceased to be such at the date of its issue. The Board of Directors may authorize the issuance of certificates for fractional shares or, in lieu thereof, scrip or other evidence of ownership, which may (or may not) as determined by the Board of Directors entitle the holder thereof to voting, dividends or other rights of shareholders.

Section 7.2 Transfer of Shares. Transfers of shares of stock of the Corporation shall be made on the books of the Corporation only upon surrender to the Corporation of the certificate or certificates for such shares properly endorsed by the shareholder or by the shareholder's assignee, agent or legal representative, who shall furnish proper evidence of assignment, authority or legal succession, or by the agent of one of the foregoing thereunto duly authorized by an instrument duly executed and filed with the Corporation in accordance with regular commercial practice.

Section 7.3 Holders of Record. The Corporation shall be entitled to treat the holder of record of any share or shares of stock of the Corporation as the holder and owner in fact thereof for all purposes and shall not be bound to recognize any equitable or other claim to or interest in any share on the part of any person other than the registered holder thereof, whether or not it shall have express or other notice thereof, except as expressly provided by law. The Board of Directors may fix a record date, within any applicable limits imposed by law or the Restated Articles



of Incorporation, for the determination of shareholders for any purpose, including meetings, payment of dividends, allotment of rights and reclassification, conversion or exchange of shares. The Board of Directors may adopt a procedure whereby a shareholder of the Corporation may certify in writing to the Corporation that all or a portion of the shares registered in the name of the shareholder are held for the account of a specified person or persons. The resolution of the Board of Directors adopting such a procedure may set forth: (1) the classification of shareholder who may certify; (2) the purpose or purposes for which the certification may be made; (3) the form of certification and information to be contained therein; (4) if the certification is with respect to a record date, the time after the record date within which the certification must be received by the Corporation; and (5) such other provisions with respect to the procedure as are deemed necessary or desirable. Upon receipt by the Corporation of a certification complying with the procedure, the persons specified in the certification shall be deemed, for the purposes set forth in the certification, to be the holders of record of the number of shares specified in place of the shareholder making the certification.

Section 7.4 Replacement. Each duly appointed transfer agent and registrar of the Corporation may issue and register, respectively, from time to time, without further action or approval by or on behalf of the Corporation, new certificates of stock of the Corporation to replace certificates claimed to have been lost, stolen, or destroyed, upon receipt by the transfer agent of an Affidavit of Loss and Bond of Indemnity in such amount and upon such terms as may be required by the transfer agent to protect the Corporation, the transfer agent and registrar against all loss, cost or damage arising from the issuance of such new certificates, provided that a Bond of Indemnity shall not be required where not more than five shares of stock are involved.

ARTICLE VIII

MISCELLANEOUS

Section 8.1 Description of Seal. The corporate seal of the Corporation shall be inscribed with the name of the Corporation, and the words "Corporate Seal," and may be used by causing it or a facsimile thereof to be impressed or affixed or in any manner reproduced.

Section 8.2 Fiscal Year. The fiscal year of the Corporation shall be the calendar year.

Section 8.3 Adoption, Amendment or Repeal of Bylaws. Except as otherwise provided by law, in the Restated Articles of Incorporation or in these bylaws, new or additional bylaws may be adopted and these bylaws may be amended or repealed by action of the Board of Directors at any regular or special meeting, subject to the power of the shareholders to change such action.

Section 8.4 Exclusive Forum.

(a) Venue in the following actions and proceedings shall be solely and exclusively in the Pennsylvania Court of Common Pleas of the judicial district embracing the county in which the registered office of the Corporation is located (the "Court") (or, if the Court lacks jurisdiction, the federal district court for the district that includes that county):

- (i) any derivative action or proceeding brought on behalf of the Corporation;
- (ii) any action or proceeding asserting a claim of breach of duty owed by any director, officer, or other employee of the Corporation to the Corporation or its shareholders;
- (iii) any action or proceeding asserting a claim against the Corporation or against any director, officer, or other employee of the Corporation (i) arising under any provision of the Pennsylvania Associations Code, Title 15 Pa Con. Stat, or the Restated Articles of Incorporation or these bylaws, or (ii) governed by the internal affairs doctrine; and
- (iv) any other action or proceeding under the Pennsylvania Associations Code, with respect to which the Pennsylvania Associations Code provides that the Court may or shall hear or determine the action or proceeding.

The provisions of this Section 8.4 are severable. The invalidity of any provision of this Section, or the unenforceability of any provision against any person or in any circumstance, shall not invalidate the remaining portions of this Section or cause this Section to be unenforceable against any other person or in any other circumstance.



Notwithstanding the foregoing, the Corporation may consent in writing to the selection of an alternative forum.

(b) If any action or proceeding the subject matter of which is within the scope of paragraph (a) above is filed in a court other than the Court (or, if the Court lacks jurisdiction, the federal district court for the district that includes the county in which the registered office of the Corporation is located) (a "Foreign Action") in the name of any shareholder of the Corporation, such shareholder shall be deemed to have consented to (i) the personal jurisdiction of the Court (or, if the Court lacks jurisdiction, the federal district court for the district that includes the county in which the registered office of the Corporation is located) in connection with any action brought in any such court to enforce paragraph (a) above (an "Enforcement Action") and (ii) having service of process made upon such shareholder in any such Enforcement Action by service upon such shareholder's counsel in the Foreign Action as agent for such shareholder. For purposes of this Section 8.4, "shareholder" shall include a beneficial owner of shares of the Corporation.

