PPG Annual Report
and Form 10-K

Company Profile

PPG Industries' vision is to continue to be the world's leading coatings and specialty products company. Through leadership in innovation, sustainability and color, PPG helps customers in industrial, transportation, consumer products, and construction markets and aftermarkets to enhance more surfaces in more ways than does any other company. Founded in 1883, PPG has global headquarters in Pittsburgh and operates in more than 60 countries around the world. Sales in 2011 were $14.9 billion.

PERFORMANCE COATINGS

- **AEROSPACE.** Leading manufacturer of transparencies, electrochromic cabin window shades, sealants and coatings, and provider of surface solutions, packaging, and chemical management services, delivering new technologies and solutions to airframe manufacturers, airlines and maintenance providers for the commercial, military and general aviation industries globally. Also supplies transparent armor for military vehicles.
- **ARCHITECTURAL COATINGS — AMERICAS AND ASIA PACIFIC.** Produces paints, stains and specialty coatings for the commercial, maintenance and residential markets under brands such as PPG Pittsburgh Paints®, PPG Porter Paints®, PPG, Master's Mark®, Renner®, Lucite®, Olympic®, Taubmans® and Ivy®.
- **AUTOMOTIVE REFINISH.** Produces and markets a full line of coatings products and related services for automotive and commercial transport/fleet repair and refurbishing, light industrial coatings and specialty coatings for signs.
- **PROTECTIVE AND MARINE COATINGS.** Leading supplier of corrosion-resistant, appearance-enhancing coatings for the marine, infrastructure, petrochemical, offshore and power industries. Produces the Amercoat®, Freitag®, PPG High Performance Coatings and Sigma Coatings® brands.

INDUSTRIAL COATINGS

- **AUTOMOTIVE OEM COATINGS.** Leading supplier of coatings, specialty products and services to automotive, commercial vehicle, fascia and trim manufacturers. Products include electrocoats, primer surfacers, basecoats, clearcoats, liquid applied sound dampeners, bedliner, pretreatment chemicals, adhesives and sealants.
- **INDUSTRIAL COATINGS.** Produces coatings for appliances, agricultural and construction equipment, consumer products, electronics, automotive parts, residential and commercial construction, wood flooring, joinery (windows and doors) and other finished products.
- **PACKAGING COATINGS.** Global supplier of coatings, inks, compounds, pretreatment chemicals and lubricants for metal and plastic containers for the beverage, food, general line and specialty packaging industries.

ARCHITECTURAL COATINGS – EMEA

- **ARCHITECTURAL COATINGS — EMEA (Europe, Middle East and Africa).** Supplier of market-leading paint brands for the trade and retail markets such as Sigma Coatings®, Histor®, Brander®, Dyrup®, Bondex®, Balakryl®, Boonstoppel®, Rambo®, Seigneurie®, Penitures Gauthier®, Guittet®, Ripolin®, Johnstone's®, Leyland®, Dekoral®, Trinat®, Hera®, Primalex®, Prominent Paints® and Freitag®.

OPTICAL AND SPECIALTY MATERIALS

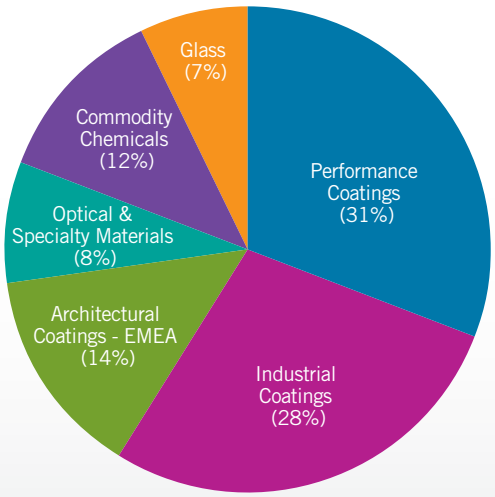
- **OPTICAL PRODUCTS.** Produces optical monomers and coatings, including CR-39®, Trivex® and Tribrid™ lens materials, high performance NXT® sunlenses, optical sheet transparencies, photochromic dyes and Transitions® photochromic eyeglass lenses.
- **SILICAS.** Produces amorphous precipitated silicas for tire, battery separator and other end-use applications and Teslin® substrate used in applications such as radio frequency identification (RFID) tags and labels, e-passports, driver's licenses and identification cards.

COMMODITY CHEMICALS

- **CHLOR-ALKALI AND DERIVATIVES.** Produces chlorine, caustic soda and related chemicals for use in chemical manufacturing, pulp and paper production, water treatment, plastics production, agricultural products, pharmaceuticals and many other applications.

GLASS

- **FIBER GLASS.** Manufactures fiber glass reinforcement materials for thermoset and thermoplastic composite applications, serving the transportation, energy, infrastructure and consumer markets. Produces fiber glass yarns for electronic printed circuit boards and specialty applications.
- **FLAT GLASS.** Produces flat glass and coated glass that is fabricated into products primarily for commercial construction and residential markets, as well as the solar energy, appliance, mirror and transportation industries.



2011 Segment Net Sales

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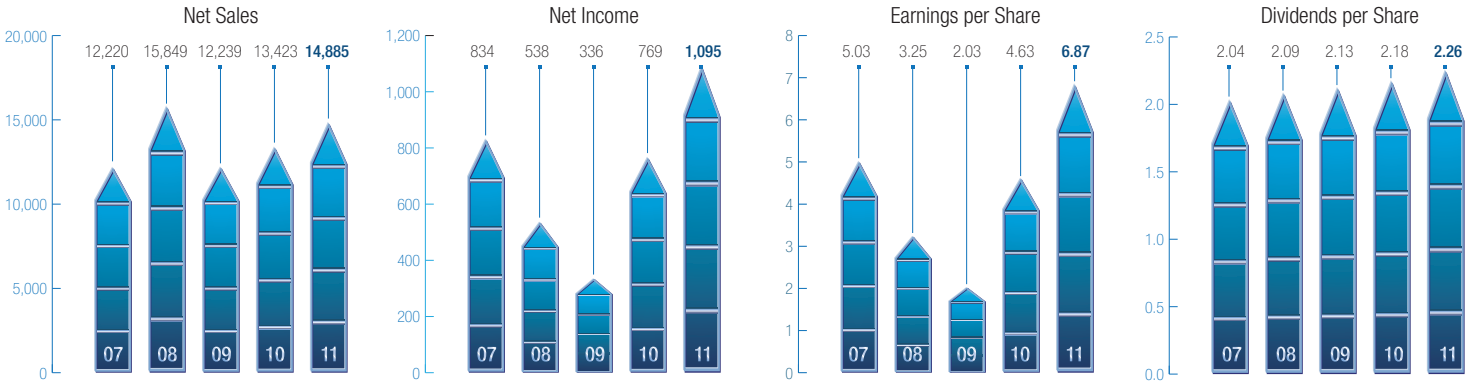
2011 Financial Highlights

Average shares outstanding and all dollar amounts except per share data are in millions.



FOR THE YEAR	2011	CHANGE	2010
Net Sales	$ 14,885	11 %	$ 13,423
Net Income*	$ 1,095	42 %	$ 769
Earnings per Share* ‡	$ 6.87	48 %	$ 4.63
Dividends per Share	$ 2.26	4 %	$ 2.18
Return on Average Capital	16.6 %	29 %	12.9 %
Operating Cash Flow	$ 1,436	10 %	$ 1,310
Capital Spending	$ 446	31 %	$ 341
Research and Development	$ 445	9 %	$ 408
Average Shares Outstanding ‡	159.3	-4 %	165.9
Average Number of Employees	38,400	— %	38,300

AT YEAR END	2011	CHANGE	2010
PPG Shareholders' Equity	$ 3,249	-11 %	$ 3,638

* Includes in 2010 an aftertax charge of $85 million, or 51 cents per share, representing a reduction in a deferred tax asset due to tax law changes included in health care legislation enacted in March 2010 that included a provision to reduce the amount of retiree medical costs that will be deductible after Dec. 31, 2012.

‡Assumes dilution.

Board of Directors

Charles E. Bunch
Chairman and Chief Executive Officer, PPG Industries, Inc.

Stephen F. Angel
Chairman, President and Chief Executive Officer, Praxair, Inc.
Nominating and Governance Committee; Technology and Environment Committee

James G. Berges
Partner, Clayton, Dubilier & Rice, LLC, and retired President, Emerson Electric Co.
Audit Committee; Nominating and Governance Committee

Hugh Grant
Chairman, President and Chief Executive Officer, Monsanto Company
Nominating and Governance Committee; Officers-Directors Compensation Committee

Victoria F. Haynes
President and Chief Executive Officer, RTI International
Audit Committee; Technology and Environment Committee

Michele J. Hooper
President and Chief Executive Officer, The Directors' Council
Audit Committee; Nominating and Governance Committee

Robert Mehrabian
Chairman, President and Chief Executive Officer, Teledyne Technologies Incorporated
Officers-Directors Compensation Committee; Technology and Environment Committee

Martin H. Richenhagen
Chairman, President and Chief Executive Officer, AGCO Corporation
Audit Committee; Technology and Environment Committee

Robert Ripp
Chairman, Lightpath Technologies, Inc., and former Chairman and Chief Executive Officer, AMP Inc.
Audit Committee; Officers-Directors Compensation Committee

Thomas J. Usher
Non-executive Chairman of the Board, Marathon Petroleum Corporation
Officers-Directors Compensation Committee; Technology and Environment Committee

David R. Whitwam
Retired Chairman and Chief Executive Officer, Whirlpool Corporation
Nominating and Governance Committee; Officers-Directors Compensation Committee

Operating Committee

Charles E. Bunch*
Chairman and Chief Executive Officer

J. Rich Alexander*
Executive Vice President

Pierre-Marie De Leener*
Executive Vice President

Glenn E. Bost II*
Sr. Vice President and General Counsel

David B. Navikas*
Sr. Vice President, Finance, and Chief Financial Officer

Richard C. Elias
Sr. Vice President, Optical and Specialty Materials

Michael H. McGarry
Sr. Vice President, Commodity Chemicals

Cynthia A. Niekamp
Sr. Vice President, Automotive OEM Coatings

Viktoras R. Sekmakas
Sr. Vice President, Industrial Coatings, and President, PPG Europe

Aziz Giga
Vice President and Treasurer

Anup Jain
Vice President, Strategic Planning and Corporate Development

J. Craig Jordan
Vice President, Human Resources

Charles F. Kahle II
Chief Technology Officer and Vice President, Research and Development, Coatings

**Member of the Executive Committee*

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Letter from the Chairman

In 2011, PPG delivered record full-year earnings per share of $6.87. This represents an increase of 48 percent over 2010 and easily establishes a new record for the company. Net income also was a record at $1.1 billion, an increase of 42 percent over last year. Earnings per share in each quarter of the year eclipsed prior quarter records by an average of about 20 percent. And sales for the year were $14.9 billion, an increase of 11 percent over 2010.

This strong performance was achieved despite global growth rates that were uneven by region and varied by industry. More importantly, these results demonstrate that our mission to continue to be the world's leading coatings and specialty products company, supported by our strategic initiatives to pursue profitable growth and drive operational excellence, is clearly yielding results.

Our actions to extend PPG's geographic footprint and broaden end-use market exposure contributed greatly to our performance in 2011. We delivered double-digit percentage sales increases in each major global region. PPG also posted higher earnings in each region on the strength of improved results in each of the company's six reporting segments, including excellent performance in our businesses serving the aerospace, automotive and general industrial market segments.

During the year, PPG made progress toward many of our strategic initiatives. As a result, PPG's segment margins improved to 13.6 percent, up from 12.8 percent in 2010, and we maintained our margin leadership in the coatings industry. Each of our 13 business units delivered higher pricing, and we gained market share in several end-use markets by leveraging our leading technologies and customer service. This enabled us to counter the impact of persistent inflation in raw materials costs. We also reduced our manufacturing costs during the year beyond the already low cost structure we achieved by implementing our 2008 and 2009 restructuring programs.

We continued to strengthen our business both organically and through acquisitions. Among other projects, we completed construction of a new resin manufacturing facility in Zhangjiagang, China, and expanded our waterborne coatings manufacturing facility in Tianjin, China. We also announced four acquisitions: Equa-Chlor, a chlor-alkali producer in the western United States; Dyrup, a European architectural coatings and wood care business; Ducol, a South African automotive refinish company; and Colpisa, a Colombian automotive coatings producer.

PPG maintained its long tradition of rewarding shareholders in 2011 by returning $1.2 billion, or about 85 percent of the cash we generated from operations, in the form of dividends and share repurchases. We are proud to have paid uninterrupted annual dividends since 1899, and 2011 marked the 40th consecutive year that we increased our annual dividend payout. Additionally, the 10.2 million shares of PPG stock we repurchased for about $850 million marked the highest annual level in the company's history. Notwithstanding this amplified level of cash deployment, we still ended the year with about $1.5 billion of cash and short-term investments that will provide us with the strength and flexibility to fund growth initiatives in 2012.

In addition to our record financial performance, 2011 was an excellent year for PPG by nearly every other measure. True to our "Blueprint" values, we made significant progress on many of our ethics; environment, health and safety; and community engagement programs. In 2011, we revised our Global Code of Ethics to make it even stronger. For the second consecutive year, we reduced our spill and release rate and maintained our low level of injuries and illnesses across the corporation. And, we expanded our community and social responsibility initiatives on a global scale. You can read more about this work in our Corporate Sustainability Report Update, which will be published this April.

Looking ahead, we anticipate a mixed economic backdrop in 2012. We expect moderate strengthening in the U.S. economy supported by an enhanced global cost position in the industrial sector due to lower regional natural gas prices. The European region will likely remain very challenging. In the aggregate, growth in the emerging regions is expected to remain high compared to developed regions but more moderate and erratic than it has been in the past.

As we deal with these uncertainties, we intend to manage our businesses in the same proactive and disciplined manner we always have. We will continue to emphasize our principles of operational excellence and our legacy of ensuring that our cost structure is appropriate for end-market demand levels. We plan to implement price increases in many of our businesses to offset the cost inflation we have already absorbed in 2011. Finally, we aim to continue to prudently deploy our strong cash position toward earnings accretion and rewarding shareholders, and we are targeting to end 2012 with a cash balance of less than $1 billion.

Like most years, 2012 will present unanticipated challenges. However, given our strong performance over the past several years, I'm confident that our strategy and execution remain sound and will enable us not only to overcome these obstacles but to continue to create value for our shareholders.

Charles E. Bunch
Chairman and Chief Executive Officer

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 10-K

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

For the fiscal year ended December 31, 2011 Commission File Number 1-1687

PPG INDUSTRIES, INC.

(Exact name of registrant as specified in its charter)

Pennsylvania (State or other jurisdiction of incorporation or organization)	25-0730780 (I.R.S. Employer Identification No.)
One PPG Place, Pittsburgh, Pennsylvania (Address of principal executive offices)	15272 (Zip code)
Registrant's telephone number, including area code:	412-434-3131

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

Title of each class	Name of each exchange on which registered
Common Stock – Par Value $1.66 ⅔	New York Stock Exchange

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

Indicate by check mark if the Registrant is a well-known seasoned issuer as defined in Rule 405 of the Securities Act. YES ☒ NO ☐

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. YES ☐ NO ☒

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months, and (2) has been subject to such filing requirements for the past 90 days. YES ☒ NO ☐

Indicate by checkmark whether the registrant has submitted electronically and posted on its corporate web site, if any, every Interactive Date File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). YES ☒ NO ☐

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ☒	Accelerated filer ☐
Non-accelerated filer ☐ (Do not check if a smaller reporting company)	Smaller reporting company ☐

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

The aggregate market value of common stock held by non-affiliates as of June 30, 2011, was $14,069 million.

As of January 31, 2012, 152,007,747 shares of the Registrant's common stock, with a par value of $1.66 ⅔ per share, were outstanding. As of that date, the aggregate market value of common stock held by non-affiliates was $13,580 million.

DOCUMENTS INCORPORATED BY REFERENCE

Document	Incorporated By Reference In Part No.
Portions of PPG Industries, Inc. Proxy Statement for its 2012 Annual Meeting of Shareholders	III

PPG INDUSTRIES, INC.
AND CONSOLIDATED SUBSIDIARIES

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

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Note on Incorporation by Reference

Throughout this report, various information and data are incorporated by reference from the Company's 2011 Annual Report (hereinafter referred to as "the Annual Report"). Any reference in this report to disclosures in the Annual Report shall constitute incorporation by reference only of that specific information and data into this Form 10-K.

Part I

Item 1. Business

PPG Industries, Inc., incorporated in Pennsylvania in 1883, is comprised of six reportable business segments: Performance Coatings, Industrial Coatings, Architectural Coatings – EMEA (Europe, Middle East and Africa), Optical and Specialty Materials, Commodity Chemicals and Glass. Each of the business segments in which PPG is engaged is highly competitive. The diversification of product lines and worldwide markets served tend to minimize the impact on PPG's total sales and earnings from changes in demand for a particular product line or in a particular geographic area. Refer to Note 24, "Reportable Business Segment Information" under Item 8 of this Form 10-K for financial information relating to our reportable business segments.

Performance Coatings, Industrial Coatings and Architectural Coatings – EMEA

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

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

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

The aerospace coatings business supplies sealants, coatings, technical cleaners and transparencies for commercial, military, regional jet and general aviation aircraft and transparent armor for military land vehicles. PPG supplies products to aircraft manufacturers and maintenance and aftermarket customers around the world both on a direct basis and through a company-owned distribution network.

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

Product performance, technology, quality, distribution and technical and customer service are major competitive factors in these three coatings businesses.

The architectural coatings-Americas and Asia Pacific business primarily produces coatings used by painting and maintenance contractors and by consumers for decoration and maintenance of residential and commercial building structures. These coatings are sold under a number of brands. Architectural coatings – Americas and Asia Pacific products are sold through a combination of company-owned stores, home centers, paint dealers, and independent distributors and directly to customers. Price, product performance, quality, distribution and brand recognition are key competitive factors for these architectural coatings businesses. The architectural coatings-Americas and Asia Pacific business operates about 400 company-owned stores in North America and about 40 company-owned stores in Australia.

The major global competitors of the Performance Coatings reportable segment are Akzo Nobel N.V., BASF Corporation, E.I. duPont de Nemours and Company, Hempel A/S, the Jotun Group, Masco Corporation, the Sherwin-Williams Company, Valspar Corporation and GKN plc. The average number of persons employed by the Performance Coatings reportable segment during 2011 was about 12,100.

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

The industrial and automotive OEM coatings businesses sell directly to a variety of manufacturing companies. PPG also supplies adhesives and sealants for the automotive industry and metal pretreatments and related chemicals for industrial and automotive applications. PPG has established alliances with Kansai Paint, Helios Group and Asian Paints Ltd. to serve certain automotive original equipment manufacturers in various regions of the world. PPG owns a 60% interest in PPG

Kansai Finishes to serve Japanese-based automotive OEM customers in North America and Europe. PPG owns a 60% interest in PPG Helios Ltd. to serve Russian-based automotive OEM customers in Russia and the Ukraine. PPG and Asian Paints currently each own a 50% interest in Asian PPG Paints to serve global and domestic-based automotive OEM customers in India. In 2011, PPG announced that it plans to expand the current Asian Paints joint venture to also create a second 50-50 joint venture with Asian Paints. The current joint venture will expand its scope to serve India's industrial liquid, marine and consumer packaging coatings markets. The new venture will serve the protective, industrial powder, industrial containers and light industrial coatings markets. These transactions are subject to Indian regulatory approvals and are expected to be completed during 2012. PPG and Asian Paints have agreed that PPG will control the existing expanded joint venture and Asian Paints will control the new joint venture.

The packaging coatings business supplies coatings and inks to the manufacturers of aerosol, food and beverage containers.

Product performance, technology, cost effectiveness, quality and technical and customer service are major competitive factors in the industrial coatings businesses. The major global competitors of the Industrial Coatings reportable segment are Akzo Nobel N.V., BASF Corporation, the E.I. duPont de Nemours and Company, Valspar Corporation and Nippon Paint. The average number of persons employed by the Industrial Coatings reportable segment during 2011 was about 8,000.

The Architectural Coatings – EMEA business supplies a variety of coatings under a number of brands and purchased sundries to painting contractors and consumers in Europe, the Middle East and Africa. Architectural Coatings – EMEA products are sold through a combination of about 650 company-owned stores, home centers, paint dealers, and independent distributors and directly to customers. Price, product performance, quality, distribution and brand recognition are key competitive factors for this business. The major competitors of the Architectural Coatings – EMEA reportable segment are Akzo Nobel N.V. and Materis Paints. The average number of persons employed by the Architectural Coatings – EMEA reportable segment during 2011 was about 7,900.

Optical and Specialty Materials

PPG's Optical and Specialty Materials reportable segment is comprised of the optical products and silicas businesses. The primary Optical and Specialty Materials products are *Transitions*® lenses, optical lens materials and high performance sunlenses; amorphous precipitated silicas for tire, battery separator and other end-use markets; and *Teslin*® substrate used in such applications as radio frequency identification (RFID) tags and labels, e-passports, drivers' licenses and identification cards. *Transitions*® lenses are processed and distributed by PPG's 51%-owned joint venture with Essilor International. In the Optical and Specialty Materials businesses, product quality and performance, branding, distribution and technical service are the most critical competitive factors. The major global competitors of the Optical and Specialty Materials reportable segment are Vision-Ease Lens, Carl Zeiss AG, Corning, Inc., Hoya Corporation, Mitsui Chemicals, Inc., Rhodia, S.A., J.M. Huber and Evonik Industries, A.G. The average number of persons employed by the Optical and Specialty Materials reportable business segment during 2011 was about 2,800.

Commodity Chemicals

PPG is a producer and supplier of basic chemicals. The Commodity Chemicals reportable segment produces chlor-alkali and derivative products, including chlorine, caustic soda, vinyl chloride monomer, chlorinated solvents, calcium hypochlorite, ethylene dichloride, hydrochloric acid and phosgene derivatives. Most of these products are sold directly to manufacturing companies in the chemical processing, plastics, including polyvinyl chloride ("PVC"), paper, minerals, metals and water treatment industries. PPG competes with seven other major producers of chlor-alkali products, including The Dow Chemical Company, Formosa Plastics Corporation, U.S.A., Georgia Gulf Corporation, Occidental Chemical Corporation, Olin Corporation, Shintech, Inc and Westlake Chemical Corporation. Price, product availability, product quality and customer service are the key competitive factors. The average number of persons employed by the Commodity Chemicals reportable business segment during 2011 was about 2,000.

Glass

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

The bases for competition in the Glass businesses are price, quality, technology and customer service. The Company competes with four major producers of flat glass, including Asahi Glass Company, Cardinal Glass Industries, Guardian Industries and NSG Pilkington, and eight major producers of fiber glass throughout the world, including Owens Corning-Vetrotex, Jushi Group, Johns Manville Corporation, CPIC Fiberglass, AGY, NEG, 3B and Taishan Fiberglass. The average number of persons employed by the Glass reportable business segment during 2011 was about 3,200.

Raw Materials and Energy

The effective management of raw materials and energy is important to PPG's continued success. The Company's most significant raw materials are epoxy and other resins, titanium dioxide and other pigments, and solvents in the Coatings businesses; lenses, sand and soda ash in the Optical and Specialty Materials segment; brine and ethylene in the Commodity Chemicals segment; and sand, clay and soda ash in the Glass segment. Many raw material prices began to inflate during 2010, which continued through the majority of 2011, reflecting recovering economic demand and decreased supply stemming from capacity idled or closed during the recession. Also, adverse effects of supplier disruptions due to natural disasters placed additional pressure on some of our supply chains leading to higher prices.

Coatings raw materials include both organic, primarily petroleum based, and inorganic materials and generally comprise 70-to-80 percent of cost of goods sold in most coatings formulations and represent PPG's single largest production cost component. In 2011, overall coatings raw materials costs inflated by approximately 10-to-12 percent for the Company. The largest inflation impacts were from titanium dioxide pigments and certain propylene-based resins. During 2011, the incremental cost of coatings raw materials due to inflation was approximately $440 million. This compares to inflation of approximately $210 million in 2010 and a benefit of $150 million in 2009 reflecting a drop in overall commodity prices due to the recession.

Energy is a significant production cost in the Commodity Chemicals and Glass segments, and our primary energy cost is natural gas. PPG purchases 60-to-70 trillion British Thermal Units (BTUs) of natural gas each year. Inclusive of the impact of PPG's natural gas hedging activities, PPG's 2011 natural gas unit cost decreased 15 percent in the U.S. compared to 2010, reflecting higher natural gas supply stemming from the success of shale gas drilling. In our Commodity Chemicals business, the positive impact of the lower natural gas prices was partially offset by an increase in ethylene prices. During 2011, PPG's costs for ethylene increased substantially compared to 2010 driven by a combination of tight supply due to production outages and increased global demand, particularly in U.S. exports of ethylene derivative products.

Most of the raw materials and energy used in production are purchased from outside sources, and the Company has made, and plans to continue to make, supply arrangements to meet the planned operating requirements for the future. Supply of critical raw materials and energy is managed by establishing contracts, multiple sources, and identifying alternative materials or technology whenever possible. The Company is continuing its aggressive sourcing initiatives to support its continuous efforts to find the lowest raw material costs. These initiatives include reformulation of our products using both petroleum-derived and bio-based materials as part of a product renewal strategy, qualifying multiple and local sources of supply, including suppliers from Asia and other lower cost regions of the world. The Company also has undertaken a strategic initiative with multiple global suppliers to secure and enhance PPG's supply of titanium dioxide, as well as to add to the global supply of this raw material. PPG possesses intellectual property and expertise in the production and finishing of titanium dioxide pigment and we intend to leverage this and engage potential partners to develop innovative supply solutions through technical collaborations, joint ventures, licensing or other commercial initiatives.

We are subject to existing and evolving standards relating to the registration of chemicals that impact or could potentially impact the availability and viability of some of the raw materials we use in our production processes. Our ongoing global product stewardship efforts are directed at maintaining our compliance with these standards.

In December 2006, the European Union ("EU") member states adopted new comprehensive chemical management legislation known as "REACH" (Registration, Evaluation, and Authorization of Chemicals). REACH applies to all chemical substances manufactured or imported into the EU in quantities of one metric ton or more annually and will require the registration of approximately 30,000 chemical substances with the European Chemicals Agency. PPG met the requirements for pre-registration of such chemicals that ended on December 1, 2008. Additionally, REACH requires the registration of these substances, entailing the filing of extensive data on their potential risks to human health and the environment. Registration activities are occurring in three phases over an 11-year period, based on tonnage and level of concern. The first registration deadline was December 1, 2010. Subsequent phases end in 2013 and 2018. In the case of chemicals with a high level of concern, the regulation calls for progressive substitution unless no alternative can be found; in these cases, authorization of the chemicals will be required.

PPG established a dedicated organization to manage REACH implementation. We have continued to review our product portfolio, worked closely with our suppliers to assure their commitment to register substances in our key raw materials and started registration of substances that PPG manufactures or imports as raw materials. We will continue to work with our suppliers to understand the future availability and viability of the raw materials we use in our production processes.

Compliance with the REACH legislation will result in increased costs related to the registration process, product testing and reformulation, risk characterization and participation in Substance Information Exchange Forums ("SIEFs") required to coordinate registration dossier preparation. PPG identified 10 substances that required

registration in 2010 and engaged with other key companies through SIEFs to develop the required registration dossiers. Actual costs for substance registration were not significant in 2010 or 2011, due primarily to fewer substances requiring registration than originally anticipated. The costs for 2013 and 2018 registrations and potential additional future testing in support of 2010 registrations are currently unclear; however, our current estimate of the total spend during 2012-2018 is in the range of $10 million to $25 million. We anticipate that some current raw materials and products will be subject to the REACH authorization process and believe that we will be able to demonstrate adequate risk management for the use and application of the majority of such substances.

Changes to chemical control regulations have been proposed or implemented in many countries beyond the EU, including China, Canada, the United States, and Korea. Because implementation of many of these programs have not been finalized, the financial impact can not be estimated at this time. We anticipate chemical control regulations will continue to increase globally, and we have implemented programs to track and comply with the regulations.

Research and Development

Technology innovation has been a hallmark of PPG's success throughout its history. Research and development costs, including depreciation of research facilities, were $445 million, $408 million and $403 million during 2011, 2010 and 2009, respectively. These costs totaled approximately 3% of sales in each year of the period from 2009 to 2011. PPG owns and operates several facilities to conduct research and development relating to new and improved products and processes. Additional process and product research and development work is also undertaken at many of the Company's manufacturing plants. As part of our ongoing efforts to manage our formulations and raw material costs effectively, we operate a global competitive sourcing laboratory in China. We have obtained government funding of a small portion of the Company's research efforts, and we will continue to pursue government funding. Because of the Company's broad array of products and customers, PPG is not materially dependent upon any single technology platform.

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

Patents

PPG considers patent protection to be important. The Company's reportable business segments are not materially dependent upon any single patent or group of related patents. PPG earned $55 million in 2011, $58 million in 2010 and $45 million in 2009 from royalties and the sale of technical know-how.

Backlog

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

Non-U.S. Operations

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

Our sales generated by products sold in the developed and emerging regions of the world over the past three years are summarized below:

(millions)	*Sales*		
	2011	*2010*	*2009*
United States, Canada, Western Europe	$10,844	$ 9,837	$ 9,252
Latin America, Eastern Europe, Middle East, Africa, Asia Pacific	4,041	3,586	2,987
Total	$14,885	$13,423	$12,239

Seasonality

PPG's earnings are typically greater in the second and third quarters and cash flow from operations is greatest in the fourth quarter due to end-use market seasonality, primarily in PPG's architectural coatings businesses. Demand for PPG's architectural coatings products is typically strongest in the second and third quarters due to higher home improvement, maintenance and construction activity during the spring and summer months in North America and Europe. This higher activity level results in higher outstanding receivables that are collected in the fourth quarter generating higher fourth quarter cash flow.

Employee Relations

The average number of persons employed worldwide by PPG at December 31, 2011 was 38,400. The Company has numerous collective bargaining agreements throughout the world. While we have experienced occasional work stoppages as a result of the collective bargaining process and may experience some work stoppages in the future, we believe we will be able to negotiate all labor agreements on satisfactory terms. To date, these work stoppages have not had a significant impact on PPG's operating results. Overall, the Company believes it has good relationships with its employees.

Environmental Matters

PPG is subject to existing and evolving standards relating to protection of the environment. Capital

expenditures for environmental control projects were $15 million, $16 million and $27 million in 2011, 2010 and 2009, respectively. It is expected that expenditures for such projects in 2012 will be in the range of $15 – $20 million. Although future capital expenditures are difficult to estimate accurately because of constantly changing regulatory standards and policies, it can be anticipated that environmental control standards will become increasingly stringent and the cost of compliance will increase.

In March of 2011, the United States Environmental Protection Agency ("USEPA") proposed amendments to the national emission standards for hazardous air pollutants for mercury emissions from mercury cell chlor-alkali plants known as Mercury Maximum Achievable Control Technology ("Mercury MACT"). The USEPA is projecting that it will finalize this rule in September 2012. PPG currently operates one remaining 200 ton-per-day mercury cell production unit at its Natrium, W.Va. facility. This unit constitutes approximately 4% of PPG's total chlor-alkali production capacity. PPG has made an application to the Ohio River Valley Water Sanitation Commission ("ORSANCO") for a variance from the mixing zone prohibition in Section VI G of the Pollution Control Standards, which are to become effective in October 2013. PPG has requested continued use of a mixing zone for mercury through the life of the current permit, which is valid through January 2014 and for any subsequent permit. There are on-going discussions with ORSANCO, and PPG expects a decision by the full commission in 2012. Alternative strategies are under consideration to enable the Natrium, W.Va. facility to operate the mercury production unit in compliance with the new standards if this request for a variance is denied.

PPG is negotiating with various government agencies concerning 103 current and former manufacturing sites and offsite waste disposal locations, including 20 sites on the National Priority List. While PPG is not generally a major contributor of wastes to these offsite waste disposal locations, each potentially responsible party may face governmental agency assertions of joint and several liability. Generally, however, a final allocation of costs is made based on relative contributions of wastes to the site. There is a wide range of cost estimates for cleanup of these sites, due largely to uncertainties as to the nature and extent of their condition and the methods that may have to be employed for their remediation. The Company has established reserves for onsite and offsite remediation of those sites where it is probable that a liability has been incurred and the amount can be reasonably estimated. As of December 31, 2011 and 2010, PPG had reserves for estimated environmental remediation costs totaling $226 million and $272 million, respectively, of which $59 million and $83 million, respectively, were classified as current liabilities. Pretax charges against income for environmental remediation costs in 2011, 2010 and 2009 totaled $16 million, $21 million and $11 million, respectively. Cash outlays related to such environmental remediation aggregated $59 million, $34 million and $24 million in 2011, 2010 and 2009, respectively. The impact of foreign currency translation decreased the liability by $3 million in 2011 and decreased the liability by $2 million in 2010. Environmental remediation of a former chromium manufacturing plant site and associated sites in Jersey City, N.J. (which we refer to as "New Jersey Chrome") represents the major part of our existing reserves. Included in the amounts mentioned above were $129 million and $168 million in reserves at December 31, 2011 and 2010, respectively, associated with all New Jersey chromium sites.

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

The Company's continuing efforts to analyze and assess the environmental issues associated with New Jersey Chrome and the Calcasieu River Estuary located near our Lake Charles, La. chlor-alkali plant resulted in a pre-tax charge of $173 million in the third quarter of 2006 for the estimated costs of remediating these sites. These charges for estimated environmental remediation costs in 2006 were significantly higher than PPG's historical range. Excluding 2006, pre-tax charges against income for environmental remediation have ranged between $10 million and $35 million per year for the past 15 years. Changes in 2012 may again be above this historical range as information is being generated from the continuing remedial investigation activities related to New Jersey Chrome that will be incorporated into a final remedial action work plan to be submitted in mid-2012, which may result in an increase the existing reserve. In addition to the amounts currently reserved, we may be subject to loss contingencies related to environmental matters estimated to be as much as $200 million to $400 million. Such unreserved losses are reasonably possible but are not currently considered to be probable of occurrence. This range of reasonably possible unreserved losses relate to environmental matters at a number of sites; however, about 50 percent of this range relates to additional costs at New Jersey Chrome, about 25 percent relates to the Calcasieu River Estuary and three operating PPG plant sites in the Company's chemicals businesses, and the remaining 25 percent relates to a number of other sites, including legacy glass manufacturing sites. The loss contingencies related to these sites include significant unresolved issues such as the nature and extent of contamination at these sites and the methods that may have to be employed to remediate them.

In management's opinion, the Company operates in an environmentally sound manner, is well positioned,

relative to environmental matters, within the industries in which it operates and the outcome of these environmental contingencies will not have a material adverse effect on PPG's financial position or liquidity; however, any such outcome may be material to the results of operations of any particular period in which costs, if any, are recognized. See Note 15, "Commitments and Contingent Liabilities," under Item 8 of this Form 10-K for additional information related to environmental matters and our accrued liability for estimated environmental remediation costs.

Public and governmental concerns related to climate change continue to grow, leading to efforts to limit the greenhouse gas ("GHG") emissions believed to be responsible. These concerns were reflected in the 2005 framework for GHG reduction under the Kyoto Protocol to the United Nations Framework Convention on Climate Change ("UNFCCC"). The Kyoto Protocol was adopted by many countries where PPG operates, including the European Union and Canada, though not by the U.S. The European Union implemented a cap and trade approach with a mandatory emissions trading scheme for GHGs. The recent 2011 UNFCC Climate Change Conference in Durban, South Africa resulted in the first agreement that includes both developed and developing (China and India) countries. The parties, including the U.S., Britain, China and India agreed to adopt, by 2015, a universal legal agreement to cut carbon emissions. While PPG has operations in many of these countries, a substantial portion of PPG's GHG emissions are generated by locations in the U.S., where considerable legislative and regulatory activity has been taking place.

As a result of a U.S. Supreme Court ruling in April 2007 declaring that GHGs are air pollutants covered by the Clean Air Act, USEPA proposed and later finalized in December 2009 an Endangerment Finding that GHG emissions "threaten public health and welfare of current and future generations". Based on the Endangerment Finding, the USEPA proposed then finalized new, "tailored" thresholds for GHG emissions that define when Clean Air Act New Source Review and title V operating permit programs would be required for new or existing industrial facilities. These rules impose new permit requirements on PPG facilities emitting more than 100,000 tons of GHGs per year as well as on new equipment installations that will emit more than 75,000 tons of GHGs per year. The U.S. federal government has committed to a 17% economy-wide emission reduction target below 2005 levels by 2020. The potential impact on PPG of the implementation of these requirements will not be known until related guidelines are proposed and finalized.

With the enactment of USEPA's own GHG reporting, verification, and permitting regulations, PPG made the decision to withdraw from the U.S.-based Climate Registry reporting program. With formal regulations in place, PPG no longer saw sufficient value in continuing to belong to this voluntary program. Also in 2010, USEPA announced its decision to disband its own voluntary Climate Leaders program, of which PPG had been a member. PPG has, and will continue to, annually report our global GHG emissions to the voluntary Carbon Disclosure project.

Energy prices and availability of supply continue to be a concern for major energy users. Since PPG's GHG emissions arise principally from combustion of fossil fuels, PPG has for some time recognized the desirability of reducing energy consumption and GHG generation. In 2007, PPG announced corporate targets, namely (i) a reduction in energy intensity by 25% from 2006 to 2016 and (ii) a 10% absolute reduction in GHG emissions from 2006 to 2011. Effective energy management practices led to a four percent decline in PPG's GHG emissions. While PPG fell short of its goal of reducing GHG emissions by 10 percent, the Company continues to work toward this long-term goal. PPG participates in the U.S. Department of Energy ("DOE") Save Energy Now LEADER Program reinforcing the company's voluntary efforts to significantly reduce its industrial energy intensity. In September 2011, the DOE changed its approach to energy efficiency in the industrial sector and initiated the Better Buildings, Better Plants program. PPG is currently participating in this new program, which sets energy savings targets and provides a suite of educational, training, and technical resources to help meet those targets. Recognizing the continuing importance of this matter, PPG has a senior management group with a mandate to guide the Company's progress in this area.

In March of 2011 the USEPA issued Clean Air Act emissions standards for large and small boilers and incinerators that burn solid waste known as the Boiler Maximum Achievable Control Technology ("Boiler MACT") regulations. These regulations are aimed at controlling emissions of air toxics. As a result of numerous petitions from both industry and environmental groups, USEPA was required to reconsider their March 2011 final rule. On December 23, 2011 the USEPA's Proposed Rule reconsidering the Boiler MACT regulations was published in the Federal Register. USEPA has indicated its intent to issue the final regulations in early 2012 requiring that covered facilities achieve compliance within three years. There are 11 PPG facilities that will likely be subject to these regulations, with the 115 megawatt coal fired power plant at PPG's Natrium, W.Va. facility being the most significantly impacted. PPG continues to evaluate alternative paths of either retrofitting the Natrium boilers to burn natural gas or to engineer and install pollution control equipment. The estimated potential cost for these capital improvements at our Natrium facility could be in the $15-$20 million range. The cost impact for the other affected facilities is not currently known, but is expected to be of a lesser magnitude.

PPG's public disclosure on energy security and climate change can be viewed in our Sustainability Report

www.ppg.com/sustainability or at the Carbon Disclosure Project *www.cdproject.net*.

Available Information

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

Item 1A. Risk Factors

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

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

Our financial results are significantly affected by the cost of raw materials and energy, including natural gas. Energy is a significant production cost in the Commodity Chemicals and Glass segments, and our primary energy cost is natural gas. Each one-dollar change in our unit cost of natural gas per million British Thermal Units has a direct impact of approximately $60 million to $70 million on our annual operating costs. Inclusive of the impact of PPG's natural gas hedging activities, PPG's 2011 natural gas unit cost decreased 15 percent in the U.S. compared to 2010, reflecting higher natural gas supply stemming from the success of shale gas drilling. Also, in our Commodity Chemicals segments, ethylene is a key raw material. During 2011, PPG's costs for ethylene increased substantially compared to 2010 driven by a combination of tight supplies due to production outages and increased global demand, particularly in U.S. exports of ethylene derivative products.

Coatings raw materials both organic, primarily petroleum based, and inorganic, generally comprise between 70-to-80 percent of coatings cost of goods sold in most coatings formulations and represent PPG's single largest production cost component. In 2011, overall coatings raw material costs inflated by approximately 10-to-12 percent for the Company. The largest inflation impacts were from titanium dioxide pigments and certain propylene-based resins. During 2011, the incremental cost of coatings raw materials due to inflation was approximately $440 million. This compares to coatings raw material inflation of approximately $210 million in 2010 and a benefit of $150 million in 2009 from lower coatings raw material prices reflecting a drop in overall commodity prices due to the recession.

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

Most of the raw materials and energy used in production are purchased from outside sources, and the Company has made, and plans to continue to make, supply arrangements to meet the planned operating requirements for the future. Supply of critical raw materials and energy is managed by establishing contracts, multiple sources, and identifying alternative materials or technology whenever possible. The Company is continuing its aggressive sourcing initiatives to support its continuous efforts to find the lowest raw material costs. These initiatives include reformulation of our products using both petroleum-derived and bio-based materials as part of a product renewal strategy, qualifying multiple and local sources of supply, including suppliers from Asia and other lower cost regions of the world, and strategic initiatives with multiple global suppliers to secure and enhance PPG's supply of titanium dioxide and other materials.

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

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

During 2008, worldwide demand for many of our products declined significantly as the impact of the recession spread globally. Many global industrial end-use markets remained depressed for most of 2009. During 2010, the global economy began to mend; however, the pace of recovery was uneven. Beginning in 2011, overall activity levels in most major global economies and in most end-use markets exhibited year-over-year growth. The North American economy experienced early overall improving industrial and chemical activity, particularly solid improvement in automotive OEM production. However, as the year progressed, factors such as unemployment rates, impasses on government policy and concerns over the global economy limited the rate of economic growth in this region. The European economy

underperformed most other major economies. Economic activity in this region, which was growing slowly, began to fade, and demand in many end-use markets served by PPG turned negative late in the year. In many emerging economies, such as those in Asia and Latin America, economic activity surpassed the pre-recession pace due, in part, to continued industrial and infrastructure growth in these regions. However, inflation concerns and government fiscal policies in these regions dampened demand. Entering 2012, our expectation is for the pace of economic activity to continue to vary by region and by end-use market. In North America, most major sectors of the economy are expected to strengthen as the recovery continues to gradually move the economy back to pre-recession levels. The European economy is expected to mildly contract in early 2012 despite growth in exported products, but there is downside risk the economic conditions in Europe could be even weaker in 2012. The growth rate in emerging regions is expected to continue to moderate and be more erratic but still outpace that of the developed regions. Based on our broad geographic footprint and extensive end-use market exposure, we expect to see overall higher demand in 2012 versus 2011, however, the extent of variations in the global economy and their impacts on various end-use markets that we serve is not known. PPG provides products and services to a variety of end-use markets and in many geographies. While this broad end-use market exposure and expanded geographic presence lessens the significance of any significant or rapid decrease in activity levels, nonetheless, lower demand levels may result in lower sales which would result in reduced earnings and cash flows.

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

Environmental laws and regulations control, among other things, the discharge of pollutants into the air and water, the handling, use, treatment, storage and clean-up of hazardous and non-hazardous wastes, the investigation and remediation of soil and groundwater affected by hazardous substances, and regulate various health and safety matters. The environmental laws and regulations we are subject to, including those in the United States as well as in other countries in which we operate, impose liability for the costs of, and damages resulting from, cleaning up current sites, past spills, disposals and other releases of hazardous substances. Violations of these laws and regulations can also result in fines and penalties. Future environmental laws and regulations may require substantial capital expenditures or may require or cause us to modify or curtail our operations, which may have a material adverse impact on our business, financial condition and results of operations.

As described in Note 15, "Commitments and Contingent Liabilities," under Item 8 of this Form 10-K, we are currently undertaking environmental remediation activities at a number of our facilities and properties, the cost of which is substantial. We have accrued a $226 million liability for estimated environmental remediation costs at December 31, 2011. Our assessment of the potential impact of these environmental contingencies is subject to considerable uncertainty due to the complex, ongoing and evolving process of investigation and remediation, if necessary, of such environmental contingencies, and the potential for technological and regulatory developments. As such, in addition to the amounts currently reserved, we may be subject to loss contingencies related to environmental matters estimated to be as much as $200 million to $400 million. Such unreserved losses are reasonably possible but are not currently considered to be probable of occurrence.

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

PPG is involved in a number of lawsuits and claims, both actual and potential in which substantial monetary damages are sought. Those lawsuits and claims relate to contract, patent, environmental, product liability, anti-trust and other matters arising out of the conduct of PPG's current and past business activities. Any such claims, whether with or without merit, could be time consuming, expensive to defend and could divert management's attention and resources. We maintain insurance against some, but not all, of these potential claims, and the levels of insurance we do maintain may not be adequate to fully cover any and all losses. We believe that, in the aggregate, the outcome of all current lawsuits and claims involving PPG, including asbestos-related claims in the event the settlement described in Note 15, "Commitments and Contingent Liabilities" under Item 8 of this Form 10-K does not become effective, will not have a material effect on PPG's consolidated financial position or liquidity; however, such outcome may be material to the results of operations of any particular period in which costs, if any, are recognized. Nonetheless, the results of any future litigation or claims are inherently unpredictable, but such outcomes could have a material adverse effect on our results of operations, cash flow or financial condition.

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

Most of our potential exposure relates to allegations by plaintiffs that PPG should be liable for injuries involving asbestos containing thermal insulation products manufactured by Pittsburgh Corning Corporation ("PC"). PPG is a 50% shareholder of PC. Although we have entered into a settlement arrangement with several parties concerning these asbestos claims as discussed in Note 15, "Commitments and Contingent Liabilities," under Item 8 of this Form 10-K, the arrangement remains subject to court proceedings and, if not approved, the outcome could be material to the results of operations of any particular period.

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

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

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

Our international operations expose us to additional risks and uncertainties that could affect our financial results.

PPG has a significant investment in non-U.S. operations. This broad geographic footprint serves to lessen the significance of economic impacts occurring in any one region. Notwithstanding the benefits of geographic diversification, our ability to achieve and maintain profitable growth in international markets is subject to risks related to the differing legal, political, social and regulatory requirements and economic conditions of many countries. As a result of our expansion outside the U.S., we are subject to certain inherent risks, including political and economic uncertainty, inflation rates, exchange rates, trade protection measures, local labor conditions and laws, restrictions on foreign investments and repatriation of earnings, and weak intellectual property protection. Our percentage of sales generated in 2011 by products sold outside the U.S. was approximately 58%.

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

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

As a producer of commodity chemicals, we manufacture and transport certain materials that are inherently hazardous due to their toxic nature.

We have significant experience in handling these materials and take precautions to handle and transport them in a safe manner. However, these materials, if mishandled or released into the environment, could cause substantial property damage or personal injuries resulting in significant legal claims against us. In addition, evolving regulations concerning the security of chemical production facilities and the transportation of hazardous chemicals could result in increased future capital or operating costs.

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

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

We may have difficulty integrating acquired businesses.

In the past 15 years, PPG has completed over 50 acquisitions to further the growth of the Company, and we will likely acquire additional businesses and enter into additional joint ventures in the future as part of our growth strategy. Making acquisitions and forming joint ventures involve risks, including:

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

- unexpected losses of customers or suppliers of the acquired business;
- difficulty in conforming the acquired business' standards, processes, procedures and controls with our operations; and
- difficulties in retaining key employees of the acquired businesses.

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

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

The Company's corporate headquarters is located in Pittsburgh, Pa. The Company's manufacturing facilities, sales offices, research and development centers and distribution centers are located throughout the world. The Company operates 128 manufacturing facilities in 45 countries. The Company's principal manufacturing and distribution facilities are as follows:

Performance Coatings:	Clayton, Australia; Delaware, Ohio; Dover, Del.; Huntsville, Ala.; Kunshan, China; Little Rock, Ark.; Milan, Italy; Mojave, Calif.; Stowmarket, United Kingdom; Sylmar, Calif.; about 400 company-owned stores in the United States and about 40 company-owned stores in Australia
Industrial Coatings:	Cieszyn, Poland; Cleveland, Ohio; Oak Creek, Wis.; Sumaré, Brazil; Tianjin, China; Quattordio, Italy; San Juan del Rio, Mexico; Zhangjiagang, China and Busan, South Korea
Architectural Coatings—EMEA:	Soborg, Denmark; Moreuil, France; Budapest, Hungary; Amsterdam, Netherlands; Uithorn, Netherlands; Wroclaw, Poland; Birstall, the United Kingdom and about 650 company-owned stores, including 212 stores in France and 193 stores in the United Kingdom
Optical and Specialty Materials:	Barberton, Ohio; Bangkok, Thailand; Lake Charles, La. and Manila, Philippines
Commodity Chemicals:	Lake Charles, La. and Natrium, W. Va.
Glass:	Carlisle, Pa.; Hoogezand, Netherlands; Shelby, N.C. and Wichita Falls, Texas

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

United States:	34 manufacturing facilities in 20 states.
Other Americas:	10 manufacturing facilities in 6 countries.
EMEA:	55 manufacturing facilities in 27 countries.
Asia:	28 manufacturing facilities in 11 countries.

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

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

Item 3. Legal Proceedings

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

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

For over 30 years, PPG has been a defendant in lawsuits involving claims alleging personal injury from exposure to asbestos. For a description of asbestos litigation affecting the Company and the terms and status of the proposed asbestos settlement arrangement, see Note 15, "Commitments and Contingent Liabilities" under Item 8 of this Form 10-K.

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

PPG received a Consolidated Compliance Order and Notice of Proposed Penalty ("CO/NOPP") from the

Louisiana Department of Environmental Quality ("LDEQ") in February 2006 alleging violation of various requirements of its Lake Charles, La. facility's air permit based largely upon permit deviations self-reported by PPG. The CO/NOPP did not contain a proposed civil penalty. PPG filed a request for hearing and has engaged LDEQ in settlement discussions. Since 2006, PPG has held discussions with LDEQ to try to resolve the CO/NOPP. In April 2009, PPG offered to settle all of its self-reported air permit deviations through the first half of 2008 for a proposed penalty of $130,000. LDEQ responded to this settlement offer by asking PPG to make another offer that includes all self-reported air permit deviations through the end of 2009. PPG has increased its offer to settle this matter to $171,000. LDEQ has rejected this settlement offer and has asked PPG to consider increasing its offer.

PPG received a proposed Consent Order and Final Agreement ("COFA") from USEPA on May 11, 2011, which included a proposed penalty of $338,000 relating to the alleged exceedance of emission limits for dioxins and furans from the Energy Recovery Unit ("ERU") at our Circleville facility. The COFA alleges that PPG failed to meet dioxin and furan limits during a comprehensive performance test on the air pollution control equipment on the ERU conducted between August and September of 2009 until the ERU was temporarily shut down on September 17, 2009. In the COFA, USEPA also alleged that PPG failed to comply with its Start-up, Shutdown and Malfunction Plan (the "SSM Plan") during an unspecified period of time in 2009. The ERU resumed operations on or about October 14, 2009, and PPG believes that it has been operated in compliance with applicable limits since that time. It is PPG's position that the allegations in the COFA are not correct and that PPG did not violate any applicable legal requirements. On September 30, 2011, PPG and USEPA negotiated a settlement in order to resolve this matter which has been memorialized in a revised COFA. PPG paid to USEPA a civil penalty of $175,000 and revised the ERU's SSM Plan during the fourth quarter of 2011.

Executive Officers of the Company

Set forth below is information related to the Company's executive officers as of February 16, 2012.

Name	*Age*	*Title*
Charles E. Bunch (a)	62	Chairman of the Board and Chief Executive Officer since July 2005
J. Rich Alexander (b)	56	Executive Vice President since August 2010
Pierre-Marie De Leener (c)	54	Executive Vice President since August 2010
Glenn E. Bost II (d)	59	Senior Vice President and General Counsel since July 2010
David B. Navikas (e)	61	Senior Vice President, Finance and Chief Financial Officer since June 2011
Richard C. Elias (f)	58	Senior Vice President, Optical and Specialty Materials since July 2008
Michael H. McGarry (g)	53	Senior Vice President, Commodity Chemicals since July 2008
Cynthia A. Niekamp (h)	52	Senior Vice President, Automotive Coatings since August 2010
Viktoras R. Sekmakas (i)	51	Senior Vice President, Industrial Coatings since August 2010 and President, PPG Europe since September 2011

(a) Mr. Bunch became President and Chief Executive Officer on March 31, 2005 and became Chairman of the Board July 1, 2005.

(b) Mr. Alexander is responsible for leading the Architectural Coatings – EMEA (Europe, Middle East and Africa) and Glass segments, the Architectural Coatings – Americas and Asia Pacific business, Corporate Marketing and Purchasing and Distribution. Mr. Alexander held the position of Executive Vice President, Performance Coatings from August 2010 until August 2011. Mr. Alexander held the position of Senior Vice President, Performance Coatings from May 2005 to August 2010 and held the position of Vice President, Industrial Coatings from July 2002 through April 2005.

(c) Mr. De Leener is responsible for leading the refinish, aerospace and protective and marine coatings businesses and Corporate Information Technology. Mr. De Leener held the position of Executive Vice President, Architectural Coatings – EMEA from August 2010 until August 2011 and President, PPG Europe from July 2008 until August 2011. Mr. De Leener was appointed to Senior Vice President, Architectural Coatings – EMEA upon PPG's acquisition of SigmaKalon Group on January 2, 2008. He previously served as Chief Executive Officer of SigmaKalon Group from 1999 until January 2008.

(d) Mr. Bost held the position of Vice President and Associate General Counsel from July 2006 through June 2010. Previously, Mr. Bost served as Associate General Counsel, Operations from July 2005 through June 2006 and Assistant General Counsel, Operations from September 2000 through June 2005.

(e) Mr. Navikas held the position of Vice President and Controller from March 2000 until June 2011.

(f) Mr. Elias held the position of Vice President, Optical Products from April 2000 until June 2008.

(g) Mr. McGarry held the positions of Vice President, Coatings, Europe and Managing Director, PPG Europe from July 2006 through June 2008; and the position of Vice President, Chlor-Alkali and Derivatives from March 2004 through June 2006. Mr. McGarry also has responsibility for Corporate Environmental Health and Safety and Corporate Quality.

(h) Ms. Niekamp was appointed Vice President, Automotive Coatings in January 2009 when she joined PPG from BorgWarner, Inc. She previously served as President of BorgWarner's TorqTransfer Systems business from 2004 until 2008.

(i) Mr. Sekmakas held the position of President, PPG Asia Pacific from March 2009 until August 2011. In addition to serving as President, Asia/Pacific, Mr. Sekmakas held the position of Vice President Industrial Coatings from March 2010 through July 2010. He was appointed President, Asia Pacific in March 2009. Previously, Mr. Sekmakas, served as Vice President, Asia Pacific from July 2006 through February 2009, Managing Director, Coatings and General Manager Industrial Coatings – Asia from March 2005 through June 2006 and General Manager Asia Pacific Industrial Coatings from April 2001 through February 2005.

Part II

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

The information required by Item 5 regarding market information, including stock exchange listings and quarterly stock market prices, dividends and holders of common stock is included in Exhibit 13.1 filed with this Form 10-K and is incorporated herein by reference. This information is also included in the PPG Shareholder Information on page 87 of the Annual Report to shareholders.

Directors who are not also officers of the Company receive common stock equivalents pursuant to the PPG Industries, Inc., Deferred Compensation Plan for Directors ("PPG Deferred Compensation Plan for Directors"). Common stock equivalents are hypothetical shares of common stock having a value on any given date equal to the value of a share of common stock. Common stock equivalents earn dividend equivalents that are converted into additional common stock equivalents but carry no voting rights or other rights afforded to a holder of common stock. The common stock equivalents credited to directors under this plan are exempt from registration under Section 4(2) of the Securities Act of 1933 as private offerings made only to directors of the Company in accordance with the provisions of the plan.

Under the PPG Deferred Compensation Plan for Directors, each director may elect to defer the receipt of all or any portion of the compensation paid to such director for serving as a PPG director. All deferred payments are held in the form of common stock equivalents. Payments out of the deferred accounts are made in the form of common stock of the Company (and cash as to any fractional common stock equivalent). The directors, as a group, were credited with 20,575; 15,647; and 22,103 common stock equivalents in 2011, 2010 and 2009, respectively, under this plan. The values of the common stock equivalents, when credited, ranged from $68.68 to $94.64 in 2011, $60.36 to $80.90 in 2010 and $34.34 to $58.51 in 2009.

Issuer Purchases of Equity Securities

The following table summarizes the Company's stock repurchase activity for the three months ended December 31, 2011:

Month	*Total Number of Shares Purchased*	*Average Price Paid per Share*	*Total Number of Shares Purchased as Part of Publicly Announced Programs*[1]	*Maximum Number of Shares that May Yet Be Purchased Under the Programs*
October 2011				
Repurchase programs	935,733	$80.36	935,733	10,773,559
Other transactions[2]	—	—		
November 2011				
Repurchase programs	881,300	85.10	881,300	9,892,259
Other transactions[2]	2,011	88.11		
December 2011				
Repurchase programs	903,565	83.01	903,565	8,988,694
Other transactions[2]	—	—		
Total quarter ended December 31, 2011				
Repurchase programs	2,720,598	$82.77	2,720,598	8,988,694
Other transactions[2]	2,011	88.11		

(1) These shares were repurchased under a 10 million share repurchase program approved by PPG's Board of Directors in October 2010 as well as an additional 10 million share repurchase program approved in October 2011. The October 2010 repurchase program was concluded in November 2011. The October 2011 repurchase program has no expiration date.

(2) Includes shares withheld or certified to in satisfaction of the exercise price and/or tax withholding obligation by holders of employee stock options who exercised options granted under the Company's equity compensation plans.

Item 6. Selected Financial Data

The information required by Item 6 regarding the selected financial data for the five years ended December 31, 2011 is included in Exhibit 13.2 filed with this Form 10-K and is incorporated herein by reference. This information is also reported in the Five-Year Digest on page 86 of the Annual Report to shareholders.

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

Performance in 2011 compared with 2010

Performance Overview

Net sales in 2011 totaled $14,885 million compared to $13,423 million in 2010, an increase of 11 percent. Higher volumes contributed just over 2 percent and higher selling prices increased sales by 5 percent. The remainder of the sales increase was due to the impact of foreign currency translation and acquisitions. The higher sales volumes were achieved in all major geographic regions, while four reportable segments had increased volume levels and the other two had level year-over-year volumes.

Increased demand was driven by stronger global industrial production activity, which aided many of our businesses. The global industrial recovery continued in 2011 with solid growth in emerging regions and North America and with modest improvement in Europe despite a slight decline in volume in the second half of 2011 due to reduced end-use market demand for fiber glass and automotive refinish based on softness in the region. Growth rates in Asia in 2011 were reduced by the shrinking level of marine original-equipment new ship builds. Growth was impacted early in the year due to the effects of the Japanese earthquake and tsunami and was also tempered late in the year by the negative sales impact stemming from the Thailand floods, particularly in optical products. North American growth was impacted by unscheduled production outages in the Commodity Chemicals segment earlier in 2011 as well as decreased chlorine industry demand in the fourth quarter. Activity in construction markets in the developed regions of the world remained at low levels and has not demonstrated any consistent improvement. Our volume growth for 2011 versus the prior year growth which benefitted from increasing demand as the global industrial economy began to recover from the recession. Also, volumes were flat in the fourth quarter of 2011 as customers curtailed their inventory and were cautious with their order patterns, reflecting economic uncertainty. The improved selling prices in 2011 were achieved in every reporting segment, led by Commodity Chemicals and each of the three coatings segments. The Commodity Chemicals segment achieved pricing gains due to continued strong demand and tightening supply of caustic soda. In our coatings segments, prices were raised in response to persistent raw material cost inflation. The higher coatings selling prices significantly, but did not fully, offset the impact of raw material inflation rates that began to flatten in the fourth quarter. The favorable currency impact was primarily driven by strengthening European, Asian and Latin American currencies against the U.S. dollar compared to 2010, despite a decline in the value of the Euro in the second half of 2011.

Cost of sales, exclusive of depreciation and amortization, increased by $867 million in 2011 to $9,081 million compared to $8,214 million in 2010. About fifty-five percent of the increase was driven by inflation, particularly increases in raw material costs, primarily in our coatings businesses. Manufacturing costs were again positive in 2011. Additionally, about 20 percent of the increase in cost of sales was due to sales growth from volume and acquisitions. The effect of foreign currency accounts for about 25 percent of the increase in cost of sales for the year. Cost of sales as a percentage of sales was 61.0 percent in 2011 compared to 61.2 percent in 2010. This improvement reflects a combination of slightly higher margins on the sales volume growth in 2011 due to improved product mix and the benefit of selling price increases, particularly in Commodity Chemicals, net of the impact of inflation on cost of sales. For the coatings businesses, higher pricing significantly offset inflation, as raw material costs escalated throughout 2011. However, the coatings businesses did not fully offset raw material cost inflation with higher pricing in 2011, and additional pricing actions are underway in 2012 in several businesses to further counter inflation absorbed in 2011. For the Company in total, inflation was more than offset by higher pricing aided by Commodity Chemicals.

Selling, general and administrative expenses increased by $255 million to $3,234 million in 2011 compared to $2,979 million in 2010. The effects of foreign currency, inflation, and growth in costs to support the increased sales volumes and acquisitions were approximately equal. Selling, general and administrative costs as a percentage of sales were 21.7 percent in 2011, down from 22.2 percent in 2010 reflecting the benefit of our continuing effort to aggressively manage our cost growth as our sales volume increases.

Interest expense increased $21 million to $210 million in 2011 from $189 million in 2010. This increase was driven by the Company's $1 billion debt issuance in November of 2010 partially offset by an early repayment of $400 million in term loans in June 2011. Interest income increased $8 million to $42 million in 2011 from $34 million in 2010 due to higher average short term investment balances in 2011 compared to 2010.

Other charges decreased $11 million to $73 million in 2011 from $84 million in 2010 due principally to the absence of a $6 million antitrust litigation settlement charge which occurred in 2010 and lower environmental remediation expense in 2011 of $5 million.

The effective tax rate on pretax earnings in 2011 was approximately 24 percent compared to approximately 32 percent in 2010. The 2011 rate includes a benefit of $12 million resulting from a favorable tax audit settlement. The 2011 rate also includes the impact of the non-taxable bargain purchase gain resulting from the Equa-Chlor acquisition. The effective rate was 25 percent on the remaining pretax earnings in 2011.

The 2010 tax rate includes expense of $85 million resulting from the reduction of our previously provided deferred tax asset related to our liability for retiree medical costs. The deferred tax asset needed to be reduced because the healthcare legislation enacted in March 2010 included a provision that reduced the amount of retiree medical costs that will be deductible after December 31, 2012. The 2010 rate also included a $5 million benefit as a result of enacted changes in statutory tax rates outside the U.S. The effective rate was 26 percent on the remaining pretax earnings in 2010. The decrease in the tax rate on the remaining pretax earnings in 2011 is mainly the result of tax planning initiatives in the fourth quarter, the benefit of which are expected to continue in 2012.

Net income (attributable to PPG) and earnings per share – assuming dilution (attributable to PPG) for 2011 and 2010 are summarized below:

(Millions, except per share amounts)		
Year ended December 31, 2011	*Net Income*	
	$	*EPS*
Net income (attributable to PPG)	$1,095	$6.87

(Millions, except per share amounts)		
Year ended December 31, 2010	*Net Income*	
	$	*EPS*
Net income (attributable to PPG)	$ 769	$4.63
Net income (attributable to PPG) includes:		
Charges related to:		
Charge related to change in U.S. tax law	$ 85	$0.51

Average shares used to calculate earnings per share – assuming dilution were 157.3 million in 2011 and 164.5 million in 2010. The reduction is the result of share buyback activity in 2011.

Results of Reportable Business Segments

	Net sales		*Segment income*	
(Millions)	**2011**	**2010**	**2011**	**2010**
Performance Coatings	$4,626	$4,281	$673	$661
Industrial Coatings	4,158	3,708	438	378
Architectural Coatings –EMEA	2,104	1,874	123	113
Optical and Specialty Materials	1,204	1,141	326	307
Commodity Chemicals	1,732	1,434	370	189
Glass	1,061	985	97	74

Performance Coatings sales increased $345 million, or 8 percent, to $4,626 million in 2011. The sales increase was comprised of 5 percent due to price and 3 percent due to currency. Volumes for the segment were slightly favorable as volume increases in automotive refinish and aerospace were offset by low-single digit percentage volume declines in the protective and marine coatings and the architectural-Americas and Asia Pacific coatings businesses. Aerospace volumes continued to grow reflecting robust industry demand and PPG share gains. Automotive refinish volume increased, but growth was impacted by customer inventory management at year-end and weaker European activity levels in the second half of the year. Marine coatings volumes were down reflecting the decline in ship build activity and reduced global shipping during the last quarter of 2011. Improved protective coatings volumes in most regions, reflecting higher energy and infrastructure demand, partly offset the sales decline in marine. U.S. architectural coatings volumes were relatively flat. This included the severely negative volume trends in the U.S. early in 2011 due to weather conditions. Architectural volumes in the emerging regions declined low single digit percentages, including the negative impacts from lower demand near the end of 2011. Segment income in 2011 increased $12 million to $673 million. The impacts of improved volumes in automotive refinish and aerospace, manufacturing cost reductions and favorable currency impacts more than offset the negative impact of inflation net of price to result in the earnings improvement in 2011 compared to 2010. Pricing improved in all businesses reflecting our continuing efforts to address persistent input cost inflation.

Looking ahead to the first quarter 2012, lower marine activity levels are expected to continue. Strong aerospace demand is also expected to carry-forward. U.S. architectural volumes are anticipated to be flat-to-modestly improved, while emerging region architectural coatings markets are expected to remain challenging. In addition, we intend to implement higher U.S. architectural pricing based on previously announced price increases. Also, we anticipate less customer inventory management impacts in the segment. Currency impacts for the segment are expected to be negative based on current exchange rates in comparison with the first quarter 2011 exchange rates.

Industrial Coatings sales increased $450 million, or 12 percent compared to 2010, to $4,158 million. The sales increase was comprised of 5 percent due to volume, 4 percent due to price and 3 percent due to currency. Segment income improved 16 percent versus 2010 to $438 million in 2011. This increase was primarily due to increased volumes, lower manufacturing costs and currency, partially offset by the negative impact of inflation net of increases in selling prices and growth-driven increases in overhead costs. Segment volume grew by 5 percent on solid global industrial demand, with positive results in all three business units. Growth rates were robust in Asia as a result of continued growth in the region for all three businesses. The automotive OEM business delivered strong single-digit percentage growth reflecting high growth rates due to the automotive industry recovery with continued growth in North America, Asia Pacific and Latin America, and low growth in Europe where volumes were positive for the full year but weakened in the second half of the year. Global volumes in the industrial and packaging businesses were also favorable with Asia Pacific the strongest region delivering the majority of the growth, with somewhat lower or even declining volumes in Europe and North America due, in part, to late year customer destocking.

Looking ahead, we anticipate continued volume growth, including higher global auto production and strong general industrial activity. We also anticipate further price increases to restore margin lost to raw material inflation in 2011. Currency is expected to be negative to sales and earnings in the first quarter.

Architectural Coatings - EMEA sales increased $230 million, or 12 percent, to $2,104 million in 2011. The sales increase was comprised of 5 percent due to the positive impact of foreign currency translation, a 1 percent increase from acquired business and the remainder from an increase in selling prices and volume gains. Segment earnings were up $10 million compared to the prior year. Positive year-over-year earnings resulted from the earnings impact of volume growth and currency translation. Earnings in 2011 were reduced by a $9 million charge related to a U.K.-based retail do-it-yourself customer who filed for bankruptcy during the second quarter of 2011 and the adverse impact of inflation net of price increases.

Looking ahead, we anticipate soft demand to continue in Europe as we begin 2012. First quarter 2012 results will also include the results of the Dyrup acquisition, which closed in January 2012. We anticipate negative currency translation impacts given the segment's large Euro base of sales and earnings and the decline in the value of the Euro compared with the first quarter of 2011.

Optical and Specialty Materials sales for 2011 increased $63 million, or 6 percent, compared to 2010, to $1,204 million due to a 2 percent increase in volumes, pricing and the favorable impact of currency. Earnings grew by 6 percent to $326 million. Both optical products and silicas achieved sales growth coming from higher volumes, pricing and the impact of currency. The silicas business' volumes benefitted from the higher automotive OEM production resulting in increased demand for our products sold into the tire and battery markets. Segment results were tempered by the negative impact from the serious flooding in Thailand that disrupted optical customers and supply chains. The flooding also impacted production of PPG's optical materials, resulting in a declaration of force majeure during the fourth quarter. Segment earnings increased due to the factors increasing sales, which exceeded the impact of inflation, higher manufacturing costs and volume driven growth in overhead cost.

Looking ahead, we do not anticipate any notable 2012 residual impact from the Thailand flooding, as we approached normal operations at the end of December. We expect a normal seasonal uptick for optical in the first quarter and *Transitions*® growth to resume driven by market growth and share gain versus clear lenses in emerging regions. In addition, we are commercializing *Vantage*® our new *Transitions*® clear-to-polarized product in the first half of 2012, and we expect increased marketing costs associated with the launch of this new product. We also anticipate recent silica market trends to continue, aided by higher auto production and the tire industry focus on improving fuel efficiency through higher silica content in tires. Similar to other global PPG businesses, currency is expected to have a negative year-over-year impact in the first quarter.

Commodity Chemicals sales in 2011 versus the prior year increased $298 million, or 21 percent, to $1,732 million. Higher pricing and the impact of the EquaChlor acquisition were the key factors producing the improved sales and earnings. Segment earnings increased $181 million to $370 million in 2011. Capacity utilization was lower in the second, third and fourth quarters due to planned and unplanned production outages, as well as lower chlorine industry demand in the fourth quarter due to customer inventory management and lower chlorine derivative exports, resulting in higher manufacturing and maintenance expenses. Natural gas unit costs were lower year-over-year, but ethylene costs were higher. An increase in overhead costs was substantially offset by gains from asset sales, primarily related to the lease of Marcellus Shale natural gas drilling rights on PPG owned property, and lower environmental expense.

Looking forward, we anticipate higher chlorine demand in the first quarter of 2012 sequentially versus the fourth quarter of 2011 due to both seasonal factors and modest customer inventory restocking. This would result in improved capacity utilization compared to the fourth quarter, but still lower versus an exceptionally strong operating rate in the first quarter 2011. Caustic inventory is extremely low, and we intend to implement announced caustic price increases in the first quarter. Also, the current natural gas market price has declined below $3.00 per unit.

Glass sales increased $76 million, or 8 percent, compared to 2010 to $1,061 million in 2011. Sales increased 4 percent due to pricing, 2 percent due to volume growth with the remainder attributable to favorable foreign currency impacts. Solid fiber glass pricing gains drove the sales growth, together with improved flat glass volumes. Fiber glass volumes were also up over 2010, but were lower in the fourth quarter of 2011 due to lower European demand. Segment earnings grew to $97 million, compared to $74 million a year ago. Higher sales prices and volumes were the primary drivers of the earnings improvement. The earnings results were tempered somewhat by raw material cost inflation, higher fiber glass maintenance costs and higher overhead costs.

Looking forward, we anticipate fiber glass volume trends to be sequentially comparable with the second half of 2011 which was down versus the first half, which may adversely impact pricing. Flat glass activity is also expected to be comparable with the second half of 2011. We also expect the electronics market to remain weak especially against strong first quarter 2011 comparables adversely impacting our fiber glass equity earnings. Cost control is a perennial focus for this segment.

Outlook

At the beginning of 2011, overall activity levels in most major global economies and for most end-use markets were experiencing year-over-year growth, although levels in the developed regions were still below the pre-recession rates of 2008. In many emerging regions, economic activity surpassed the pre-recession pace due, in part, to continued, solid industrial and infrastructure growth in those regions. One notable exception to the 2011 recovery was the construction markets in the developed regions, which remained static at extremely low activity levels in comparison with the past decade. During the middle of 2011, growth rates slowed in most economic sectors and regions, as concerns emerged over government debt levels, fiscal policy and associated austerity measures. Late in the year, the pace of all major economies slowed, reflecting heightened concerns over the potential financial crisis stemming from government indebtedness and related actions, particularly in the Euro zone.

The North American economy generally followed the global trends with improving overall industrial and chemical activity aided by lower regional energy costs due to increased availability of natural gas stemming from the success of shale gas drilling. This lower feedstock cost resulted in higher export activity due to the favorable regional energy cost input advantages. Also aiding the industrial recovery was continued, solid improvement in automotive OEM production. Although production levels grew throughout the year, they were still considerably lower than pre-recession levels. Similar to 2010, construction markets showed initial signs of a potential recovery early in the year, but optimism faded, and activity levels were flat until very modest improvements were evidenced late in the year. Unemployment rates, impasses on government policy and concerns over the global economy served as additional factors which limited the rate of economic growth in the region. Despite these limitations, the region ended the year with more growth promise than many other major developed regional economies.

At the outset of 2011, growth in the European economy continued to underperform most other major economies as concerns heightened over government budget deficits and their ability to sustain or refinance government debt loads. Anxiety rose throughout the year as global financial markets grew more concerned with European sovereign debt loads. Government action was subdued, due in part to disagreement within the European Union over a course of action, and also due to the already high level of government economic support within the region. Economic activity, which began the year slowly, faded and demand in many end-use markets served by PPG turned negative late in the year. The region ended the year weaker and with no clear catalyst to initiate a recovery.

Many of the major emerging economies, such as those in Asia Pacific and Latin America, were expanding entering 2011, aided by continued growth in exports, expansion of their domestic markets and improved energy or rare earth mineral availability. Inflation concerns in these emerging regions served to either dampen demand or caused governments to take action with the same objective. Growth rates, however, remained above those in developed regions, with a slowly shifting emphasis toward internal consumption partly offsetting slower or no growth in exports from the regions.

Entering 2012, the expectation is for the pace of economic activity to continue to vary by region. In North America, most major sectors of the economy are expected to strengthen as the recovery continues to gradually move the economy back toward pre-recession levels. This increased activity level is expected to be led by higher industrial and chemical production, while improvement in construction is likely to be modest and inconsistent. The 2012 growth rate in emerging regions is expected to continue to moderate and be more erratic, but still outpace that of the developed regions. The European economy is expected to mildly contract in early 2012, despite some growth in exports, but there is downside risk the economic conditions in Europe could be even weaker in 2012.

Since the middle of 2010, commodity and oil prices have experienced inflation due to tight supply stemming from manufacturing capacity remaining idled or removed from service during the recession and improving demand for commodities. It is anticipated that prices will remain at elevated levels during the first half of 2012. PPG typically experiences fluctuating prices for energy and raw materials used in many of our businesses. Factors which impact our input prices are supply/demand imbalances, global industrial activity levels and changes in supplier feedstock costs. Over the past two years combined, PPG's coatings raw material costs have inflated by about $650 million. Our current forecast for the early portion of 2012 is for overall coatings raw material prices to be flat with year-end 2011 levels but up in comparison to full-year 2011 reflecting the fact that costs rose during 2011. Given the volatility in supply/demand, energy cost and the currency environment, it is not feasible to project full-year 2012 raw material pricing.

Changes in natural gas pricing have a significant impact on the financial performance of our Commodity Chemicals and Glass segments. Each one-dollar change in our unit cost of natural gas per million British Thermal Units has a direct impact of approximately $60 million to $70 million on our annual operating costs. Our 2011 natural gas costs averaged approximately $4.65 per mmbtu for the year, while our 2010 costs averaged about $5.50 per unit. We currently estimate the market cost for natural gas in the first quarter of 2012 will be between $2.50 and $3.00 per mmbtu. We currently have about 10 percent of full-year 2012 U.S. natural gas needs hedged at an average price of about $4.50 per unit from hedges placed prior to 2012. While it remains difficult to predict future natural gas prices, in order to reduce the risks associated with volatile prices, we will continue to use a variety of techniques, which include reducing consumption through improved manufacturing processes, switching to alternative fuels and hedging.

In an effort to offset the adverse impact of raw material cost inflation on earnings during 2011, PPG initiated higher selling prices in all operating segments. The Company has historically raised selling prices to counteract the negative earnings impact from inflation. Higher pricing in 2011 did not fully counter inflation in our coatings segments for the full year, but the offset grew higher each quarter of the year. We intend to implement additional pricing for 2012 to further offset the inflation absorbed in 2011. Commodity Chemicals pricing improved during the year, but fell modestly in the fourth quarter due to lower chlorine demand.

Our pension and postretirement benefit costs were about $230 million in 2011, a decrease of approximately $30 million from 2010, which included the benefit of a plan change in January 2011. These costs are expected to increase in 2012 by about $35 million to $45 million primarily due to the reduction in the discount rate consistent with the decline of interest rates. During 2011, PPG's cash contributions to our pension plans totaled $121 million following cash contributions of $340 and $330 million, in 2010 and 2009, respectively, and we anticipate 2012 contributions will be in the range of $130 million to $150 million.

We expect our ongoing tax rate in 2012 to be in the range of 25 percent to 26 percent, consistent with the 2011 rate. The reduction we have achieved in 2011 in our ongoing tax rate reflects the impact from tax planning strategies and our sales and earnings growth outside the U.S. where corporate income tax rates are lower, particularly in Asia Pacific and Europe. A similar benefit from these tax planning strategies is expected to impact the 2012 effective tax rate. Because of the differences in regional tax rates, a shift in the geographic mix of our earnings will impact our ongoing tax rate.

The Company's cash generation has been consistent and at or near record levels over the past four years, despite the recession and a significant increase in the level of voluntary pension contributions. Over the past two years, the Company has repurchased over 17.9 million shares of stock at a cost of $1.4 billion, and the Company ended the year with approximately 9 million shares left under the current authorization from the Board of Directors. The Company entered 2012 with about $1.5 billion in cash and short-term investments, which remains at a historically high level for the Company. We completed the previously announced acquisitions of Dyrup and Colpisa in January 2012 to strengthen our coatings businesses by broadening their product offerings and extending their operations into new geographic areas. The sales of these businesses in 2011 were approximately $300 million. We anticipate making additional acquisitions in 2012 as part of our strategy for accelerating growth. We will remain disciplined and deploy our cash in ways that will support future earnings growth, and we are targeting to end 2012 with less than $1 billion in cash and short-term investments.

Our current economic outlook for 2012 is for global growth to continue, but we expect it to be uneven by region. Growth in Asia Pacific will be higher than the other regions of the world. In contrast, we expect to see economic contraction in Europe in the first half of 2012, and the level of uncertainty concerning the credit crisis in that region increases the risk that the economy there will weaken further. Considering the expected ongoing global growth coupled with our broad geographic footprint and extensive end-use market exposure, we expect to see overall higher demand in 2012 versus 2011. PPG intends to remain proactive in managing our businesses to address these varied market conditions and level of economic uncertainty. PPG has in the past initiated cost reduction actions in response to lower end-market demand and downward pressure on our margins. These actions have included strict management of discretionary costs and, in some cases, restructuring actions focused on lowering our fixed cost structure.

Accounting Standards Adopted in 2011

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

Accounting Standards to be Adopted in Future Years

Note 1, "Summary of Significant Accounting Policies," under Item 8 describes accounting pronouncements that have been promulgated prior to December 31, 2011 but are not effective until a future date.

Performance in 2010 compared with 2009

Performance Overview

Net sales in 2010 totaled $13,423 million compared to $12,239 million in 2009, an increase of 10 percent. Higher volumes contributed 8 percent and higher selling prices increased sales by 1 percent. The remainder of the sales increase was due to foreign currency and acquisitions. The higher sales volumes were achieved in all major geographic regions and in all reportable segments, with the exception of Architectural Coatings – EMEA, reflecting the partial recovery in demand from the impact of the global recession. Our overall volume growth was driven by automotive OEM coatings growth of almost 30 percent, while continuing weakness in construction and maintenance markets reduced architectural coatings volumes in Europe, as demand declines remained at about 5 percent throughout the year. Growth in North America was driven by improving industrial activity, especially in new automotive builds, aerospace, transportation and consumer products. Sales in Europe did increase slightly for the year although the rate of recovery in the European economy underperformed in comparison with most other major economies. This was driven by recurring concerns over governmental spending and the ability to sustain or refinance government debt loads which caused many major European countries to initiate significant austerity measures. The major emerging economies in which we operate, such as Asia and Latin America, maintained late 2009 economic momentum and grew throughout 2010, in many cases surpassing pre-recession economic activity levels. Industrial growth rates remained high, including mid-teen percentage growth in China. The company's record sales in emerging regions reflects the measurable benefits from PPG's strategic initiatives to broaden end-use markets served and improve our penetration in the rapid growth regions.

Cost of sales, exclusive of depreciation and amortization, increased by $675 million in 2010 to $8,214 million compared to $7,539 million in 2009. About 80 percent of the increase was due to volume growth. Additionally, about 40 percent of the increase was driven by inflation, offset by a decrease of nearly 25 percent in manufacturing costs which was a result of the restructuring and cost savings initiatives taken by the Company. Cost of sales as a percentage of sales was 61.2 percent in 2010 compared to 61.6 percent in 2009. The impact of inflation on cost of sales in 2010 was offset by increases in selling prices and lower manufacturing costs. The incremental sales volume in 2010 delivered an above average gross margin. These factors combined to produce the reduction in cost of sales as a percentage of sales.

Selling, general and administrative expenses increased by $43 million to $2,979 million in 2010 compared to $2,936 million in 2009. Nearly half of the increase was due to the effects of inflation, more than 35 percent due to increased sales volumes and approximately 15 percent due to the effects of foreign currency. The increase was offset partially by specific overhead cost reduction actions. Selling, general and administrative costs as a percentage of sales were 22.2 percent in 2010, down from 24.0 percent in 2009 as incremental volume growth was achieved without significant increases in selling costs.

During the first quarter of 2009, the Company finalized a restructuring plan that was focused on further reducing PPG's global cost structure. The Company recorded a charge of $186 million for the cost of these restructuring actions.

Other charges increased $19 million to $84 million in 2010 from $65 million in 2009 due principally to $10 million higher environmental remediation expense compared to 2009 and a $6 million antitrust litigation settlement charge. Other earnings increased $30 million to $180 million in 2010 from $150 million in 2009 due primarily to higher equity earnings and royalties, offset partially by the absence of gains on non-operating asset sales that occurred in 2009.

The effective tax rate on pretax earnings in 2010 was 32.0 percent compared to 31.0 percent in 2009. The 2010 rate includes expense of $85 million resulting from the reduction of our previously provided deferred tax asset related to our liability for retiree medical costs. The deferred tax asset needed to be reduced because the U.S. healthcare legislation enacted in March 2010 included a provision that reduced the amount of retiree medical costs that will be deductible after December 31, 2012. The 2010 rate also included a $5 million benefit as a result of enacted changes in statutory tax rates outside the U.S. The rate was approximately 26 percent on the remaining pretax earnings in 2010.

The 2009 rate includes a tax benefit of $2 million related to audit settlements and a tax benefit of 24.5 percent related to the business restructuring charge. The rate was approximately 30 percent on the remaining pretax earnings in 2009.

The decrease in the tax rate on the remaining pretax earnings in 2010 is mainly the result of shifts in the geographic mix of pretax earnings to lower taxed regions of the world.

Net income (attributable to PPG) and earnings per share – assuming dilution (attributable to PPG) for 2010 and 2009 are summarized below:

(Millions, except per share amounts)		
Year ended December 31, 2010	*Net Income*	
	$	*EPS*
Net income (attributable to PPG)	$769	$4.63
Net income (attributable to PPG) includes:		
Charges related to:		
Change in U. S. Tax Law (U. S. Patient Protection and Affordable Care Act)	$ 85	$0.51

(Millions, except per share amounts)		
Year ended December 31, 2009	*Net Income*	
	$	*EPS*
Net income (attributable to PPG)	$336	$2.03
Net income (attributable to PPG) includes:		
Charges related to:		
Business restructuring	$141	$0.86

Results of Reportable Business Segments

	Net sales		*Segment income (loss)*	
(Millions)	**2010**	**2009**	**2010**	**2009**
Performance Coatings	$4,281	$4,095	$661	$551
Industrial Coatings	3,708	3,068	378	159
Architectural Coatings – EMEA	1,874	1,952	113	128
Optical and Specialty Materials	1,141	1,002	307	235
Commodity Chemicals	1,434	1,273	189	152
Glass	985	849	74	(39)

Performance Coatings sales increased $186 million or 5 percent, to $4,281 million in 2010. The sales increase was comprised of 3 percent due to price and 2 percent due to currency. Volumes for the segment were slightly positive as volume increases in automotive refinish, aerospace and protective and marine coatings were offset by a mid-single digit percentage volume decline in the architectural-Americas and Asia Pacific coatings business. The growth in the automotive refinish business was a result of market share gains and recovery from the customer destocking in 2009. Aerospace and protective and marine coatings also achieved solid volume growth due to strong growth in both emerging and developed regions. These businesses both have a sizeable after-market component, serve late-economic cycle industries and did not experience the same degree of volume decline during the recession as most of our other businesses. Segment income in 2010 increased $110 million to $661 million. The increase in earnings resulted from the impact of higher sales volume, improved sales margin mix, lower overhead costs and favorable currency. The negative earnings impact of inflation was offset by favorable pricing and lower manufacturing costs. The increase in income was led by automotive refinish, protective and marine coatings and aerospace businesses as all benefited from partial volume recovery and lower costs as a result of our cost savings initiatives.

Industrial Coatings sales increased $640 million or 21 percent compared to 2009, to $3,708 million. The sales increase was comprised of 19 percent due to volume, 1 percent due to price and 1 percent due to currency translation. Volume growth was led by the automotive OEM and industrial businesses' emerging regions, both reflecting the continuing, gradual recovery from the global recession. Segment income improved 138 percent versus 2009 to $378 million in 2010. This increase was primarily due to increased volumes and lower manufacturing and overhead costs, partially offset by the negative impact of inflation net of increases in selling prices. Earnings returned closer to pre-recession levels as this segment was the most impacted segment by the recession.

Architectural Coatings – EMEA sales decreased $78 million or 4 percent, to $1,874 million in 2010. The sales decrease was comprised of 4 percent due to the negative impact of foreign currency translation and a 2 percent decline in sales volume, which includes the positive impact of some small acquisitions, offset by a 2 percent increase in selling prices. Volume trends remained consistent throughout 2010, declining by mid-single-digit percentages, reflecting continued general sluggishness in the European construction and maintenance markets. There were solid price gains made in response to higher raw materials costs. Segment income decreased $15 million to $113 million in 2010. The negative earnings impact of lower sales volumes was only partially offset by lower overhead costs and the positive impact of price increases, net of inflation.

Optical and Specialty Materials sales for 2010 increased $139 million or 14 percent compared to 2009, to $1,141 million due almost entirely to increased volumes in both the optical and silicas businesses. Both the optical products and silicas businesses delivered double-digit volume growth in each quarter during 2010. As a result, segment sales and earnings results for the year were all-time records. Increased sales penetration was achieved in the end-use market for Transitions® lens products, including about 20 percent growth in emerging regions. Volume recovery momentum continued in silicas in large part due to the recovery in several silicas end-use markets, including automotive OEM production. Segment income increased $72 million to $307 million in 2010 primarily due to the improved volumes, partially offset by higher selling and advertising costs to support the increased optical volumes.

Commodity Chemicals sales in 2010 versus the prior year increased $161 million or 13 percent, to $1,434 million. Sales improved 15 percent due to higher volumes, driven by the economic recovery in 2010 partially offset by a 3 percent decline in pricing for the year. The impact of foreign currency translation was slightly positive. Segment income increased $37 million to $189 million in 2010 due to the impact of the higher volumes as well as favorable manufacturing and overhead costs resulting from our cost savings initiatives. Factors partially offsetting the earnings improvement were the impact of the lower pricing and input cost inflation.

Glass sales increased $136 million or 16 percent compared to 2009 to $985 million in 2010. Sales increased 18 percent due to volume growth offset by a 2 percent reduction in pricing. The sales volume improvement was largely in the fiber glass business resulting from higher demand as a result of the improved global economy. The lower flat glass pricing was a result of the continued sluggishness in the residential and commercial construction markets. Segment income increased $113 million to $74 million in 2010 due primarily to the impact of the higher fiber glass sales volumes, lower manufacturing costs as a result of our restructuring and cost savings initiatives, and higher fiber glass equity earnings, which reflect the overall improvement in the global demand for electronics, partially offset by the impact of the lower flat glass pricing.

See Note 24, "Reportable Business Segment Information," under Item 8 of this Form 10-K for further information related to the Company's operating segments and reportable business segments.

Commitments and Contingent Liabilities, including Environmental Matters

PPG is involved in a number of lawsuits and claims, both actual and potential, including some that it has asserted against others, in which substantial monetary damages are sought. See Item 3, "Legal Proceedings" and Note 15, "Commitments and Contingent Liabilities," under Item 8 of this Form 10-K for a description of certain of these lawsuits, including a description of the proposed asbestos settlement.

As discussed in Item 3 and Note 15, although the result of any future litigation of such lawsuits and claims is inherently unpredictable, management believes that, in the aggregate, the outcome of all lawsuits and claims involving PPG, including asbestos-related claims in the event the proposed asbestos settlement described in Note 15 does not become effective, will not have a material effect on PPG's consolidated financial position or liquidity; however, any such outcome may be material to the results of operations of any particular period in which costs, if any, are recognized.

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

As of December 31, 2011 and 2010, PPG had reserves for environmental contingencies totaling $226 million and $272 million, respectively, of which $59 million and $83 million, respectively, were classified as current liabilities. Pretax charges against income for environmental remediation costs in 2011, 2010 and 2009 totaled $16 million, $21 million and $11 million, respectively, and are included in "Other charges" in the accompanying consolidated statement of income. Cash outlays related to such environmental remediation aggregated $59 million, $34 million and $24 million in 2011, 2010 and 2009, respectively. The impact of foreign currency translation decreased the liability by $3 million in 2011 and by $2 million in 2010.

In addition to the amounts currently reserved for environmental remediation, the Company may be subject to loss contingencies related to environmental matters estimated to be as much as $200 million to $400 million. Such unreserved losses are reasonably possible but are not currently considered to be probable of occurrence. About 50% of this reasonably possible loss relates to New Jersey Chrome.

Our continuing efforts to analyze and assess the environmental issues associated with New Jersey Chrome and at the Calcasieu River Estuary located near our Lake Charles, La., chlor-alkali plant resulted in a pre-tax charge of $173 million in the third quarter of 2006 for the estimated costs of remediating these sites. These charges for estimated environmental remediation costs in 2006 were significantly higher than PPG's historical range. Excluding 2006, pretax charges against income for environmental remediation have ranged between $10 million and $35 million per year for the past 15 years. Information is being generated from the continuing remedial investigation activities related to New Jersey Chrome that will be incorporated into a final remedial action work plan to be submitted in mid 2012 which may result in an increase to the existing reserve.

Management expects cash outlays for environmental remediation costs to range from $50 million to $70 million annually through 2016. It is possible that technological, regulatory and enforcement developments, the results of environmental studies and other factors could alter our expectations with respect to charges against income and future cash outlays. Specifically, the level of expected cash outlays and charges for environmental remediation costs are highly dependent upon activity related to New Jersey Chrome, as PPG expects to submit additional remedial action work plans to the applicable regulatory agencies in 2012.

Impact of Inflation

In 2011, PPG experienced a reduction in the price of natural gas, its primary energy cost, but experienced a significant rise in ethylene, a Commodity Chemical raw material and in coatings raw material prices. Coatings raw materials both organic, primarily petroleum based, and inorganic materials, generally comprise 70-to-80 percent of coatings cost of goods sold in most coatings formulations and represent PPG's single largest production cost component. In 2011, overall coatings raw materials costs inflated by approximately 10-to-12 percent for the Company. The largest inflation impacts were from titanium dioxide pigments and certain propylene-based resins. This impact was not entirely offset by higher selling prices in our Performance Coatings and Architectural Coatings – EMEA reportable segments. There was also a coverage gap in our Industrial Coatings reportable segment even with this segment using product reformulations to attempt to counter this impact. Our Commodity Chemicals and Glass reportable segments were able to more than fully offset the impact of inflation with price increases, while inflation was not significant for our Optical and Specialty Materials reportable segment.

In 2010, PPG experienced a reduction in its primary energy costs but a steady increase in its coatings raw material costs, most notably in the second half of the year. This was driven by higher global demand as a result of the gradual recovery in the global economy and tightness of supply as suppliers have not increased their capacities. This impact was offset by higher selling prices in our Performance Coatings and Architectural Coatings – EMEA reportable segments and partially offset in our Industrial Coatings reportable segment. Industrial Coatings partially addressed the remaining impact of raw material inflation with further cost reductions in 2010. The impact of inflation net of price was positive in the Optical and Specialty Materials reportable segment and negative in the Commodity Chemicals and Glass reportable segments.

In 2009, PPG experienced a reduction in our energy and raw material costs, following the significant increases in these costs experienced in 2008 and 2007, which was driven by lower global demand as a result of the recession and the delayed impact of lower oil prices. This impact was largely offset by reductions in our selling prices. The impact of inflation net of price was negative in our Commodity Chemicals and Glass reportable segments and was positive in our three Coatings and the Optical and Specialty Materials reportable segments.

In 2012, we expect the majority of our raw material costs in all of our coatings reportable segments to stabilize, although the price of some raw materials are expected to remain volatile and to result in inflation while others have declined. The Company is continuing its aggressive sourcing initiatives to support its continuous efforts to find the lowest raw material costs. These initiatives include reformulation of our products using both petroleum-derived and bio-based materials as part of a product renewal strategy, qualifying multiple and local sources of supply, including suppliers from Asia and other lower cost regions of the world, and strategic initiatives with multiple global suppliers to secure and enhance PPG's supply of titanium dioxide and other materials. We expect these efforts, combined with increases in our selling prices, will offset the negative impact of inflation on our coatings businesses in 2012 and recover margin lost from inflation absorbed in 2011. It is expected, however, that our selling prices may not be able to cover raw material increases in certain of our segments. The Company will look to other cost control measures to attempt to manage this negative impact on these reportable segments. We will also continue our efforts to manage our energy costs in 2012.

Liquidity and Capital Resources

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

Cash from operating activities was $1,436 million, $1,310 million, and $1,345 million in 2011, 2010, and 2009, respectively. Higher earnings increased cash from operations in 2011 compared to 2010, but the increase was reduced by cash used to fund an increase in working capital of $212 million driven by our sales growth in 2011. Cash provided by working capital was greater in 2009 than 2010 and that decline was more than offset by the cash from higher 2010 earnings.

Operating Working Capital is a subset of total working capital and represents (1) trade receivables-net of the allowance for doubtful accounts, plus (2) inventories on a first-in, first-out ("FIFO") basis, less (3) trade creditors' liabilities. See Note 3, "Working Capital Detail" under Item 8 of this Form 10-K for further information related to the components of the Company's Operating Working Capital. We believe Operating Working Capital represents the key components of working capital under the operating control of our businesses. Operating Working Capital at December 31, 2011 and 2010 was $2.7 billion and $2.6 billion, respectively. A key metric we use to measure our working capital management is Operating Working Capital as a percentage of sales (fourth quarter sales annualized).

(Millions)	*2011*	*2010*
Operating Working Capital	*$2,739*	*$2,595*
Operating Working Capital as % of Sales	*19.5%*	*19.2%*

The change in operating working capital elements, excluding the impact of currency and acquisitions, was an increase of $195 million during the year ended December 31, 2011. This increase was the net result of an increase in receivables from customers associated with the 2011 increase in sales and an increase in FIFO inventory slightly offset by an increase in trade creditors' liabilities. Trade receivables from customers, net, as a percentage of fourth quarter sales, annualized, for 2011 was 17.9 percent, down slightly from 18.1 percent for 2010. Days sales outstanding was 66 days in 2011, level with 2010. Inventories on a FIFO basis as a percentage of fourth quarter sales, annualized, for 2011 was 13.1 percent level with 2010. Inventory turnover was 5.0 times in 2011 and 4.6 times in 2010.

Total capital spending, including acquisitions, was $446 million, $341 million and $265 million in 2011, 2010, and 2009, respectively. Spending related to modernization and productivity improvements, expansion of existing businesses and environmental control projects was $390 million, $307 million and $239 million in 2011, 2010, and 2009, respectively, and is expected to be in the range of $450-$550 million during 2012. Capital spending, excluding acquisitions, as a percentage of sales was 2.6%, 2.3% and 2.0% in 2011, 2010 and 2009, respectively. Capital spending related to business acquisitions amounted to $56 million, $34 million, and $26 million in 2011, 2010 and 2009, respectively. We continue to evaluate acquisition opportunities and expect to use cash in 2012 to fund small to mid-sized acquisitions, as part of a balanced deployment of our cash to support growth in earnings. In January 2012, the Company closed the previously announced acquisitions of Colpisa, a Colombian producer of automotive OEM and refinish coatings, and Dyrup, a European architectural coatings company. The cost of these acquisitions, including assumed debt, was $193 million.

Dividends paid to shareholders totaled $355 million, $360 million and $353 million in 2011, 2010 and 2009, respectively. PPG has paid uninterrupted annual dividends since 1899, and 2011 marked the 40th consecutive year of increased annual dividend payments to shareholders.

We did not have a mandatory contribution to our U.S. defined benefit pension plans in 2011; however, we made voluntary contributions to these plans in 2011 totaling $50 million. In 2010 and 2009, we made voluntary contributions to our U.S. defined benefit pension plans of $250 and $360 million (of which $100 million was made in PPG stock), respectively. We expect to make voluntary contributions to our U.S. defined benefit pension plans in 2012 of up to $60 million. Contributions were made to our non-U.S. defined benefit pension plans of $71 million, $87 million and $90 million (of which approximately $20 million was made in PPG stock) for 2011, 2010 and 2009, respectively, some of which were required by local funding requirements. We expect to make mandatory contributions to our non-U.S. plans in 2012 of approximately $90 million.

The Company's share repurchase activity in 2011, 2010 and 2009 was 10.2 million shares at a cost of $858 million, 8.1 million shares at a cost of $586 million and 1.5 million shares at a cost of $59 million, respectively. We expect to make share repurchases in 2012 as part of our cash deployment focused on earnings growth. The amount of spending will depend on the level of acquisition spending and other uses of cash, but we currently expect to spend in the range of $250 million to $500 million on share repurchases in 2012. We can repurchase about 9 million shares under the current authorization from the Board of Directors.

In June 2011, the Company repaid a $400 million three year unsecured term loan, which had a scheduled maturity date of June 2012. There was no prepayment penalty. This $400 million three year unsecured loan was entered into in June 2009 with a variable interest rate based on a spread over the London InterBank Offered Rate ("LIBOR"). This term loan was repaid using a portion of the proceeds from the $1 billion debt we issued in November 2010.

On November 12, 2010, PPG completed a public offering of $250 million in aggregate principal amount of its 1.900% Notes due 2016, $500 million in aggregate principal amount of its 3.600% Notes due 2020 and $250 million in aggregate principal amount of its 5.500% Notes due 2040. These notes were offered by the Company pursuant to its existing shelf registration statement. The proceeds of this offering were $983 million (net of discount and issuance costs). We used the proceeds to repay $400 million in term debt and to contribute to employee pension plans and we intend to use the remainder of the proceeds to fund certain asbestos claims and for other general corporate purposes of the Company.

In August 2010, PPG entered into a three-year credit agreement with several banks and financial institutions (the "Credit Agreement"). The Credit Agreement provides for a $1.2 billion unsecured revolving credit facility. In connection with entering into this Credit Agreement, the Company terminated its €650 million and its $1 billion revolving credit facilities that were each set to expire in 2011. There were no outstanding amounts due under either revolving facility at the time of their termination. The Company has the ability to increase the size of the Credit Agreement by up to an additional $300 million, subject to the receipt of lender commitments and other conditions. The Credit Agreement will terminate and all amounts outstanding will be due and payable on August 5, 2013. There were no amounts outstanding under the credit agreement at December 31, 2011; however, the available borrowing rate on a one month, U.S. dollar denominated borrowing would have been 1.05 percent.

PPG entered into $400 million of forward starting swaps in 2009 and 2010, which are set to expire during 2012. The Company plans to issue 10 year debt in connection with the expiration of these instruments and intends to use the proceeds from this issuance in 2013 to repay the $600 million in notes due in 2013.

The ratio of total debt, including capital leases, to total debt and equity was 53% at December 31, 2011 and 2010.

No deferred U.S. income taxes have been provided on undistributed earnings of non-U.S. subsidiaries, which amounted to $2,920 million as of December 31, 2011 and $2,465 million as of December 31, 2010. These earnings are considered to be reinvested for an indefinite period of time or will be repatriated when it is tax effective to do so. It is not practicable to determine the deferred tax liability on these undistributed earnings.

We continue to believe that our cash on hand, cash from operations and the Company's available debt capacity will continue to be sufficient to fund our operating activities, capital spending, including acquisitions, dividend payments, debt service, amounts due under the proposed asbestos settlement, share repurchases, contributions to pension plans, and PPG's significant contractual obligations. These significant contractual obligations, along with amounts due under the proposed asbestos settlement are presented in the following table.

		Obligations Due In:			
(Millions)	*Total*	*2012*	*2013-2014*	*2015-2016*	*Thereafter*
Contractual Obligations					
Long-term debt	$3,617	$ 73	$ 611	$ 808	$2,125
Short-term debt	33	33	—	—	—
Capital lease obligations	32	2	4	4	22
Operating leases	643	162	221	129	131
Interest payments[1]	1,775	195	323	286	971
Pension contributions[2]	150	150	—	—	—
Unconditional purchase commitments	742	253	211	78	200
Total	$6,992	$868	$1,370	$1,305	$3,449
Asbestos Settlement[3]					
Aggregate cash payments	$ 825	$462	$ 23	$ 21	$ 319
PPG stock and other	131	131	—	—	—
Total	$ 956	$593	$ 23	$ 21	$ 319

(1) Includes interest on all outstanding debt. Interest for variable-rate debt instruments is based on effective rates at December 31, 2011. Interest for fixed-rate debt instruments have been adjusted for the impact of interest rate swaps using the effective rate at December 31, 2011.

(2) Includes the estimated pension contribution for 2012 only, as PPG is unable to estimate the pension contributions beyond 2012.

(3) We have recorded an obligation equal to the net present value of the aggregate cash payments, along with the PPG stock and other assets to be contributed to a trust under the proposed asbestos settlement. However, PPG has no obligation to pay any amounts under this settlement until the Funding Effective Date, as more fully discussed in Note 15, "Commitments and Contingent Liabilities," under Item 8 of this Form 10-K.

The unconditional purchase commitments are principally take-or-pay obligations related to the purchase of certain materials, including industrial gases, natural gas, coal and electricity, consistent with customary industry practice. These amounts also include PPG's commitment to purchase electricity and steam from our RS Cogen joint venture discussed in Note 5, "Investments," under Item 8 of this Form 10-K.

See Note 8, "Debt and Bank Credit Agreements and Leases," under Item 8 of this Form 10-K for details regarding the use and availability of committed and uncommitted lines of credit, letters of credit, guarantees and debt covenants.

In addition to the amounts available under the lines of credit, the Company has an automatic shelf registration statement on file with the SEC pursuant to which it may issue, offer and sell from time to time on a continuous or delayed basis any combination of securities in one or more offerings.

Off-Balance Sheet Arrangements

The Company's off-balance sheet arrangements include the operating leases and unconditional purchase commitments disclosed in the "Liquidity and Capital Resources" section in the contractual obligations table as well as letters of credit and guarantees as discussed in Note 8, "Debt and Bank Credit Agreements and Leases," under Item 8 of this Form 10-K.

Critical Accounting Estimates

Management has evaluated the accounting policies used in the preparation of the financial statements and related notes presented under Item 8 of this Form 10-K and believes those policies to be reasonable and appropriate. We believe that the most critical accounting estimates made in the preparation of our financial statements are those related to accounting for contingencies, under which we accrue a loss when it is probable that a liability has been incurred and the amount can be reasonably estimated, and to accounting for pensions, other postretirement benefits, goodwill and other identifiable intangible assets with indefinite lives because of the importance of management judgment in making the estimates necessary to apply these policies.

Contingencies, by their nature, relate to uncertainties that require management to exercise judgment both in assessing the likelihood that a liability has been incurred as well as in estimating the amount of potential loss. The most important contingencies impacting our financial statements are those related to the collectability of accounts receivable, to environmental remediation, to pending, impending or overtly threatened litigation against the Company and to the resolution of matters related to open tax years. For more information on these matters, see Note 3, "Working Capital Detail," Note 13, "Income Taxes" and Note 15, "Commitments and Contingent Liabilities" under Item 8 of this Form 10-K.

Accounting for pensions and other postretirement benefits involves estimating the cost of benefits to be provided well into the future and attributing that cost over the time period each employee works. To accomplish this, extensive use is made of assumptions about inflation, investment returns, mortality, turnover, medical costs and discount rates. The Company has established a process by which management reviews and selects these assumptions annually. See Note 14, "Pensions and Other Postretirement Benefits," under Item 8 for information on these plans and the assumptions used.

The discount rate used in accounting for pensions and other postretirement benefits is determined by reference to a current yield curve and by considering the timing and amount of projected future benefit payments. The discount rate assumption at December 31, 2011 and for 2012 is 4.50% for our U.S. defined benefit pension and other postretirement benefit plans. A change in the discount rate of 75 basis points, with all other assumptions held constant, would impact 2012 net periodic benefit expense for our defined benefit pension and other postretirement benefit plans by approximately $10 million and $8 million, respectively.

The expected return on plan assets assumption used in accounting for our pension plans is determined by evaluating the mix of investments that comprise plan assets and external forecasts of future long-term investment returns. For 2011, the return on plan assets assumption for our U.S. defined benefit pension plans was 8.0 percent. This assumption will be lowered to 7.5 percent for 2012. A change in the rate of return of 75 basis points, with other assumptions held constant, would impact 2012 net periodic pension expense by approximately $22 million.

As discussed in Note 1, "Summary of Significant Accounting Policies," under Item 8 of this Form 10-K, the Company tests goodwill and identifiable intangible assets with indefinite lives for impairment at least annually by comparing the fair value of the reporting units to their carrying values. Fair values are estimated using discounted cash flow methodologies that are based on projections of the amounts and timing of future revenues and cash flows. Based on this testing, none of our goodwill or identifiable intangible assets with indefinite lives was impaired as of December 31, 2011.

As part of our ongoing financial reporting process, a collaborative effort is undertaken involving PPG managers with functional responsibility for financial, credit, environmental, legal, tax and benefit matters. The results of these efforts provide management with the necessary information on which to base their judgments on these contingencies and to develop the estimates and assumptions used to prepare the financial statements.

We believe that the amounts recorded in the financial statements under Item 8 of this Form 10-K related to these contingencies, pensions, other postretirement benefits, goodwill and other identifiable intangible assets with indefinite lives are based on the best estimates and judgments of the appropriate PPG management, although actual outcomes could differ from our estimates.

Currency

From December 31, 2010 to December 31, 2011, the U.S. dollar strengthened against the currencies of most of the countries in which PPG operates, most notably against the Euro, the Brazilian real, and the Polish zloty. A $188 million decrease in PPG consolidated net assets and shareholders equity resulted from translating PPG's foreign denominated net assets to U.S. dollars at December 31, 2011, compared to December 31, 2010. However, during much of 2011, the U.S. dollar was weaker against the currencies of many countries in which PPG operates than it was in 2010, which had a favorable impact on 2011 pretax earnings of approximately $40 million from the translation of these foreign earnings into U.S. dollars.

From December 31, 2009 to December 31, 2010, the U.S. dollar strengthened against the Euro, the Polish zloty, and the British pound sterling while at the same time it weakened against the Canadian and Australian dollar, the Chinese yuan, the South Korean won, and the Brazilian real, which had a nearly offsetting effect on the translation of the net assets of PPG's operations denominated in non-U.S. currencies to the U.S. dollar. A $13 million decrease resulted from translating PPG's foreign denominated net assets at December 31, 2010, compared to December 31, 2009. The impact of translating foreign pretax earnings into U.S. dollars was insignificant.

From December 31, 2008 to December 31, 2009, the U.S. dollar weakened against the currencies of most of the countries in which PPG operated, most notably against the Euro, the Canadian dollar, the British pound sterling, the Polish zloty, the Brazilian real, the South Korean won and the Australian dollar. As a result, the effects of translating the net assets of PPG's operations denominated in non-U.S. currencies to the U.S. dollar increased consolidated net assets at December 31, 2009 by $173 million compared to December 31, 2008. During much of the year, the U.S. dollar was stronger against the currencies of many countries in which PPG operated than it was in 2008, which had an unfavorable impact on 2009 pretax earnings of $29 million from the translation of these foreign earnings into U.S. dollars.

Forward-Looking Statements

The Private Securities Litigation Reform Act of 1995 provides a safe harbor for forward-looking statements made by or on behalf of the Company. Management's Discussion and Analysis and other sections of this Annual Report contain forward-looking statements that reflect the Company's current views with respect to future events and financial performance.

You can identify forward-looking statements by the fact that they do not relate strictly to current or historic facts. Forward-looking statements are identified by the use of the words "aim," "believe," "expect," "anticipate," "intend," "estimate," "project," "outlook," "forecast" and other expressions that indicate future events and trends. Any forward-looking statement speaks only as of the date on which such statement is made, and the Company undertakes no obligation to update any forward looking statement, whether as a result of new information, future events or otherwise, except as otherwise required by applicable law. You are advised, however, to consult any further disclosures we make on related subjects in our reports to the Securities and Exchange Commission. Also, note the following cautionary statements.

Many factors could cause actual results to differ materially from the Company's forward-looking statements. Such factors include global economic conditions, increasing price and product competition by foreign and domestic competitors, fluctuations in cost and availability of raw materials, the ability to maintain favorable supplier relationships and arrangements, difficulties in integrating acquired businesses and achieving expected synergies therefrom, economic and political conditions in international markets, the ability to penetrate existing, developing and emerging foreign and domestic markets, foreign exchange rates and fluctuations in such rates, fluctuations in tax rates, the impact of future legislation, the impact of environmental regulations, unexpected business disruptions and the unpredictability of existing and possible future litigation, including litigation that could result if the proposed asbestos settlement does not become effective. However, it is not possible to predict or identify all such factors. Consequently, while the list of factors presented here and under Item 1A is considered representative, no such list should be considered to be a complete statement of all potential risks and uncertainties. Unlisted factors may present significant additional obstacles to the realization of forward-looking statements.

Consequences of material differences in the results compared with those anticipated in the forward-looking statements could include, among other things, business disruption, operational problems, financial loss, legal liability to third parties, other factors set forth in Item 1A of this Form 10-K and similar risks, any of which could have a material adverse effect on the Company's consolidated financial condition, results of operations or liquidity.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

PPG is exposed to market risks related to changes in foreign currency exchange rates, interest rates, and natural gas prices and to changes in PPG's stock price. The Company may enter into derivative financial instrument transactions in order to manage or reduce these market risks. A detailed description of these exposures and the Company's risk management policies are provided in Note 11, "Derivative Financial Instruments and Hedge Activities," under Item 8 of this Form 10-K.

The following disclosures summarize PPG's exposure to market risks and information regarding the use of and fair value of derivatives employed to manage its exposure to such risks. Quantitative sensitivity analyses have been provided to reflect how reasonably possible, unfavorable changes in market rates can impact PPG's consolidated results of operations, cash flows and financial position.

Foreign currency forward and option contracts outstanding during 2011 and 2010 were used to hedge PPG's exposure to foreign currency transaction risk. The fair value of these contracts as of December 31, 2011 and 2010 were liabilities of $1 million and assets of $2 million, respectively. The potential reduction in PPG's earnings resulting from the impact of adverse changes in exchange rates on the fair value of its outstanding foreign currency hedge contracts of 10 percent for European currencies and 20 percent for Asian and South American currencies for the years ended December 31, 2011 and 2010 would have been $23 million and $22 million, respectively.

PPG entered into nine U.S. dollar to euro cross currency swap contracts with a total notional amount of $1.16 billion, of which $600 million were to settle on March 15, 2013 and $560 million were to settle on March 15, 2018. Another contract, with a notional amount of $140 million and a settlement date of March 15, 2018 was converted to cash during the first quarter of 2010. Accordingly, on settlement of the contracts, PPG will receive $1.16 billion and pay euros to the counterparties to the contracts. The Company has designated these swaps as hedges of its net investment in the acquired SigmaKalon businesses and, as a result, mark to fair value adjustments of the swaps have been and will be recorded as a component of other comprehensive income. As of December 31, 2011 and 2010, the aggregate fair value of these swaps was a liability of $120 million and $163 million, respectively. A 10 percent increase in the value of the euro to the U.S. dollar would have had an unfavorable effect on the fair value of these swap contracts and increased the liability by $153 million and $158 million at December 31, 2011 and 2010, respectively.

PPG had non-U.S. dollar denominated debt outstanding of $441 million as of December 31, 2011 and $447 million as of December 31, 2010. A weakening of the U.S. dollar by 10 percent against European currencies and by 20 percent against Asian and South American currencies would have resulted in unrealized translation losses of approximately $50 million and $52 million as of December 31, 2011 and 2010, respectively.

Interest rate swaps are used to manage a portion of PPG's interest rate risk. As of December 31, 2011 and 2010 the notional value of outstanding interest rate swaps totaled $445 million and $450 million, respectively. The fair value of the interest rate swaps was an asset of $26 million and $20 million as of December 31, 2011 and 2010, respectively. The fair value of these swaps would have changed unfavorably by $1 million as of December 31, 2011 and 2010, respectively, if variable interest rates increased by 10 percent. A 10 percent increase in interest rates in the U.S., Canada, Mexico and Europe and a 20 percent increase in interest rates in Asia and South America would have affected PPG's variable rate debt obligations by increasing interest expense approximately $1 million as of December 31, 2011 and December 31, 2010, respectively. Further, a 10 percent reduction in interest rates would have increased the present value of the Company's fixed rate debt by approximately $90 million and $115 million as of December 31, 2011 and 2010, respectively; however, such changes would not have had an effect on PPG's annual earnings or cash flows.

The Company entered into forward starting swaps in 2009 and in the second quarter of 2010 to effectively lock-in a fixed interest rate for future debt refinancings with an anticipated term of ten years based on a the ten year swap rate, to which will be added a corporate spread. The notional amount of these swaps totaled $400 million as of December 31, 2011 and 2010, respectively. The fair value of these swaps was a liability of $92 million as of December 31, 2011 and $21 million as of December 31, 2010. A 10 percent decline in interest rates would unfavorably affect the fair value of these swaps by $9 million and $14 million as of December 31, 2011 and 2010, respectively.

The fair value of natural gas swap contracts in place as of December 31, 2011 and 2010 was a liability of $9 million and $31 million, respectively. These contracts were entered into to reduce PPG's exposure to higher prices of natural gas. A 10 percent reduction in the price of natural gas would have had an unfavorable effect on the fair value of these contracts by increasing the liability by $2 million and $5 million at December 31, 2011 and 2010, respectively.

An equity forward arrangement was entered into to hedge the Company's exposure to changes in fair value of its future obligation to contribute PPG stock into an asbestos settlement trust (see Note 11 "Derivative Financial Instruments and Hedge Activities" and Note 15, "Commitments and Contingent Liabilities," under Item 8 of this Form 10-K). The fair value of this instrument as of December 31, 2011 and 2010 was an asset of $56 million and $55 million, respectively. A 10 percent decrease in PPG's stock price would have had an unfavorable effect on the fair value of this instrument of $12 million at December 31, 2011 and 2010, respectively.

Item 8. Financial Statements and Supplementary Data

Internal Controls – Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of PPG Industries, Inc.

We have audited the internal control over financial reporting of PPG Industries, Inc. and subsidiaries (the "Company") as of December 31, 2011, based on criteria established in *Internal Control – Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission. The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management Report. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

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

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

Because of the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. Also, projections of any evaluation of the effectiveness of the internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2011, based on the criteria established in *Internal Control – Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated financial statements and financial statement schedule as of and for the year ended December 31, 2011 of the Company and our report dated February 16, 2012 expressed an unqualified opinion on those financial statements and financial statement schedule.

Deloitte + Touche LLP

Deloitte & Touche LLP
Pittsburgh, Pennsylvania
February 16, 2012

Management Report

Responsibility for Preparation of the Financial Statements and Establishing and Maintaining Adequate Internal Control Over Financial Reporting

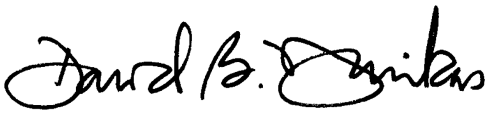
We are responsible for the preparation of the financial statements included in this Annual Report. The financial statements were prepared in accordance with accounting principles generally accepted in the United States of America and include amounts that are based on the best estimates and judgments of management.

We are also responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934, as amended. All internal control systems, no matter how well designed, have inherent limitations. Therefore, a system of internal control over financial reporting can provide only reasonable assurance and may not prevent or detect misstatements. In addition, because of changing conditions, there is risk in projecting any evaluation of internal controls to future periods.

We conducted an evaluation of the effectiveness of the Company's internal control over financial reporting as of December 31, 2011. In making this evaluation, we used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in *Internal Control - Integrated Framework*. Our evaluation included reviewing the documentation of our controls, evaluating the design effectiveness of our controls and testing their operating effectiveness. Based on this evaluation we believe that, as of December 31, 2011, the Company's internal controls over financial reporting were effective.

Deloitte & Touche LLP, an independent registered public accounting firm, has issued their report, included on page 32 of this Form 10-K, regarding the Company's internal control over financial reporting.

Charles E. Bunch
Chairman of the Board
and Chief Executive Officer
February 16, 2012



David B. Navikas
Senior Vice President, Finance and
Chief Financial Officer
February 16, 2012

Consolidated Financial Statements – Report of Independent Registered Public Accounting Firm

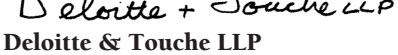
To the Board of Directors and Shareholders of PPG Industries, Inc.

We have audited the accompanying consolidated balance sheets of PPG Industries, Inc. and subsidiaries (the "Company") as of December 31, 2011 and 2010, and the related consolidated statements of income, shareholders' equity, comprehensive income, and cash flows for each of the three years in the period ended December 31, 2011. Our audits also included the financial statement schedule listed in the Index at Item 15(a)(2). These financial statements and the financial statement schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on the financial statements and the financial statement schedule based on our audits.

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

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of PPG Industries, Inc. and subsidiaries as of December 31, 2011 and 2010, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2011, in conformity with accounting principles generally accepted in the United States of America. Also, in our opinion, such financial statement schedule, when considered in relation to the basic consolidated financial statements taken as a whole, presents fairly, in all material respects, the information set forth therein.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Company's internal control over financial reporting as of December 31, 2011, based on the criteria established in *Internal Control – Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 16, 2012 expressed an unqualified opinion on the Company's internal control over financial reporting.



Deloitte & Touche LLP
Pittsburgh, Pennsylvania
February 16, 2012

Consolidated Statement of Income

(Millions, except per share amounts)	*For the Year* 2011	2010	2009
Net sales	$14,885	$13,423	$12,239
Cost of sales, exclusive of depreciation and amortization	9,081	8,214	7,539
Selling, general and administrative	3,234	2,979	2,936
Depreciation	346	346	354
Amortization (See Note 6)	121	124	126
Research and development – net (See Note 22)	430	394	388
Interest expense	210	189	193
Interest income	(42)	(34)	(28)
Asbestos settlement – net (See Notes 11 and 15)	12	12	13
Business restructuring (See Note 7)	—	—	186
Other charges (See Note 15)	73	84	65
Other earnings (See Note 19)	(177)	(180)	(150)
Income before income taxes	1,597	1,295	617
Income tax expense (See Note 13)	385	415	191
Net income attributable to the controlling and noncontrolling interests	1,212	880	426
Less: net income attributable to noncontrolling interests	117	111	90
Net income (attributable to PPG)	$ 1,095	$ 769	$ 336
Earnings per common share (See Note 12)			
Net income (attributable to PPG)	$ 6.96	$ 4.67	$ 2.04
Earnings per common share – assuming dilution (See Note 12)			
Net Income (attributable to PPG)	$ 6.87	$ 4.63	$ 2.03

The accompanying notes to the consolidated financial statements are an integral part of this consolidated statement.

Consolidated Balance Sheet

(Millions)	December 31 2011	2010
Assets		
Current assets		
Cash and cash equivalents	$ 1,457	$ 1,341
Short-term investments (See Note 9)	25	637
Receivables (See Note 3)	2,830	2,778
Inventories (See Note 3)	1,607	1,573
Deferred income taxes (See Note 13)	473	451
Other	302	278
Total current assets	6,694	7,058
Property (See Note 4)	8,614	8,415
Less accumulated depreciation	5,893	5,729
Property – net	2,721	2,686
Investments (See Note 5)	387	550
Goodwill (See Note 6)	2,660	2,719
Identifiable intangible assets – net (See Note 6)	1,125	1,268
Other assets (See Note 13)	795	694
Total	$14,382	$14,975
Liabilities and Shareholders' Equity		
Current liabilities		
Short-term debt and current portion of long-term debt (See Note 8)	$ 108	$ 28
Asbestos settlement (See Note 15)	593	578
Accounts payable and accrued liabilities (See Note 3)	2,996	3,002
Business restructuring (See Note 7)	5	17
Total current liabilities	3,702	3,625
Long-term debt (See Note 8)	3,574	4,043
Asbestos settlement (See Note 15)	241	243
Deferred income taxes (See Note 13)	272	293
Accrued pensions (See Note 14)	968	819
Other postretirement benefits (See Note 14)	1,307	1,151
Other liabilities	872	968
Total liabilities	10,936	11,142
Commitments and contingent liabilities (See Note 15)		
Shareholders' equity (See Note 16)		
Common stock	484	484
Additional paid-in capital	783	725
Retained earnings	9,288	8,548
Treasury stock, at cost	(5,506)	(4,708)
Accumulated other comprehensive loss (See Note 17)	(1,800)	(1,411)
Total PPG shareholders' equity	3,249	3,638
Noncontrolling interests	197	195
Total shareholders' equity	3,446	3,833
Total	$14,382	$14,975

Shares outstanding were 151,888,780 and 160,381,815 as of December 31, 2011 and 2010, respectively.
The accompanying notes to the consolidated financial statements are an integral part of this consolidated statement.

Consolidated Statement of Shareholders' Equity

(Millions)	Common Stock	Additional Paid-In Capital	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive (Loss) Income (See Note 17)	Total PPG	Non-controlling Interests	Total
Balance, January 1, 2009	$484	$580	$8,156	$(4,259)	$(1,628)	$3,333	$156	$3,489
Net income attributable to the controlling and noncontrolling interests	—	—	336	—	—	336	90	426
Other comprehensive income, net of tax	—	—	—	—	367	367	—	367
Cash dividends	—	—	(353)	—	—	(353)	—	(353)
Purchase of treasury stock	—	—	—	(59)	—	(59)	—	(59)
Issuance of treasury stock	—	50	—	100	—	150	—	150
Stock-based compensation activity	—	6	—	—	—	6	—	6
Equity forward arrangement	—	(27)	—	—	—	(27)	—	(27)
Dividends paid on subsidiary common stock to noncontrolling interests	—	—	—	—	—	—	(77)	(77)
Balance, December 31, 2009	$484	$609	$8,139	$(4,218)	$(1,261)	$3,753	$169	$3,922
Net income attributable to the controlling and noncontrolling interests	—	—	769	—	—	769	111	880
Other comprehensive (loss) income, net of tax	—	—	—	—	(150)	(150)	2	(148)
Cash dividends	—	—	(360)	—	—	(360)	—	(360)
Purchase of treasury stock	—	—	—	(521)	—	(521)	—	(521)
Issuance of treasury stock	—	77	—	96	—	173	—	173
Stock-based compensation activity	—	12	—	—	—	12	—	12
Equity forward arrangement	—	27	—	(65)	—	(38)	—	(38)
Dividends paid on subsidiary common stock to noncontrolling interests	—	—	—	—	—	—	(87)	(87)
Balance, December 31, 2010	$484	$725	$8,548	$(4,708)	$(1,411)	$3,638	$195	$3,833
Net income attributable to the controlling and noncontrolling interests	—	—	1,095	—	—	1,095	117	1,212
Other comprehensive loss, net of tax	—	—	—	—	(389)	(389)	(9)	(398)
Cash dividends	—	—	(355)	—	—	(355)	—	(355)
Purchase of treasury stock	—	—	—	(858)	—	(858)	—	(858)
Issuance of treasury stock	—	47	—	60	—	107	—	107
Stock-based compensation activity	—	11	—	—	—	11	—	11
Dividends paid on subsidiary common stock to noncontrolling interests	—	—	—	—	—	—	(106)	(106)
Balance, December 31, 2011	$484	$783	$9,288	$(5,506)	$(1,800)	$3,249	$197	$3,446

Consolidated Statement of Comprehensive Income

	For the Year		
(Millions)	2011	2010	2009
Net income attributable to the controlling and noncontrolling interests	$ 1,212	$ 880	$426
Other comprehensive (loss) income, net of tax (See Note 17)			
Unrealized currency translation adjustment	(197)	(11)	173
Defined benefit pension and other postretirement benefit adjustments (See Note 14)	(169)	(136)	169
Unrealized gains on marketable equity securities	—	1	—
Net change – derivatives (See Note 11)	(32)	(2)	25
Other comprehensive (loss) / income, net of tax	(398)	(148)	367
Total comprehensive income	$ 814	$ 732	$793
Less: amounts attributable to noncontrolling interests:			
Net income	(117)	(111)	(90)
Unrealized currency translation adjustment	9	(2)	—
Comprehensive income attributable to PPG	$ 706	$ 619	$703

The accompanying notes to the consolidated financial statements are an integral part of these consolidated statements.

Consolidated Statement of Cash Flows

(Millions)	For the Year 2011	2010	2009
Operating activities			
Net income attributable to the controlling and noncontrolling interests	$ 1,212	$ 880	$ 426
Adjustments to reconcile to cash from operations:			
Depreciation and amortization	467	470	480
Pension expense	131	161	218
Charge related to change in U.S. tax law (See Note 13)	—	85	—
Equity affiliate (earnings) loss net of dividends	(18)	(39)	17
Asbestos settlement, net of tax	7	7	8
Business restructuring	—	—	186
Cash contributions to pension plans	(121)	(340)	(330)
Restructuring cash spending	(18)	(103)	(142)
Change in certain asset and liability accounts:			
(Increase)/decrease in receivables	(129)	(188)	345
(Increase)/decrease in inventories	(73)	(34)	232
(Increase)/decrease in other current assets	(32)	16	32
Increase/(decrease) in accounts payable and accrued liabilities	22	306	(117)
(Increase)/decrease in noncurrent assets	(3)	(9)	62
(Decrease)/increase in noncurrent liabilities	(12)	(22)	5
Change in accrued tax and interest accounts	39	170	(82)
Other	(36)	(50)	5
Cash from operating activities	1,436	1,310	1,345
Investing activities			
Capital spending:			
Additions to property and investments	(390)	(307)	(239)
Business acquisitions, net of cash balances acquired (See Note 2)	(56)	(34)	(26)
Deposit of cash into escrow (See Note 2)	(16)	(7)	—
Release of cash held in escrow (See Note 2)	—	1	22
Proceeds from maturity of short-term investments	749	—	—
Purchase of short-term investments	(125)	(624)	—
Payments on cross currency swap contracts (See Note 11)	(10)	(9)	(3)
Proceeds from termination of cross currency swap contracts (See Note 11)	—	5	—
Collection of notes receivable, equity affiliate (See Note 5)	90	—	—
Return of capital, equity affiliate (See Note 5)	78	—	—
Reductions of other property and investments	33	26	43
Cash from/(used for) investing activities	353	(949)	(203)
Financing activities			
Debt:			
Proceeds from issuance of notes (net of discount and issuance costs) (See Note 8)	—	983	—
Net change in borrowings with maturities of three months or less	9	(23)	(431)
Proceeds from term loan (See Note 8)	—	—	400
Repayment of term loan (See Note 8)	(400)	—	—
Proceeds from other short-term debt	4	8	1
Repayment of other short-term debt	—	(225)	(517)
Repayment of 7.05% Notes due 2009 (See Note 8)	—	—	(116)
Proceeds from other long-term debt	3	7	29
Repayment of other long-term debt	(7)	(14)	(12)
Proceeds from termination of interest rate swaps	19	—	—
Net change in cash related to debt transactions	(372)	736	(646)
Other financing activities:			
Purchase of treasury stock	(858)	(586)	(59)
Issuance of treasury stock	81	146	12
Dividends paid on subsidiary common stock to noncontrolling interests	(106)	(87)	(77)
Dividends paid	(355)	(360)	(353)
Other	(22)	47	—
Cash used for financing activities	(1,632)	(104)	(1,123)
Effect of currency exchange rate changes on cash and cash equivalents	(41)	27	17
Net increase in cash and cash equivalents	116	284	36
Cash and cash equivalents, beginning of year	1,341	1,057	1,021
Cash and cash equivalents, end of year	$ 1,457	$1,341	$ 1,057

The accompanying notes to the consolidated financial statements are an integral part of this consolidated statement.

Notes to the Consolidated Financial Statements

1. Summary of Significant Accounting Policies

Principles of Consolidation

The accompanying consolidated financial statements include the accounts of PPG Industries, Inc. ("PPG" or the "Company") and all subsidiaries, both U.S. and non-U.S., that it controls. PPG owns more than 50% of the voting stock of the subsidiaries that it controls. For those consolidated subsidiaries in which the Company's ownership is less than 100 percent, the outside shareholders' interests are shown as noncontrolling interests. Investments in companies in which PPG owns 20% to 50% of the voting stock and has the ability to exercise significant influence over operating and financial policies of the investee are accounted for using the equity method of accounting. As a result, PPG's share of the earnings or losses of such equity affiliates is included in the accompanying consolidated statement of income and PPG's share of these companies' shareholders' equity is included in Investments in the accompanying consolidated balance sheet. Transactions between PPG and its subsidiaries are eliminated in consolidation.

Use of Estimates in the Preparation of Financial Statements

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported amounts of income and expenses during the reporting period. Actual outcomes could differ from those estimates.

Revenue Recognition

Revenue from sales is recognized by all operating segments when goods are shipped and title to inventory and risk of loss passes to the customer or when services have been rendered.

Shipping and Handling Costs

Amounts billed to customers for shipping and handling are reported in "Net sales" in the accompanying consolidated statement of income. Shipping and handling costs incurred by the Company for the delivery of goods to customers are included in "Cost of sales, exclusive of depreciation and amortization" in the accompanying consolidated statement of income.

Selling, General and Administrative Costs

Amounts presented as "Selling, general and administrative" in the accompanying consolidated statement of income are comprised of selling, customer service, distribution and advertising costs, as well as the costs of providing corporate-wide functional support in such areas as finance, law, human resources and planning. Distribution costs pertain to the movement and storage of finished goods inventory at company-owned and leased warehouses, terminals and other distribution facilities. Certain of these costs may be included in cost of sales by other companies, resulting in a lack of comparability with other companies.

Legal Costs

Legal costs are expensed as incurred.

Foreign Currency Translation

For all significant non-U.S. operations, their functional currency is their local currency. Assets and liabilities of those operations are translated into U.S. dollars using year-end exchange rates; income and expenses are translated using the average exchange rates for the reporting period. Unrealized currency translation adjustments are deferred in accumulated other comprehensive loss, a separate component of shareholders' equity.

Cash Equivalents

Cash equivalents are highly liquid investments (valued at cost, which approximates fair value) acquired with an original maturity of three months or less.

Short-term Investments

Short-term investments are highly liquid, high credit quality investments (valued at cost plus accrued interest) that have stated maturities of greater than three months to one year. The purchases and sales of these investments are classified as investing activities in the consolidated statement of cash flows.

Inventories

Most U.S. inventories are stated at cost, using the last-in, first-out ("LIFO") method of accounting, which does not exceed market. All other inventories are stated at cost, using the first-in, first-out ("FIFO") method of accounting, which does not exceed market. PPG determines cost using either average or standard factory costs, which approximate actual costs, excluding certain fixed costs such as depreciation and property taxes.

Marketable Equity Securities

The Company's investment in marketable equity securities is recorded at fair market value and reported in "Other current assets" and "Investments" in the accompanying consolidated balance sheet with changes in fair market value recorded in income for those securities designated as trading securities and in other comprehensive income, net of tax, for those designated as available for sale securities.

Property

Property is recorded at cost. PPG computes depreciation by the straight-line method based on the estimated useful lives of depreciable assets. Additional expense is recorded when facilities or equipment are subject to abnormal economic conditions or obsolescence.

Significant improvements that add to productive capacity or extend the lives of properties are capitalized. Costs for repairs and maintenance are charged to expense as incurred. When property is retired or otherwise disposed of, the original cost and related accumulated depreciation balance are removed from the accounts and any related gain or loss is included in income. Amortization of the cost of capitalized leased assets is included in depreciation expense. Property and other long-lived assets are reviewed for impairment whenever events or circumstances indicate that their carrying amounts may not be recoverable.

Goodwill and Identifiable Intangible Assets

Goodwill represents the excess of the cost over the fair value of acquired identifiable tangible and intangible assets less liabilities assumed from acquired businesses. Identifiable intangible assets acquired in business combinations are recorded based upon their fair value at the date of acquisition.

The Company tests goodwill of each reporting unit for impairment at least annually in connection with PPG's strategic planning process. The goodwill impairment test is performed by comparing the fair value of the associated reporting unit as of September 30 to its carrying value. The Company's reporting units are its operating segments. (See Note 24, "Reportable Business Segment Information" for further information concerning the Company's operating segments.) Fair value is estimated using discounted cash flow methodologies.

The Company has determined that certain acquired trademarks have indefinite useful lives. The Company tests the carrying value of these trademarks for impairment at least annually, as of September 30, by comparing the fair value of each trademark to its carrying value. Fair value is estimated by using the relief from royalty method (a discounted cash flow methodology).

Identifiable intangible assets with finite lives are amortized on a straight-line basis over their estimated useful lives (2 to 25 years) and are reviewed for impairment whenever events or circumstances indicate that their carrying amount may not be recoverable.

Allowance for Doubtful Accounts

The Company provides an allowance for doubtful accounts to reduce receivables to their estimated net realizable value when it is probable that a loss will be incurred. Those estimates are based on historical collection experience, current economic and market conditions, a review of the aging of accounts receivable and the assessments of current creditworthiness of customers.

Product Warranties

The Company accrues for product warranties at the time the associated products are sold based on historical claims experience. As of December 31, 2011 and 2010, the reserve for product warranties was $11 million and $7 million, respectively. Pretax charges against income for product warranties in 2011, 2010 and 2009 totaled $14 million, $7 million and $6 million, respectively. Cash outlays related to product warranties were $10 million in 2011 and $7 million annually in 2010 and 2009.

Asset Retirement Obligations

An asset retirement obligation represents a legal obligation associated with the retirement of a tangible long-lived asset that is incurred upon the acquisition, construction, development or normal operation of that long-lived asset. PPG recognizes asset retirement obligations in the period in which they are incurred, if a reasonable estimate of fair value can be made. The asset retirement obligation is subsequently adjusted for changes in fair value. The associated estimated asset retirement costs are capitalized as part of the carrying amount of the long-lived asset and depreciated over its useful life. PPG's asset retirement obligations are primarily associated with closure of certain assets used in the chemicals manufacturing process.

The accrued asset retirement obligation was $12 million and $13 million as of December 31, 2011 and 2010, respectively.

PPG's only conditional asset retirement obligation relates to the possible future abatement of asbestos contained in certain PPG production facilities. The asbestos in PPG's production facilities arises from the application of normal and customary building practices in the past when the facilities were constructed. This asbestos is encapsulated in place and, as a result, there is no current legal requirement to abate it. Inasmuch as there is no requirement to abate, the Company does not have any current plans or an intention to abate and therefore the timing, method and cost of future abatement, if any, are not known. The Company has not recorded an asset retirement obligation associated with asbestos abatement, given the uncertainty concerning the timing of future abatement, if any.

Accounting Standards Adopted in 2011

In April 2011, the Financial Accounting Standards Board ("FASB") issued revisions to the accounting guidance related to troubled debt restructuring. This new guidance was effective for the first interim or annual period beginning on or after June 15, 2011 and should be applied retrospectively to the beginning of the annual period of adoption. PPG adopted the new requirements in the third quarter of 2011 retrospectively as of January 1, 2011; however, the adoption of this guidance did not have

a material effect on its consolidated financial position as of December 31, 2011 or its consolidated results of operations or cash flows for the year ended December 31, 2011.

Accounting Standards to be Adopted in Future Years

In May 2011, the FASB issued an amendment to the fair value measurement guidance and disclosure requirements to establish U.S. Generally Accepted Accounting Principles ("GAAP") in common with International Financial Reporting Standards ("IFRS") measurement and reporting requirements. The new requirements are effective for the first interim or annual period beginning after December 15, 2011. The requirements are to be applied prospectively. PPG is currently evaluating the new requirements; however, it does not expect that the adoption of this guidance will have a material effect on its consolidated financial position, results of operations or cash flows.

In June 2011, the FASB issued an amendment to the requirements for presenting comprehensive income. The new requirements are effective for the first interim or annual period beginning after December 15, 2011. The requirements are to be applied retrospectively. The standard requires other comprehensive income to be presented in a continuous statement of comprehensive income that would combine the components of net income and other comprehensive income, or in a separate, but consecutive, statement following the statement of income. PPG will apply these new requirements in the first quarter of 2012; however, the adoption of this guidance will not have a material effect on its consolidated financial position, results of operations or cash flows.

2. Acquisitions

In early January 2012, PPG completed the purchase of European coatings company Dyrup A/S ("Dyrup"), based in Copenhagen, Denmark, from its owner, Monberg & Thorsen, a public holding company, for $44 million of which $26 million is currently being held in escrow, and assumed debt of $111 million. Dyrup, a producer of architectural coatings and woodcare products, operates six manufacturing facilities throughout Europe, and its products are sold primarily in Denmark, France, Germany, Portugal, Poland, and Spain through professional and do-it-yourself channels.

Also in early January 2012, PPG completed the purchase of the coatings businesses of Colpisa Colombiana de Pinturas and its affiliate, Colpisa Equador ("Colpisa"), for $38 million, of which $7 million is currently being held in escrow. Colpisa manufactures and distributes coatings for automotive OEM, automotive refinish and industrial customers in Colombia and Ecuador.

The Company spent $56 million on acquisitions in 2011, including purchase price adjustments related to acquisitions that were completed prior to December 31, 2010. In May 2011, PPG acquired the assets of Equa-Chlor, Inc. for $28 million, of which $3 million is held in escrow. The excess fair value of the assets acquired and liabilities assumed, which consisted principally of property and operating working capital, over the purchase price resulted in a bargain purchase gain of $10 million. This gain was partially offset by a $1 million loss related to the step up to fair value of acquired inventory. The gain is reported in "Other earnings" and the inventory step-up is included in "Cost of sales" in the accompanying consolidated statement of income for the year-ended December 31, 2011. The remaining amounts spent on acquisitions during the year ended December 31, 2011, relate to several acquisitions in the coatings businesses, including the acquisition of a South African automotive refinish distributor.

The Company spent $34 million on acquisitions (net of cash acquired of $6 million) in 2010, including purchase price adjustments related to acquisitions that were completed prior to December 31, 2009.

The Company spent $26 million on acquisitions (net of cash acquired of $1 million) in 2009, including purchase price adjustments related to acquisitions that were completed prior to December 31, 2008.

Notes to the Consolidated Financial Statements

3. Working Capital Detail

(Millions)	2011	2010
Receivables		
Trade - net[1]	$2,512	$2,447
Equity affiliates	28	24
Other - net	290	307
Total	$2,830	$2,778
Inventories[2]		
Finished products	$ 935	$ 912
Work in process	144	136
Raw materials	414	411
Supplies	114	114
Total	$1,607	$1,573
Accounts payable and accrued liabilities		
Trade creditors	$1,612	$1,626
Accrued payroll	414	405
Customer rebates	201	218
Other postretirement and pension benefits	108	109
Income taxes	51	56
Other	610	588
Total	$2,996	$3,002

(1) *Allowance for Doubtful Accounts equaled $71 million and $91 million as of December 31, 2011 and 2010, respectively.*

(2) *Inventories valued using the LIFO method of inventory valuation comprised 35 and 33 of total gross inventory values as of December 31, 2011 and 2010, respectively. If the FIFO method of inventory valuation had been used, inventories would have been $232 million and $201 million higher as of December 31, 2011 and 2010, respectively. During the year ended December 31, 2011 and 2010, certain inventories accounted for on the LIFO method of accounting were reduced, which resulted in the liquidation of certain quantities carried at costs prevailing in prior years. The effect on earnings was income of $0.9 million and expense of $0.3 million for the years ended December 31, 2011 and 2010, respectively.*

4. Property

(Millions)	*Useful Lives (years)*	2011	2010
Land and land improvements	5-30	$ 482	$ 477
Buildings	20-40	1,482	1,467
Machinery and equipment	5-25	5,736	5,587
Other	3-20	694	652
Construction in progress		220	232
Total[1]		$8,614	$8,415

(1) *Interest capitalized in 2011, 2010 and 2009 was $9 million, $7 million and $9 million, respectively.*

5. Investments

(Millions)	2011	2010
Investments in and advances to equity affiliates	$261	$416
Marketable equity securities		
Trading (See Note 14)	56	59
Available for sale	—	6
Other	70	69
Total	$387	$550

The Company's investments in and advances to equity affiliates are comprised principally of 50 percent ownership interests in a number of joint ventures that manufacture and sell coatings, glass and chemicals products, the most significant of which produce fiber glass products and are located in Asia. The Company's investments in and advances to equity affiliates also include its approximate 40 percent interest in Pittsburgh Glass Works L.L.C. ("PGW"), which had a carrying value of $29 million at December 31, 2011. In April 2011, the Company received $168 million from PGW, which was comprised of the repayment of $90 million of notes receivable from PGW and a $78 million return of capital.

In addition, PPG has a 50 percent ownership interest in RS Cogen, L.L.C., which toll produces electricity and steam primarily for PPG and its joint venture partner. The joint venture was formed with a wholly-owned subsidiary of Entergy Corporation in 2000 for the construction and operation of a $300 million process steam, natural gas-fired cogeneration facility in Lake Charles, La., the majority of which was financed by a syndicate of banks. PPG's future commitment to purchase electricity and steam from the joint venture approximates $23 million per year subject to contractually defined inflation adjustments for the next 11 years. The purchases for the years ended December 31, 2011, 2010 and 2009 were $23 million in each year.

RS Cogen is a variable interest entity under U.S. accounting guidance. The joint venture's critical operations are overseen by a management committee, which has equal representation by PPG and Entergy. With the power to direct the activities of RS Cogen equally shared between RS Cogen's two owners, PPG does not consider itself to be the joint venture's primary beneficiary. Accordingly, PPG accounts for its investment in RS Cogen as an equity method investment.

The following table summarizes the Company's maximum exposure to loss associated with RS Cogen as of December 31, 2011:

(Millions)	
Investment in and advances to RS Cogen	$ 11
Take-or-pay obligation under power tolling arrangement	257
Maximum exposure to loss	$268

Summarized financial information of PPG's equity affiliates on a 100 percent basis, in the aggregate, is as follows:

(Millions)	2011	2010
Working capital	$ 339	$ 130
Property, net	952	927
Short-term debt	(202)	(137)
Long-term debt	(626)	(423)
Other, net	61	184
Net assets	$ 524	$ 681

(Millions)	2011	2010	2009
Revenues	$1,633	$1,519	$1,320
Net earnings/(loss)	$ 80	$ 103	$ (4)

PPG's share of undistributed net earnings of equity affiliates was $101 million and $94 million as of December 31, 2011 and 2010, respectively. Dividends received from equity affiliates were $19 million, $6 million and $11 million in 2011, 2010 and 2009, respectively.

As of December 31, 2011, there were no unrealized pretax gains or losses related to marketable equity securities available for sale. As of December 31, 2010, there were unrealized pretax gains of $1 million recorded in "Accumulated other comprehensive loss" in the accompanying consolidated balance sheet related to marketable equity securities available for sale. PPG sold certain of these investments resulting in recognition of pretax gains of $3 million, $2 million and $0.1 million in 2011, 2010, and 2009, respectively. Cash proceeds of $9 million, $3 million, and $0.1 million were received in 2011, 2010, and 2009, respectively.

6. Goodwill and Other Identifiable Intangible Assets

The change in the carrying amount of goodwill attributable to each reportable business segment for the years ended December 31, 2011 and 2010 was as follows:

(Millions)	Performance Coatings	Industrial Coatings	Architectural Coatings—EMEA	Optical and Specialty Materials	Glass	Commodity Chemicals	Total
Balance, Jan. 1, 2010	$ 1,143	$ 509	$ 1,021	$ 51	$ 57	$ 3	$ 2,784
Goodwill from acquisitions	—	7	8	—	—	3	18
Currency translation	8	(21)	(63)	(2)	(5)	—	(83)
Balance, Dec. 31, 2010	$ 1,151	$ 495	$ 966	$ 49	$ 52	$ 6	$ 2,719
Goodwill from acquisitions	4	—	1	—	—	—	5
Currency translation	(16)	(11)	(34)	(1)	(2)	—	(64)
Balance, Dec. 31, 2011	$ 1,139	$ 484	$ 933	$ 48	$ 50	$ 6	$ 2,660

The carrying amount of acquired trademarks with indefinite lives as of December 31, 2011 and 2010 totaled $316 million and $323 million, respectively.

The Company's identifiable intangible assets with finite lives are being amortized over their estimated useful lives and are detailed below.

	Dec. 31, 2011			Dec. 31, 2010		
(Millions)	Gross Carrying Amount	Accumulated Amortization	Net	Gross Carrying Amount	Accumulated Amortization	Net
Acquired technology	$ 511	$(308)	$203	$ 515	$(273)	$242
Customer-related intangibles	945	(412)	533	974	(355)	619
Tradenames	116	(50)	66	120	(44)	76
Other	32	(25)	7	31	(23)	8
Balance	$1,604	$(795)	$809	$1,640	$(695)	$945

Aggregate amortization expense was $121 million, $124 million and $126 million in 2011, 2010 and 2009, respectively. The estimated future amortization expense of identifiable intangible assets is approximately $120 million during 2012, approximately $105-$110 million during 2013, 2014, 2015, and approximately $85 million in 2016.

7. Business Restructuring

In March of 2009, the Company finalized a restructuring plan focused on further reducing its global cost structure, driven by global economic conditions, low end-market demand and acceleration of cost-savings from the integration of the 2008 acquisition of SigmaKalon. As part of the restructuring, PPG closed the paint manufacturing portion of its facility in Saultain, France at the end of 2009, as well as several smaller production, laboratory, warehouse and distribution facilities across PPG's businesses and regions, and has reduced staffing across the company globally.

As a result of this restructuring plan, in March of 2009 the Company recorded a charge of $186 million for business restructuring, including severance and other costs of $154 million and asset write-offs of $32 million.

The Company also incurred approximately $11 million of additional costs directly associated with the restructuring actions for demolition, dismantling, relocation and training, of which $9 million was charged to expense as incurred in 2009 and $2 million in the first quarter of 2010.

At December 31, 2011, the remaining reserve for the 2009 restructuring plan of $4 million relates to severance payments to be made to certain former employees and are all expected to be paid before December 31, 2012.

The following table summarizes the activity through December 31, 2011 related to the 2009 restructuring actions:

(Millions, except no. of employees)	Severance and Other Costs	Asset Write-offs	Total Reserve	Employees Impacted
Performance Coatings	$ 35	$ 4	$ 39	764
Industrial Coatings	75	16	91	935
Architectural Coatings - EMEA	17	—	17	130
Optical & Specialty Materials	3	9	12	219
Commodity Chemicals	6	—	6	42
Glass	11	2	13	247
Corporate	7	1	8	91
Total	$154	$ 32	$ 186	2,428
2009 activity	(77)	(32)	(109)	(1,902)
Currency impact	11	—	11	—
Balance as of December 31, 2009	$ 88	$ —	$ 88	526
2010 activity	(67)	—	(67)	(526)
Currency impact	(4)	—	(4)	—
Balance as of December 31, 2010	$ 17	$ —	$ 17	—
2011 activity	(13)	—	(13)	—
Currency impact	—	—	—	—
Balance as of December 31, 2011	$ 4	$ —	$ 4	—

At December 31, 2011 and 2010 there was a remaining reserve of $1 million and $6 million, respectively related to a 2008 restructuring plan. All remaining accrued amounts are expected to be paid before December 31, 2012.

8. Debt and Bank Credit Agreements and Leases

(Millions)	2011	2010
6 7/8% notes, due 2012[1]	$ 71	$ 71
5.75% notes, due 2013[1]	600	600
3 7/8% notes, due 2015 (€300)	388	401
1.9 % notes, due 2016[1][2]	248	248
7 3/8% notes, due 2016[1]	146	146
6 7/8% notes, due 2017	74	74
6.65% notes, due 2018	700	700
7.4% notes, due 2019	198	198
3.6% notes, due 2020[2]	495	494
9% non-callable debentures, due 2021	149	149
7.70% notes, due 2038	249	249
5.5% notes, due 2040[2]	248	248
Unsecured term loan, due 2012	—	400
Impact of derivatives on debt[1]	42	24
Various other non-U.S. debt, weighted average 2.3% as of December 31, 2011 and 3.4% as of December 31, 2010	9	11
Capital lease obligations	32	34
Total	3,649	4,047
Less payments due within one year	75	4
Long-term debt	$3,574	$4,043

(1) *PPG entered into several interest rate swaps which have the effect of converting $445 million and $450 million as of December 31, 2011 and 2010, respectively, of these fixed rate notes to variable rates, based on the three-month London Interbank Offered Rate (LIBOR). The fair values of these interest rate swaps are based on Level 2 inputs as described in Note 9. The weighted average effective interest rate for these borrowings, including the effects of the outstanding swaps, was 3.1% and 4.3% for the years ended December 31, 2011 and 2010, respectively. Refer to Notes 1 and 11 for additional information.*

(2) *In 2010, the $1 billion notes issuance was issued at a discount. The effective interest rates of the 2016, 2020, and 2040 notes were 2.2%, 3.8%, and 5.5% respectively, at December 31, 2010. In 2011, the 2016 notes were converted to variable rate debt and are included in note (1) above.*

Aggregate maturities of long-term debt during the next five years are (in millions) $75 in 2012, $613 in 2013, $2 in 2014, $391 in 2015, and $421 in 2016.

In June 2011, the Company repaid a $400 million three year, unsecured term loan, which had a scheduled maturity date of June 2012. There was no prepayment penalty. This loan was made into in June 2009. PPG used $116 million of the proceeds from this term loan to retire its 7.05% Notes due 2009; the remainder of the loan proceeds of approximately $284 million were used to retire outstanding amounts under a €650 million revolving credit facility. The interest rate was variable based on a spread over LIBOR. This term loan was repaid using a portion of the proceeds from our November 2010 $1 billion debt issuance.

On November 12, 2010, PPG completed a public offering of $250 million in aggregate principal amount of its 1.900% Notes due 2016, $500 million in aggregate principal amount of its 3.600% Notes due 2020 and $250 million in aggregate principal amount of its 5.500% Notes due 2040. These notes were issued pursuant to an indenture dated as of March 18, 2008 (the "Original Indenture") between the Company and The Bank of New York Mellon Trust Company, N.A., as trustee (the "Trustee"), as supplemented by a first supplemental indenture dated as of March 18, 2008 between the Company and the Trustee (the "First Supplemental Indenture") and a second supplemental indenture dated as of November 12, 2010 between the Company and the Trustee (the "Second Supplemental Indenture" and, together with the Original Indenture and the First Supplemental Indenture, the "Indenture"). The Company may issue additional debt from time to time pursuant to the Original Indenture. The Indenture governing these notes contains covenants that limit the Company's ability to, among other things, incur certain liens securing indebtedness, engage in certain sale-leaseback transactions, and enter into certain consolidations, mergers, conveyances, transfers or leases of all or substantially all the Company's assets. The terms of these notes also require the Company to make an offer to repurchase Notes upon a Change of Control Triggering Event (as defined in the Second Supplemental Indenture)

at a price equal to 101% of their principal amount plus accrued and unpaid interest.

Cash proceeds from the sale of these notes was $983 million (net of discount and issuance costs). The discount and issuance costs related to these notes, which totaled $17 million, will be amortized to interest expense over the respective terms of the notes.

In August 2010, PPG entered into a three-year credit agreement with several banks and financial institutions (the "Credit Agreement"). The Credit Agreement provides for a $1.2 billion unsecured revolving credit facility. In connection with entering into this Credit Agreement, the Company terminated its €650 million and its $1 billion revolving credit facilities that were each set to expire in 2011. There were no outstanding amounts due under either revolving facility at the times of their termination. The Company has the ability to increase the size of the Credit Agreement by up to an additional $300 million, subject to the receipt of lender commitments and other conditions. The Credit Agreement will terminate and all amounts outstanding will be due and payable on August 5, 2013.

The Credit Agreement provides that loans will bear interest at rates based, at the Company's option, on one of two specified base rates plus a margin based on certain formulas defined in the Credit Agreement. Additionally, the Credit Agreement contains a commitment fee on the amount of unused commitment under the Credit Agreement ranging from 0.125% to 0.625% per annum. The applicable interest rate and the fee will vary depending on the ratings established by Standard & Poor's Financial Services LLC and Moody's Investor Service Inc. for the Company's non-credit enhanced, long-term, senior, unsecured debt. There were no amounts outstanding under the credit agreement at December 31, 2011; however, the available borrowing rate on a one month, U.S. dollar denominated borrowing would have been 1.05 percent.

The Credit Agreement contains usual and customary restrictive covenants for facilities of its type, which include, with specified exceptions, limitations on the Company's ability to create liens or other encumbrances, to enter into sale and leaseback transactions and to enter into consolidations, mergers or transfers of all or substantially all of its assets. The Credit Agreement also requires the Company to maintain a ratio of total indebtedness to total capitalization, as defined in the Credit Agreement, of 60 percent or less.

The Credit Agreement contains customary events of default that would permit the lenders to accelerate the repayment of any loans, including the failure to make timely payments when due under the Credit Agreement or other material indebtedness, the failure to satisfy covenants contained in the Credit Agreement, a change in control of the Company and specified events of bankruptcy and insolvency.

PPG's non-U.S. operations have uncommitted lines of credit totaling $679 million of which $36 million was used as of December 31, 2011. These uncommitted lines of credit are subject to cancellation at any time and are generally not subject to any commitment fees.

Short-term debt outstanding as of December 31, 2011 and 2010, was as follows:

(Millions)	2011	2010
Other, weighted average 3.72% as of Dec. 31, 2011 and 3.39% as of December 31, 2010	33	24
Total	$33	$24

PPG is in compliance with the restrictive covenants under its various credit agreements, loan agreements and indentures. The Company's revolving credit agreements include a financial ratio covenant. The covenant requires that the amount of total indebtedness not exceed 60% of the Company's total capitalization excluding the portion of accumulated other comprehensive income (loss) related to pensions and other postretirement benefit adjustments. As of December 31, 2011, total indebtedness was 43 percent of the Company's total capitalization excluding the portion of accumulated other comprehensive income (loss) related to pensions and other postretirement benefit adjustments. Additionally, substantially all of the Company's debt agreements contain customary cross-default provisions. Those provisions generally provide that a default on a debt service payment of $10 million or more for longer than the grace period provided (usually 10 days) under one agreement may result in an event of default under other agreements. None of the Company's primary debt obligations are secured or guaranteed by the Company's affiliates.

Interest payments in 2011, 2010 and 2009 totaled $212 million, $189 million and $201 million, respectively.

In October 2009, the Company entered into an agreement with a counterparty to repurchase up to 1.2 million shares of the Company's stock of which 1.1 million shares were purchased in the open market (465,006 of these shares were purchased as of December 31, 2009 at a weighted average price of $56.66 per share). The counterparty held the shares until September of 2010 when the Company paid $65 million and took possession of these shares.

In December 2008, the Company entered into an agreement with a counterparty to repurchase 1.5 million

shares of the Company's stock. Under the terms of the agreement, the counterparty purchased the shares in the open market in January 2009 and held the shares until December 2009 when the Company paid the agreed upon price of $39.53 per share and took possession of these shares. The total cost of this share repurchase was approximately $59 million.

Rental expense for operating leases was $249 million, $233 million and $241 million in 2011, 2010 and 2009, respectively. The primary leased assets include paint stores, transportation equipment, warehouses and other distribution facilities, and office space, including the Company's corporate headquarters located in Pittsburgh, Pa. Minimum lease commitments for operating leases that have initial or remaining lease terms in excess of one year as of December 31, 2011, are (in millions) $162 in 2012, $124 in 2013, $97 in 2014, $74 in 2015, $55 in 2016 and $131 thereafter.

The Company had outstanding letters of credit and surety bonds of $110 million as of December 31, 2011. The letters of credit secure the Company's performance to third parties under certain self-insurance programs and other commitments made in the ordinary course of business. As of December 31, 2011 and 2010, guarantees outstanding were $90 million and $86 million, respectively. The guarantees relate primarily to debt of certain entities in which PPG has an ownership interest and selected customers of certain of the Company's businesses. A portion of such debt is secured by the assets of the related entities. The carrying values of these guarantees were $13 million and $10 million as of December 31, 2011 and 2010, respectively, and the fair values were $21 million and $14 million, as of December 31, 2011 and 2010, respectively. The fair value of each guarantee was estimated by comparing the net present value of two hypothetical cash flow streams, one based on PPG's incremental borrowing rate and the other based on the borrower's incremental borrowing rate, as of the effective date of the guarantee. Both streams were discounted at a risk free rate of return. The Company does not believe any loss related to these letters of credit, surety bonds or guarantees is likely.

9. Fair Value Measurement

The accounting guidance on fair value measurements establishes a hierarchy with three levels of inputs used to determine fair value. Level 1 inputs are quoted prices in active markets for identical assets and liabilities, are considered to be the most reliable evidence of fair value, and should be used whenever available. Level 2 inputs are observable prices that are not quoted on active exchanges. Level 3 inputs are unobservable inputs employed for measuring the fair value of assets or liabilities.

Assets and liabilities reported at fair value on a recurring basis:

	December 31, 2011			
(Millions)	*Level 1*	*Level 2*	*Level 3*	*Total*
Short-term investments:				
Commercial paper and restricted cash	$—	$ 21	$—	$ 21
Marketable equity securities	4	—	—	4
Other current assets:				
Foreign currency contracts[1]	—	1	—	1
Interest rate swaps[1]	—	1	—	1
Equity forward arrangement[1]	—	56	—	56
Investments:				
Marketable equity securities	56	—	—	56
Other assets:				
Interest rate swaps[1]	—	25	—	25
Accounts payable and accrued liabilities:				
Foreign currency contracts[1]	—	6	—	6
Forward starting swaps[1]	—	92	—	92
Natural gas swap contracts[1]	—	9	—	9
Other liabilities:				
Cross currency swaps[1]	—	120	—	120
Foreign currency contracts[1]	—	1	—	1

(1) This entire balance is designated as a hedging instrument under GAAP.

	December 31, 2010			
(Millions)	*Level 1*	*Level 2*	*Level 3*	*Total*
Short-term investments:				
Commercial paper and restricted cash	$—	$632	$—	$632
Marketable equity securities	5	—	—	5
Other current assets:				
Foreign currency contracts[1]	—	4	—	4
Equity forward arrangement[1]	—	55	—	55
Investments:				
Marketable equity securities	65	—	—	65
Other assets:				
Interest rate swaps[1]	—	20	—	20
Accounts payable and accrued liabilities:				
Foreign currency contracts[1]	—	4	—	4
Natural gas swap contracts[1]	—	28	—	28
Other liabilities:				
Cross currency swaps[1]	—	163	—	163
Forward starting swaps[1]	—	21	—	21
Natural gas swap contracts[1]	—	3	—	3

(1) This entire balance is designated as a hedging instrument under GAAP.

Assets and liabilities reported at fair value on a nonrecurring basis:

There were no nonmonetary assets or liabilities written down to fair value on a nonrecurring basis during 2010 or 2011.

As a result of finalizing a restructuring plan, as discussed in Note 7, "Business Restructuring," long-lived assets with a carrying amount of $36 million were written-down to their fair value of $4 million, resulting in a charge of $32 million, which was included within the business restructuring charge in March 2009. These long-lived assets were valued using Level 3 inputs.

10. Financial Instruments, Excluding Derivative Financial Instruments

Included in PPG's financial instrument portfolio are cash and cash equivalents, short-term investments, cash held in escrow, marketable equity securities, company-owned life insurance and short and long-term debt instruments. The fair values of these financial instruments approximated their carrying values at December 31, 2011 and 2010, in the aggregate, except for long-term debt.

Long-term debt (excluding capital lease obligations), had carrying and fair values totaling $3,617 million and $4,154 million, respectively, as of December 31, 2011. Long-term debt (excluding capital lease obligations), had carrying and fair values totaling $4,013 million and $4,299 million, respectively, as of December 31, 2010. The fair values of the debt instruments were based on discounted cash flows and interest rates then currently available to the Company for instruments of the same remaining maturities.

11. Derivative Financial Instruments and Hedge Activities

The Company recognizes all derivative financial instruments as either assets or liabilities at fair value on the balance sheet. The accounting for changes in the fair value of a derivative depends on the use of the instrument. To the extent that a derivative is effective as a hedge of an exposure to future changes in cash flows, the change in fair value of the instrument is deferred in accumulated other comprehensive income (loss) ("AOCI"). Any portion considered to be ineffective is reported in earnings immediately, including changes in value related to credit risk. To the extent that a derivative is effective as a hedge of an exposure to future changes in fair value, the change in the derivative's fair value is offset in the consolidated statement of income by the change in fair value of the item being hedged. To the extent that a derivative or a financial instrument is effective as a hedge of a net investment in a foreign operation, the change in the derivative's fair value is deferred as an unrealized currency translation adjustment in AOCI.

PPG's policies do not permit speculative use of derivative financial instruments. PPG uses derivative instruments to manage its exposure to fluctuating natural gas prices through the use of natural gas swap contracts. PPG also uses forward currency and option contracts as hedges against its exposure to variability in exchange rates on short-term intercompany borrowings and transactions, unrecognized firm sales commitments and cash flows denominated in foreign currencies. PPG uses foreign denominated debt and cross currency swap contracts to hedge net investments in foreign operations. Interest rate swaps are used to manage the Company's exposure to changing interest rates as such rate changes affect the fair value of fixed rate borrowings. Forward starting swaps are used to lock-in a fixed interest rate, to which will be added a corporate spread, related to future long-term debt refinancings. PPG also uses an equity forward arrangement to hedge the Company's exposure to changes in the fair value of PPG stock that is to be contributed to the asbestos settlement trust as discussed in Note 15, "Commitments and Contingent Liabilities."

PPG enters into derivative financial instruments with high credit quality counterparties and diversifies its positions among such counterparties in order to reduce its exposure to credit losses. The Company did not realize a credit loss on derivatives during the three-year period ended December 31, 2011.

PPG centrally manages certain of its foreign currency transaction risks to minimize the volatility in cash flows caused by currency fluctuations. Decisions on whether to use derivative financial instruments to hedge the net transaction exposures related to all regions of the world are made based on the amount of those exposures by currency and, in certain situations, an assessment of the near-term outlook for certain currencies. This net hedging strategy does not qualify for hedge accounting; therefore, the change in the fair value of these instruments is recorded in "Other charges" in the accompanying consolidated statement of income in the period of change. As of December 31, 2011 and 2010, the fair value of these contracts were assets of $0.4 million and $0.1 million, respectively.

PPG designates forward currency contracts as hedges against the Company's exposure to variability in exchange rates on short-term intercompany borrowings and transactions denominated in foreign currencies. To the extent effective, changes in the fair value of these instruments are deferred in AOCI and subsequently reclassified to "Other charges" in the accompanying consolidated statement of income as foreign exchange gains and losses are recognized on the related intercompany and other transactions. The portion of the change in fair value considered to be ineffective is recognized immediately in "Other charges" in the accompanying consolidated statement of income. All amounts related to these instruments deferred in AOCI as

of December 31, 2011 will be reclassified to earnings within the next twelve months. As of December 31, 2011 and 2010, the fair value of these instruments was a net liability of $5 million and $2 million, respectively.

PPG designates forward currency contracts as hedges against the Company's exposure to future changes in fair value related to certain firm sales commitments denominated in foreign currencies. These contracts are designated as fair value hedges. As such, they are reported at fair value in the Company's consolidated balance sheet, with changes in the fair value of these contracts and that of the related firm sales commitments reported in net sales. As of December 31, 2011, these contracts converted $91 million to the South Korean won over the 30 month period ending June 30, 2014. As of December 31, 2010, contracts converted $76 million to the South Korean won over the 33 month period ending September 30, 2013. As of December 31, 2011 and 2010, the fair value of the contracts was a net liability of $1 million and a net asset of $2 million, respectively.

PPG entered into nine U.S. dollar to euro cross currency swap contracts with a total notional amount of $1.16 billion, of which $600 million will settle on March 15, 2013 and $560 million will settle on March 15, 2018. Another contract, with a notional amount of $140 million and a settlement date of March 15, 2018 was converted to cash during the first quarter of 2010. Accordingly, on settlement of the remaining outstanding contracts, PPG will receive $1.16 billion U.S. dollars and pay euros to the counterparties to the contracts. During the term of these contracts, PPG will receive semiannual payments in March and September of each year based on U.S. dollar, long-term fixed interest rates, and PPG will make annual payments in March of each year to the counterparties based on euro, long-term fixed interest rates. The Company has designated these swaps as hedges of its net investment in the acquired SigmaKalon businesses and, as a result, the mark to market fair value adjustments of the swaps have been and will be recorded as a component of AOCI, and the cash flow impact of these swaps has been and will be classified as investing activities in the consolidated statement of cash flows. As of December 31, 2011 and 2010, the fair value of these contracts was a net liability of $120 million and $163 million, respectively.

As of December 31, 2011 and 2010, PPG designated €300 million euro-denominated borrowings as a hedge of a portion of PPG's net investment in the Company's European operations. Also, during 2010, certain portions of PPG's various other euro-denominated borrowings were designated as hedges of PPG's investments in its European operations. As a result, the change in book value from adjusting these foreign-denominated borrowings to current spot rates was deferred in AOCI.

As of December 31, 2011, the Company had accumulated pretax unrealized translation gains in AOCI of $14 million and as of December 31, 2010 accumulated pretax unrealized losses in AOCI of $33 million, respectively, related to both the euro-denominated borrowings and the cross currency swaps that have been designated as hedges of net investments.

Deferrals in AOCI related to hedges of the Company's net investments in European operations would be reclassified and recognized in earnings upon a substantial liquidation, sale or partial sale of such investments or upon impairment of all or a portion of such investments.

The Company manages its interest rate risk by balancing its exposure to fixed and variable rates while attempting to minimize its interest costs. Generally, the Company maintains variable interest rate debt at a level of approximately 25 percent to 50 percent of total borrowings. PPG principally manages its fixed and variable interest rate risk by retiring and issuing debt from time to time and through the use of interest rate swaps. As of December 31, 2011 and 2010, these swaps converted $445 million and $450 million of fixed rate debt to variable rate debt, respectively. The swaps are designated as fair value hedges. As such, these swaps are carried at fair value. Changes in the fair value of these swaps and that of the related debt are recorded in "Interest expense" in the accompanying consolidated statement of income. As of December 31, 2011 and 2010, the fair value of these contracts was an asset of $26 million and $20 million, respectively.

The Company entered into forward starting swaps in 2009 and in the second quarter of 2010 to effectively lock-in a fixed interest rate of 4.8 percent for future debt refinancings with an anticipated term of ten years based on the ten year swap rate, to which will be added a corporate spread. All of the swap contracts are required to be settled in July 2012. As of December 31, 2011 and 2010, the notional amount of the swaps outstanding totaled $400 million. To the extent that the swaps are effective, changes in the fair values of the swap contracts are deferred in AOCI. The portion of the change in fair value considered to be ineffective is recognized immediately in "Other charges" in the accompanying consolidated statement of income. Amounts deferred in AOCI will be reclassified to interest expense over the same period of time that interest expense is recognized on the future borrowings. As of December 31, 2011 and 2010, the fair value of these swaps was a liability of $92 million and $21 million, respectively.

The Company uses derivative instruments to manage its exposure to fluctuating natural gas prices through the use of natural gas swap contracts. To the extent that these instruments are effective in hedging PPG's exposure to

price changes, changes in the fair values of the hedge contracts are deferred in AOCI and reclassified to "Cost of sales, exclusive of depreciation and amortization" as the natural gas is purchased. The amount of ineffectiveness is reported in "Other charges" in the accompanying consolidated statement of income immediately. As of December 31, 2011 and 2010, the fair value of these contracts was a liability of $9 million and $31 million, respectively. As of December 31, 2011, the total pretax loss deferred in AOCI related to contracts that mature within the twelve-month period ending December 31, 2012.

PPG entered into a one-year renewable equity forward arrangement with a bank in 2003 in order to mitigate the impact on PPG earnings of changes in the fair value of 1,388,889 shares of PPG stock that are to be contributed to the asbestos settlement trust as discussed in Note 15, "Commitments and Contingent Liabilities." This instrument, which has been renewed, is recorded at fair value as an asset or liability and changes in the fair value of this instrument are reflected in the "Asbestos settlement – net" caption of the accompanying consolidated statement of income. The total principal amount payable for these shares is $62 million. PPG will pay to the bank interest based on the principal amount and the bank will pay to PPG an amount equal to the dividends paid on these shares during the period this instrument is outstanding. The difference between the principal amount and any amounts related to unpaid interest or dividends and the current market price for these shares, adjusted for credit risk, represents the fair value of the instrument as well as the amount that PPG would pay or receive if the bank chose to net settle the instrument. Alternatively, the bank may, at its option, require PPG to purchase the shares covered by the arrangement at the principal amount adjusted for unpaid interest and dividends as of the date of settlement. As of December 31, 2011 and 2010, the fair value of this contract was an asset of $56 million and $55 million, respectively.

No derivative instrument initially designated as a hedge instrument was undesignated or discontinued as a hedging instrument during 2011 or 2010. Nor were any amounts deferred in AOCI reclassified to earnings during the three-year period ended December 31, 2011 related to hedges of anticipated transactions that were no longer expected to occur.

All of the outstanding derivative instruments are subject to accelerated settlement in the event of PPG's failure to meet its debt obligations or payment obligations under the terms of the instruments' contractual provisions. In addition, should the Company be acquired and its payment obligations under the derivative instruments' contractual arrangements not be assumed by the acquirer, or should PPG enter into bankruptcy, receivership or reorganization proceedings, the instruments would also be subject to accelerated settlement.

For the year ended December 31, 2011, Other comprehensive loss included a net pretax loss due to cash flow hedge derivatives of $51 million ($32 million, net of tax). This loss was comprised of realized losses of $28 million and unrealized losses of $79 million. The realized losses related to the settlement during the period of natural gas swap contracts and interest rate swaps owned by RS Cogen (Refer to Note 5, "Investments" for a discussion regarding this equity method investment.), offset in part by realized gains on foreign currency contracts. The unrealized losses related to the change in fair value of the natural gas swap contracts, forward starting swaps and interest rate swaps owned by RS Cogen, offset in part by the change in fair value of the foreign currency contracts.

For the year ended December 31, 2010, Other comprehensive loss included a net pretax loss due to cash flow hedge derivatives of $3 million ($2 million, net of tax). This loss was comprised of realized losses of $93 million and unrealized losses of $96 million. The realized losses related to the settlement during the period of natural gas swap contracts, interest rate swaps owned by RS Cogen (Refer to Note 5, "Investments" for a discussion regarding this equity method investment.) and foreign currency contracts. The unrealized losses related to the change in fair value of the natural gas swap contracts, forward starting swaps, foreign currency contracts, and interest rate swaps owned by RS Cogen.

For the year ended December 31, 2009, Other comprehensive income included a net pretax gain due to cash flow hedge derivatives of $41 million ($25 million, net of tax). This gain was comprised of realized losses of $159 million and unrealized losses of $118 million. The realized losses related to the settlement during the period of natural gas swap contracts, interest rate swaps owned by RS Cogen and foreign currency contracts. The unrealized losses related to the change in fair value of the natural gas swap and foreign currency contracts, offset in part by the change in fair value on forward starting swaps and interest rate swaps owned by RS Cogen.

Refer to Note 9, "Fair Value Measurement," for additional disclosures related to the Company's derivative instruments outstanding as of December 31, 2011 and 2010.

Notes to the Consolidated Financial Statements

The following tables provide details for the years ended December 31, 2011 and 2010 related to fair value, cash flow and net investment hedges, by type of derivative and financial instrument. All dollar amounts are pretax.

December 31, 2011

Hedge Type (Millions)	Gain (Loss) Deferred in OCI	Gain (Loss) Recognized Amount	Gain (Loss) Recognized Caption
Fair Value			
Interest rate swaps[a]	Not applicable	$ 16	Interest expense
Foreign currency contracts[b]	Not applicable	2	Sales
Equity forward arrangements[a]	Not applicable	1	Asbestos - net
Total Fair Value		$ 19	
Cash Flow			
Natural gas swaps[a]	$(10)	$(32)	Cost of sales
Interest rate swaps of RS Cogen	(2)	(2)	Other earnings
Forward starting swaps[c]	(73)	—	Interest expense
Foreign currency contracts[d]	6	6	Other charges
Other		—	Interest expense
Total Cash Flow	$(79)	$(28)	
Net Investment			
Cross currency swaps[e]	$ 34	$—	Other charges
Foreign denominated debt	13		Other charges
Total Net Investment	$ 47	$—	
Non-Hedge			
Foreign currency contracts	Not applicable	$—	Other charges
Total Non-Hedge		$—	

(a) The ineffective portion related to each of the items was less than $0.1 million of either income or expense.
(b) The ineffective portion related to this item was $0.8 million of income.
(c) The ineffective portion related to this item was $3 million of income.
(d) The ineffective portion related to this item was $6 million of expense.
(e) The ineffective portion related to this item was $2 million of expense.

December 31, 2010

Hedge Type (Millions)	Gain (Loss) Deferred in OCI	Gain (Loss) Recognized Amount	Gain (Loss) Recognized Caption
Fair Value			
Interest rate swaps[a]	Not applicable	$ 12	Interest expense
Foreign currency contracts[a]	Not applicable	(1)	Sales
Equity forward arrangements[a]	Not applicable	37	Asbestos - net
Total Fair Value		$ 48	
Cash Flow			
Natural gas swaps[a]	$ (38)	$(58)	Cost of sales
Interest rate swaps of RS Cogen	(2)	(2)	Other earnings
Forward starting swaps[b]	(26)	—	Interest expense
Foreign currency contracts[c]	(32)	(33)	Other charges
Other[a]	2	—	Interest expense
Total Cash Flow	$ (96)	$(93)	
Net Investment			
Cross currency swaps[d]	$145	$ —	Other charges
Foreign denominated debt	32		Other charges
Total Net Investment	$177	$ —	
Non-Hedge			
Foreign currency contracts	Not applicable	$ 3	Other charges
Total Non-Hedge		$ 3	

(a) The ineffective portion related to each of the items was less than $0.1 million of either income or expense.
(b) The ineffective portion related to this item was $1 million of income.
(c) The ineffective portion related to this item was $6 million of expense.
(d) The ineffective portion related to this item was $3 million of expense.

Notes to the Consolidated Financial Statements

12. Earnings Per Common Share

The earnings per common share calculations for the three years ended December 31, 2011, are as follows:

(Millions, except per share amounts)	2011	2010	2009
Earnings per common share (attributable to PPG)			
Net income (attributable to PPG)	$1,095	$769	$336
Weighted average common shares outstanding	157.3	164.5	164.8
Earnings per common share (attributable to PPG):			
Net income (attributable to PPG)	$6.96	$4.67	$2.04
Earnings per common share - assuming dilution (attributable to PPG)			
Net income (attributable to PPG)	$1,095	$769	$336
Weighted average common shares outstanding	157.3	164.5	164.8
Effect of dilutive securities:			
Stock options	1.1	0.8	0.1
Other stock compensation plans	0.9	0.6	0.6
Potentially dilutive common shares	2.0	1.4	0.7
Adjusted weighted average common shares outstanding	159.3	165.9	165.5
Earnings per common share - assuming dilution (attributable to PPG):			
Net income (attributable to PPG)	$6.87	$4.63	$2.03

There were 0.6 million, 1.2 million and 6.2 million outstanding stock options excluded in 2011, 2010 and 2009, respectively, from the computation of diluted earnings per common share due to their anti-dilutive effect.

13. Income Taxes

The following table presents a reconciliation of the statutory U.S. corporate federal income tax rate to the Company's effective income tax rate:

	2011	2010	2009
U.S. federal income tax rate	35.00%	35.00%	35.00%
Changes in rate due to:			
U.S. State and local taxes	1.03	1.31	1.99
U.S. tax benefit on foreign dividends	(1.04)	0.05	(3.05)
Taxes on non-U.S. earnings	(8.03)	(8.11)	(3.35)
Tax benefit on non-U.S. restructuring costs	—	—	2.76
PPG dividends paid to the ESOP	(0.43)	(0.67)	(1.61)
U.S. tax incentives	(1.67)	(1.83)	(1.16)
Significant audit settlements	(1.09)	—	(0.28)
Other	0.34	(0.28)	0.60
One-time charge, tax law change	—	6.57	—
Effective income tax rate	24.11%	32.04%	30.90%

The decline of the impact of U.S. state and local taxes is largely the result of the decline in U.S. earnings as a percentage of total earnings. The increased impact on the 2011 and 2010 effective income tax rate of non-U.S. earnings was a result of an increase in the level of those earnings and a shift in the geographic mix of those earnings to countries with lower statutory tax rates. U.S. tax incentives include the R&D credit, the U.S. manufacturing deduction and the tax free Medicare Part D subsidy.

The 2011 increase in the U.S. tax benefit on foreign dividends was due to the tax efficient repatriation of high taxed foreign earnings resulting from tax planning.

The 2010 effective tax rate was increased because PPG recorded a one-time, aftertax charge in the first quarter of 2010 of $85 million, or 51 cents per share, as a result of a change in U.S. tax law included in the U.S. Patient Protection and Affordable Care Act enacted in March 2010. Under the prior tax law, the total amount paid for prescription drug costs for retirees over the age of 65 was tax deductible. Beginning in 2013, however, these costs will only be deductible to the extent they exceed the amount of the annual subsidy PPG receives from the U.S. government under Medicare Part D. As a result of this change, the Company's deferred tax asset, which reflects the future tax deductibility of these post retirement costs, had to be reduced in the first quarter of 2010, the period that the change in the tax law was enacted, as required by the accounting guidance for income taxes.

The filing of our 2008 U.S. federal income tax return in September 2009 increased our 2008 foreign sourced income for U.S. tax purposes which, in turn, led to a decision in the fourth quarter of 2009 to pay dividends from several foreign subsidiaries prior to year end. The benefit of the U.S. foreign tax credits associated with those dividends lowered our 2009 effective tax rate.

Income before income taxes of the Company's non-U.S. operations for 2011, 2010 and 2009 was $896 million, $793 million and $342 million, respectively.

The following table gives details of income tax expense reported in the accompanying consolidated statement of income.

(Millions)	2011	2010	2009
Current income tax expense			
U.S. federal	$ 193	$ 62	$ 3
Non-U.S.	176	170	129
U.S. State and local	20	15	15
Total current income tax	389	247	147
Deferred income tax expense			
U.S. federal	11	70	53
Non-U.S.	(17)	2	(13)
U.S. State and local	2	11	4
One-time charge, tax law change	—	85	—
Total deferred income tax	(4)	168	44
Total	$ 385	$ 415	$ 191

Income tax payments in 2011, 2010 and 2009 totaled $353 million, $198 million and $197 million, respectively.

Net deferred income tax assets and liabilities as of December 31, 2011 and 2010, were as follows:

(Millions)	2011	2010
Deferred income tax assets related to		
Employee benefits	$ 963	$ 809
Contingent and accrued liabilities	524	524
Operating loss and other carry-forwards	183	125
Inventories	29	36
Property	3	8
Derivatives	95	75
Other	97	118
Valuation allowance	(134)	(83)
Total	1,760	1,612
Deferred income tax liabilities related to		
Property	500	450
Intangibles	460	481
Employee benefits	64	57
Other	63	66
Total	1,087	1,054
Deferred income tax assets – net	$ 673	$ 558

As of December 31, 2011, subsidiaries of the Company had available net operating loss carryforwards of approximately $581 million for income tax purposes, of which approximately $505 million has an indefinite expiration. The remaining $76 million expires between the years 2012 and 2026. The tax effected amount of the net operating loss carryforwards is $168 million. A valuation allowance has been established for carry-forwards at December 31, 2011, when the ability to utilize them is not likely.

No deferred U.S. income taxes have been provided on certain undistributed earnings of non-U.S. subsidiaries, which amounted to $2,920 million as of December 31, 2011 and $2,465 million as of December 31, 2010. These earnings are considered to be reinvested for an indefinite period of time or will be repatriated when it is tax effective to do so. It is not practicable to determine the deferred tax liability on these undistributed earnings.

The Company files federal, state and local income tax returns in numerous domestic and foreign jurisdictions. In most tax jurisdictions, returns are subject to examination by the relevant tax authorities for a number of years after the returns have been filed. The Company is no longer subject to examinations by tax authorities in any major tax jurisdiction for years before 2003. Additionally, the Internal Revenue Service has completed its examination of the Company's U.S. federal income tax returns filed for years through 2008. The examination of the Company's U.S. federal income tax return for 2009 is currently underway and is expected to be finalized during 2012.

The activity in the accrued liability for unrecognized tax benefits for the three years ended December 31, 2011 is as follows:

(Millions)	2011	2010	2009
Balance at January 1	$111	$108	$ 99
Additions based on tax positions related to the current year	15	7	19
Additions for tax positions of prior years	17	15	13
Reductions for tax positions of prior years	(19)	(5)	(8)
Reductions for expiration of the applicable statute of limitations	(7)	(6)	(9)
Settlements	(8)	(2)	(11)
Currency	(2)	(6)	5
Balance at December 31	$107	$111	$108

The amount of unrecognized tax benefits was $107 million, $111 million and $108 million as of December 31, 2011, 2010 and 2009, respectively. If recognized, $100 million, $103 million and $99 million would impact the effective rate as of December 31, 2011, 2010 and 2009, respectively. The Company recognizes accrued interest and penalties related to unrecognized tax benefits in income tax expense. The Company had accrued as of December 31, 2011, 2010 and 2009, $15 million, $15 million and $13 million, respectively, for estimated interest and penalties on unrecognized tax benefits. The Company recognized no expense in 2011 related to estimated interest and penalties. The Company recognized $2 million and $3 million of expense for estimated interest and penalties during the years ended December 31, 2010 and 2009, respectively.

While it is expected that the amount of unrecognized tax benefits will change in the next 12 months,

quantification of an estimated range cannot be made at this time. The Company does not expect this change to have a significant impact on the results of operations or financial position of the Company, however, actual settlements may differ from amounts accrued.

14. Pensions and Other Postretirement Benefits

Defined Benefit Plans

PPG has defined benefit pension plans that cover certain employees worldwide. The principal defined benefit pension plans are those in the U.S., Canada, the Netherlands and the U.K. which, in the aggregate, represent 99% of the market value of plan assets at December 31, 2011. PPG also sponsors welfare benefit plans that provide postretirement medical and life insurance benefits for certain U.S. and Canadian employees and their dependents. These programs require retiree contributions based on retiree-selected coverage levels for certain retirees and their dependents and provide for sharing of future benefit cost increases between PPG and participants based on management discretion. The Company has the right to modify or terminate certain of these benefit plans in the future. Salaried and certain hourly employees hired on or after October 1, 2004, are not eligible for postretirement medical benefits. Salaried employees hired, rehired or transferred to salaried status on or after January 1, 2006, and certain hourly employees hired in 2006 or thereafter are eligible to participate in a defined contribution retirement plan. These employees are not eligible for defined benefit pension plan benefits.

Plan Design Changes

In January 2011, the Company approved an amendment to one of its U.S. defined benefit pension plans that represents 77% of the total U.S. projected benefit obligation at December 31, 2011 and 2010. This change will result in employees no longer accruing benefits under this plan either as of December 31, 2011 or December 31, 2020 depending upon the employee's combined age and years of service to PPG. The affected employees will participate in the Company's defined contribution retirement plan from the date their benefit under the defined benefit plan is frozen. The Company remeasured the projected benefit obligation of the amended plan, which resulted in an approximate $65 million reduction in the liability and lowered 2011 pension expense by approximately $12 million. The Company made similar changes to certain other U.S. defined benefit pension plans in 2011. The Company recognized a curtailment loss and special termination benefits associated with these plan amendments of $5 million in 2011. The Company plans to continue reviewing and potentially changing other PPG defined benefit plans in the future.

During 2010, PPG made changes to certain of its defined benefit pension plans to shift pension benefits for future service to defined contribution pension plans. Such changes enacted in 2010 were for the defined benefit plan in the United Kingdom and for certain of our bargaining unit plans in the U.S. Changes that were effective prior to December 31, 2010 were reflected in the measurement of the year end projected benefit obligation as of December 31, 2010.

Postretirement medical

The Medicare Act of 2003 introduced a prescription drug benefit under Medicare ("Medicare Part D") that provides several options for Medicare eligible participants and employers, including a federal subsidy payable to companies that elect to provide a retiree prescription drug benefit which is at least actuarially equivalent to Medicare Part D. During the third quarter of 2004, PPG concluded its evaluation of the provisions of the Medicare Act and decided to maintain its retiree prescription drug program and to take the subsidy available under the Medicare Act. The federal subsidy related to providing a retiree prescription drug benefit is not subject to U.S. federal income tax and is recorded as a reduction in annual net periodic benefit cost of other postretirement benefits.

In August 2007, the Company's U.S. other postretirement benefit plan was amended to consolidate the number of retiree health care options available for certain retirees and their dependents. The amendment was effective January 1, 2008. The amended plan also offered a fully-insured Medicare Part D prescription drug plan for certain retirees and their dependents. As such, beginning in 2008 PPG was no longer eligible to receive the subsidy provided under the Medicare Act of 2003 for these retirees and their dependents.

In October 2009, the Company decided, effective January 1, 2010, to return to a self-insured Medicare Part D prescription drug plan for certain retirees and their dependents that is at least actuarially equivalent to Medicare Part D. As such, effective January 1, 2010, PPG was eligible to receive the subsidy provided under the Medicare Act of 2003 for these retirees and their dependents.

Notes to the Consolidated Financial Statements

The following table sets forth the changes in projected benefit obligations ("PBO") (as calculated as of December 31), plan assets, the funded status and the amounts recognized in the accompanying consolidated balance sheet for the Company's defined benefit pension and other postretirement benefit plans:

	Pensions		Other Postretirement Benefits	
(Millions)	2011	2010	2011	2010
Projected benefit obligation, January 1	$4,952	$4,545	$ 1,235	$ 1,089
Service cost	63	64	19	19
Interest cost	254	249	63	64
Plan amendments	—	—	22	(54)
Actuarial losses	444	410	126	183
Benefits paid	(281)	(270)	(64)	(71)
Foreign currency translation adjustments	(37)	(48)	(3)	5
Curtailment and special termination benefits	(58)	—	—	—
Other	(4)	2	(4)	—
Projected benefit obligation, December 31	$5,333	$4,952	$ 1,394	$ 1,235
Market value of plan assets, January 1	$4,127	$3,594		
Actual return on plan assets	426	478		
Company contributions	121	340		
Participant contributions	2	3		
Benefits paid	(262)	(249)		
Plan expenses and other-net	(2)	(6)		
Foreign currency translation adjustments	(30)	(33)		
Market value of plan assets, December 31	$4,382	$4,127		
Funded Status	$ (951)	$ (825)	$(1,394)	$(1,235)
Amounts recognized in the Consolidated Balance Sheet:				
Other assets (long-term)	23	—	—	—
Accounts payable and accrued liabilities	(13)	(13)	(87)	(84)
Accrued pensions	(961)	(812)	—	—
Other postretirement benefits	—	—	(1,307)	(1,151)
Net liability recognized	$ (951)	$ (825)	$(1,394)	$(1,235)

The PBO is the actuarial present value of benefits attributable to employee service rendered to date, including the effects of estimated future pay increases. The accumulated benefit obligation ("ABO") is the actuarial present value of benefits attributable to employee service rendered to date, but does not include the effects of estimated future pay increases. The ABO for all defined benefit pension plans as of December 31, 2011 and 2010 was $5,117 million and $4,695 million, respectively.

The aggregate PBO and fair value of plan assets (in millions) for the pension plans with PBO in excess of plan assets were $5,164 and $4,196, respectively, as of December 31, 2011, and $4,952 and $4,127, respectively, as of December 31, 2010. The aggregate ABO and fair value of plan assets (in millions) for the pension plans with ABO in excess of plan assets were $4,771 and $3,992, respectively, as of December 31, 2011, and $4,494 and $3,918, respectively, as of December 31, 2010.

Amounts (pretax) not yet reflected in net periodic benefit cost and included in accumulated other comprehensive loss include the following:

(Millions)	*Pensions*		*Other Postretirement Benefits*	
	2011	2010	2011	2010
Accumulated net actuarial losses	$2,052	$1,911	$ 571	$ 476
Accumulated prior service cost (credit)	(2)	1	(37)	(71)
Total	$2,050	$1,912	$ 534	$ 405

The accumulated net actuarial losses for pensions relate primarily to the actual return on plan assets being less than the expected return on plan assets in 2000-2002, and 2008 and a decline in the discount rate since 1999. The accumulated net actuarial losses for other postretirement benefits relate primarily to actual healthcare costs increasing at a higher rate than assumed during the 2001-2003 period and the decline in the discount rate. Since the accumulated net actuarial losses exceed 10 percent of the higher of the market value of plan assets or the PBO at the beginning of the year, amortization of such excess over the average remaining service period of active employees expected to receive benefits has been included in net periodic benefit costs for pension and other postretirement benefits in each of the last three years. The decrease in 2011 in the accumulated prior service credit for other postretirement benefits relates to several amendments to these plans approved by the Company during 2010. Accumulated prior service cost (credit) is amortized over the future service periods of those employees who are active at the dates of the plan amendments and who are expected to receive benefits.

The increase in accumulated other comprehensive loss (pretax) in 2011 relating to defined benefit pension and other postretirement benefits consists of:

(Millions)	*Pensions*	*Other Postretirement Benefits*
Net actuarial loss arising during the year	330	126
New prior service (credit) cost	(4)	21
Amortization of actuarial loss	(120)	(30)
Amortization of prior service (cost) credit	(1)	12
Impact of curtailment	(62)	—
Foreign currency translation adjustments and other	(5)	—
Net change	138	129

The net actuarial loss arising during 2011 related to the Company's pension plans was primarily due to a decrease in the discount rate, partially offset by greater than expected plan asset returns. The net actuarial loss arising during 2011 related to the Company's other postretirement benefit plans resulted from a decrease in the discount rate.

The estimated amounts of accumulated net actuarial loss and prior service cost for the defined benefit pension plans that will be amortized from accumulated other comprehensive income into net periodic benefit cost in 2012 are $137 million and $1 million, respectively. The estimated amounts of accumulated net actuarial loss and prior service (credit) for the other postretirement benefit plans that will be amortized from accumulated other comprehensive (loss) income into net periodic benefit cost in 2012 are $39 million and $(9) million, respectively.

Net periodic benefit cost for the three years ended December 31, 2011, includes the following:

	Pensions			*Other Postretirement Benefits*		
(Millions)	2011	2010	2009	2011	2010	2009
Service cost	$ 63	$ 64	$ 67	$ 19	$19	$ 20
Interest cost	254	249	244	63	64	68
Expected return on plan assets	(312)	(278)	(228)	—	—	—
Amortization of prior service cost (credit)	1	5	6	(12)	(5)	(13)
Amortization of actuarial losses	120	121	129	30	19	34
Curtailments and special termination benefits	5	—	—	—	—	—
Net periodic benefit cost	$ 131	$ 161	$ 218	$100	$97	$109

Net periodic benefit cost is included in Cost of sales, exclusive of depreciation and amortization, Selling, general and administrative and Research and development in the accompanying consolidated statement of income.

Assumptions

The following weighted average assumptions were used to determine the benefit obligation for the Company's defined benefit pension and other postretirement plans as of December 31, 2011 and 2010:

	2011	2010
Discount rate	4.6%	5.3%
Rate of compensation increase	3.9%	3.8%

The following weighted average assumptions were used to determine the net periodic benefit cost for the Company's defined benefit pension and other postretirement benefit plans for the three years in the period ended December 31, 2011:

	2011	2010	2009
Discount rate	5.3%	5.7%	6.1%
Expected return on assets	7.6%	7.8%	7.9%
Rate of compensation increase	3.8%	3.9%	3.9%

These assumptions for each plan are reviewed on an annual basis. In determining the expected return on plan asset assumption, the Company evaluates the mix of investments that comprise each plan's assets and external forecasts of future long-term investment returns. The Company compares the expected return on plan assets assumption to actual historic returns to ensure reasonability. The expected return on plan assets assumption to be used in determining 2012 net periodic pension expense will be 6.8 percent (7.5 percent for the U.S. plans).

At December 31, 2010, the Company updated the mortality table used to calculate its U.S. defined benefit pension and other postretirement benefit liabilities. Previously, the Company had used the mortality table known as RP 2000, projected to 2006 and now uses the RP 2000 table projected to 2017. This updated table reflects improvements in mortality rates.

The weighted-average healthcare cost trend rate (inflation) used for 2011 was 6.3 percent declining to 4.5 percent in the year 2024. For 2012, the assumed weighted-average healthcare cost trend rate used will be 6.3 percent declining to 4.5 percent in the year 2024. These assumptions are reviewed on an annual basis. In selecting rates for current and long-term health care cost assumptions, the Company takes into consideration a number of factors including the Company's actual health care cost increases, the design of the Company's benefit programs, the demographics of the Company's active and retiree populations and external expectations of future medical cost inflation rates. If these 2012 health care cost trend rates were increased or decreased by one percentage point per year, such increase or decrease would have the following effects:

(Millions)	*One-Percentage Point Increase*	*Decrease*
Increase (decrease) in the aggregate of service and interest cost components of annual expense	$ 10	$ (8)
Increase (decrease) in the benefit obligation	$144	$(120)

Contributions

On August 17, 2006, the Pension Protection Act of 2006 ("PPA") was signed into law, changing the funding requirements for the Company's U.S. defined benefit pension plans beginning in 2008. Under the requirements of the PPA, PPG did not have to make a mandatory contribution to these plans in 2011 and does not expect to have a mandatory contribution to these plans in 2012 because of management's intent to make voluntary contributions.

PPG made voluntary contributions to its U.S. defined benefit pension plans of $50 million and $250 million in 2011 and 2010, respectively. PPG made contributions to its non-U.S. defined benefit pension plans in 2011 of $71 million and approximately $85 million in 2010, some of which were required by local funding requirements. PPG expects to make voluntary contributions of up to $60 million to its U.S. plans and mandatory contributions to its non-U.S. plans of approximately $90 million in 2012.

Benefit Payments

The estimated pension benefits to be paid under the Company's defined benefit pension plans during the next five years are (in millions) $272 in 2012, $340 in 2013, $314 in 2014, $403 in 2015 and $297 in 2016 and are expected to aggregate $1,485 million for the five years thereafter. The estimated other postretirement benefits to be paid during the next five years are (in millions) $88 in 2012, $86 in 2013, $87 in 2014, $88 in 2015 and $89 in 2016 and are expected to aggregate $449 million for the five years thereafter. The Company expects to receive between $10 million and $13 million of subsidy under the Medicare Act of 2003 during each of the next five years and an aggregate amount of $84 million for the five years thereafter. The 2011 subsidy under the Medicare Act of 2003 of $7 million was received as of December 31, 2011.

Plan Assets

Each PPG sponsored defined benefit pension plan is managed in accordance with the requirements of local laws and regulations governing defined benefit pension plans for the exclusive purpose of providing pension benefits to participants and their beneficiaries. Investment committees comprised of PPG managers have fiduciary responsibility to oversee the management of pension plan assets by third party asset managers. Pension plan assets are held in trust by financial institutions and managed on a day-to-day basis by the asset managers. The asset managers receive a mandate from each investment committee that is aligned with the asset allocation targets established by each investment committee to achieve the plan's investment strategies. The performance of the asset managers is monitored and evaluated by the investment committees throughout the year.

Pension plan assets are invested to generate investment earnings over an extended time horizon to help fund the cost of benefits promised under the plans while mitigating investment risk. The asset allocation targets established for each pension plan are intended to diversify the investments among a variety of asset categories and among a variety of individual securities within each asset category to mitigate investment risk and provide each plan with sufficient liquidity to fund the payment of pension benefits to current retirees.

The following summarizes the weighted average target pension plan asset allocation as of December 31, 2011 and 2010 for all PPG defined benefit plans:

Asset Category	Dec. 31, 2011	Dec. 31, 2010
Equity securities	40–75%	40-75%
Debt securities	25–60%	25-60%
Real estate	0–10%	0-10%
Other	0–10%	0-10%

The fair values of the Company's pension plan assets at December 31, 2011, by asset category, are as follows:

(Millions)	*Level 1*[1]	*Level 2*[1]	*Level 3*[1]	*Total*
Asset Category				
Equity securities:				
U.S.				
Large cap	$ 24	$ 318	$ —	$ 342
Small cap	125	80	—	205
PPG common stock	151	—	—	151
Non-U.S.				
Developed and emerging markets[2]	63	577	—	640
Debt securities:				
Money market	270	—	—	270
Corporate[3]				
U.S.[4]	672	68	—	740
Developed and emerging markets[2]	223	115	—	338
Diversified[5]	—	339	—	339
Government				
U.S.[4]	510	—	—	510
Developed markets	148	119	—	267
Other[6]	171	22	28	221
Real estate, hedge funds, and other	41	73	245	359
Total	$2,398	$1,711	$273	$4,382

(1) These levels refer to the accounting guidance on fair value measurement described in Note 9, "Fair Value Measurement."
(2) These amounts represents holdings in investment grade debt or equity securities of issuers in both developed markets and emerging economies.
(3) This category represents investment grade debt securities from a diverse set of industry issuers.
(4) These investments are primarily long duration fixed income securities.
(5) This category represents commingled funds invested in diverse portfolios of debt securities.
(6) This category includes mortgage-backed and asset backed debt securities, municipal bonds and other debt securities.

The fair values of the Company's pension plan assets at December 31, 2010, by asset category, are as follows:

(Millions)	Level 1[1]	Level 2[1]	Level 3[1]	Total
Asset Category				
Equity securities:				
U.S.				
Large cap	$ 93	$ 679	$ —	$ 772
Small cap	135	85	—	220
PPG common stock	152	—	—	152
Non-U.S.				
Developed and emerging markets	149	490	—	639
Debt securities:				
Money market	137	—	—	137
Corporate[2]				
U.S.	666	—	—	666
Western Europe	1	167	—	168
Diversified[3]	49	173	—	222
Government				
U.S.	433	—	—	433
Western Europe	19	281	—	300
Other[4]	225	7	39	271
Real estate and other	1	7	139	147
Total	$2,060	$1,889	$178	$4,127

(1) *These levels refer to the accounting guidance on fair value measurement described in Note 9, "Fair Value Measurement."*
(2) *This category represents investment grade debt securities from a diverse set of industry issuers.*
(3) *This category represents commingled funds invested in diverse portfolios of debt securities.*
(4) *This category includes mortgage-backed and asset backed debt securities, municipal bonds and other debt securities.*

The change in the fair value of the Company's Level 3 pension assets for the years ended December 31, 2011 and 2010 was as follows:

(Millions)	Real Estate	Other Debt Securities	Hedge Funds & Other assets	Total
Balance, January 1, 2010	$ 87	$ 40	$—	$127
Realized gain/(loss)	2	1	—	3
Unrealized gain/(loss) for positions still held	13	—	—	13
Transfers in/(out)	15	(1)	22	36
Currency	—	(1)	—	(1)
Balance, December 31, 2010	$117	$ 39	$22	$178
Realized gain/(loss)	(1)	—	—	(1)
Unrealized gain/(loss) for positions still held	15	—	(2)	13
Transfers in/(out)	25	(11)	69	83
Currency	—	—	—	—
Balance, December 31, 2011	$156	$ 28	$89	$273

Real Estate properties are externally appraised at least annually by reputable, independent appraisal firms. Property valuations are also reviewed on a regular basis and are adjusted if there has been a significant change in circumstances related to the property since the last valuation.

Other debt securities consist of insurance contracts, which are externally valued by insurance companies based on the present value of the expected future cash flows. Hedge funds consist of a wide range of investments which target a relatively stable investment return. The underlying funds are valued at different frequencies, some monthly and some quarterly, based on the value of the underlying investments. Other assets consist primarily of small investments in private equity.

Other Plans

PPG has retained certain liabilities for pension and post-employment benefits earned for service up to the 2008 date of sale of its former automotive glass and service business, totaling approximately $1,011 million and $956 million at December 31, 2011 and 2010, respectively, for employees who were active as of the divestiture date and for individuals who were retirees of the business as of the divestiture date. PPG recognized expense of approximately $35 million and $30 million related to these obligations in 2011 and 2010, respectively.

Pittsburgh Glass Works LLC ceased production at its Oshawa, Canada plant in 2009 and closed its Hawkesbury, Canada plant in 2010. Under Canadian pension regulations, these plant closures will result in partial wind-ups of the pension plans for former employees at these plants, the liability for which was retained by PPG. Each of these partial windups will result in settlement charges against PPG earnings and require cash contributions to the plans. The final settlement charge and cash amounts will be determined following the required review of the partial wind-ups by the Canadian pension authorities. The amount of each pretax charge and the cash contribution is currently estimated to be in the range of $20-$30 million and $10-$15 million, respectively. The proposed effective dates of the partial windups related to the Oshawa and Hawkesbury plant closures are February 27, 2009 and August 31, 2010, respectively. Cash contributions are currently being made to the plans based on estimated cash requirements and must be completed by the end of the five year period following the proposed effective dates of the partial windups. The settlement charges will be recorded following the approval of the partial windups by the Canadian pension authorities and when the related cash contributions are completed.

The Company recognized expense for defined contribution pension plans in 2011, 2010 and 2009 of $38

million, $31 million and $25 million, respectively. As of December 31, 2011 and 2010, the Company's liability for contributions to be made to the defined contribution pension plans was $13 million and $18 million, respectively.

The Company has a deferred compensation plan for certain key managers which allows them 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 participant. The amount owed to participants is an unfunded and unsecured general obligation of the Company. Upon retirement, death, disability, termination of employment, scheduled payment or unforeseen emergency, the compensation deferred and related accumulated earnings are distributed in accordance with the participant's election in cash or in PPG stock, based on the accounts selected by the participant.

The plan provides participants with investment alternatives and the ability to transfer amounts between the phantom non-PPG stock investment accounts. To mitigate the impact on compensation expense of changes in the market value of the liability, the Company has purchased a portfolio of marketable securities that mirror the phantom non-PPG stock investment accounts selected by the participants, except the money market accounts. These investments are carried at fair market value, and the changes in market value of these securities are also included in earnings. Trading will occur in this portfolio to align the securities held with the participant's phantom non-PPG stock investment accounts, except the money market accounts.

The cost of the deferred compensation plan, comprised of dividend equivalents accrued on the phantom PPG stock account, investment income and the change in market value of the liability, was expense in 2011, 2010, and 2009 of $2 million, $10 million and $15 million, respectively. These amounts are included in "Selling, general and administrative" in the accompanying consolidated statement of income. The change in market value of the investment portfolio was income of $1 million, $9 million, and $13 million in 2011, 2010, and 2009, respectively, of which $0.8 million, $0.4 million and $0.4 million was realized gains, and is also included in "Selling, general and administrative."

The Company's obligations under this plan, which are included in "Accounts payable and accrued liabilities" and "Other liabilities" in the accompanying consolidated balance sheet, totaled $95 million and $99 million as of December 31, 2011 and 2010, respectively, and the investments in marketable securities, which are included in "Investments" and "Other current assets" in the accompanying consolidated balance sheet, were $59 million and $63 million as of December 31, 2011 and 2010, respectively.

15. Commitments and Contingent Liabilities

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

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

Antitrust Matters

Several complaints were filed in late 2007 and early 2008 in different federal courts naming PPG and other flat glass producers as defendants in purported antitrust class actions. The complaints alleged that the defendants conspired to fix, raise, maintain and stabilize the price and the terms and conditions of sale of flat glass in the United States in violation of federal antitrust laws. In June 2008, these cases were consolidated into one federal court class action in Pittsburgh, Pa. In the consolidated complaint, the plaintiffs sought a permanent injunction enjoining the defendants from future violations of the federal antitrust laws, unspecified compensatory damages, including treble damages, and the recovery of their litigation costs. Many allegations in the complaints were similar to those raised in proceedings by the European Commission in which fines were levied against other flat glass producers arising out of alleged antitrust violations. PPG is not involved in any of the proceedings in Europe. PPG divested its European flat glass business in 1998. A complaint containing allegations substantially similar to the U.S. litigation and seeking compensatory and punitive

damages in amounts to be determined by the court was filed in the Superior Court in Windsor, Ontario, Canada in August 2008 regarding the sale of flat glass in Canada. In the third quarter of 2010, the other defendants in these cases agreed to settlements. Although PPG is aware of no wrongdoing or conduct on its part in the operation of its flat glass business that violated any antitrust laws, in order to avoid the ongoing expense of this protracted case, as well as the risks and uncertainties associated with complex litigation involving jury trials, in the third quarter of 2010 PPG reached an agreement in principle to resolve these flat glass antitrust matters for approximately $6 million. Final settlement agreements were executed in the fourth quarter of 2010. The court has approved the settlements and distribution of the funds is expected to occur in 2012.

In 2010, Transitions Optical, Inc. ("TOI"), a consolidated subsidiary of the Company, entered into a settlement agreement, without admitting liability, with the Federal Trade Commission, which had alleged that TOI violated Section 5 of the Federal Trade Commission Act. Following the announcement of the settlement with the Federal Trade Commission, 30 private putative class cases were filed against TOI, alleging that it has monopolized and/or conspired to monopolize the market for photochromic lenses. All of the federal actions have been transferred and centralized in the Middle District of Florida (the "MDL Action"). Amended complaints in the MDL Action were filed in November and December 2010. In late 2011, the court ruled on TOI's motion to dismiss and allowed the plaintiffs to file new or further amended complaints.

Plaintiffs in the MDL Action include Insight Equity A.P. X, LP, d/b/a Vision-Ease Lens Worldwide, Inc., which has sued on its own behalf, and putative classes of "direct purchasers," including laboratories and retailers (the "Lab/Retailer Plaintiffs"), and "indirect purchasers," consisting of end-user consumers.

Plaintiffs in the MDL Action generally allege that TOI's exclusive dealing arrangements resulted in higher prices and seek lost profits and damages determined by the price premium attributable to wrongful exclusive deals. The damages sought are subject to trebling. The Lab/Retailer Plaintiffs also allege that TOI and certain affiliates of Essilor International SA conspired with respect to the wrongful exclusive dealing arrangements. Briefing with respect to class certification is expected to be completed in late 2012. TOI believes it has meritorious defenses and continues to defend all of the above-described actions vigorously.

Asbestos Matters

For over 30 years, PPG has been a defendant in lawsuits involving claims alleging personal injury from exposure to asbestos. Most of PPG's potential exposure relates to allegations by plaintiffs that PPG should be liable for injuries involving asbestos-containing thermal insulation products, known as Unibestos, manufactured and distributed by Pittsburgh Corning Corporation ("PC"). PPG and Corning Incorporated are each 50 percent shareholders of PC. PPG has denied responsibility for, and has defended, all claims for any injuries caused by PC products. As of the April 16, 2000 order which stayed and enjoined asbestos claims against PPG (as discussed below), PPG was one of many defendants in numerous asbestos-related lawsuits involving approximately 114,000 claims served on PPG. During the period of the stay, PPG generally has not been aware of the dispositions, if any, of these asbestos claims.

Background of PC Bankruptcy Plan of Reorganization

On April 16, 2000, PC filed for Chapter 11 Bankruptcy in the U.S. Bankruptcy Court for the Western District of Pennsylvania located in Pittsburgh, Pa. Accordingly, in the first quarter of 2000, PPG recorded an after-tax charge of $35 million for the write-off of all of its investment in PC. As a consequence of the bankruptcy filing and various motions and orders in that proceeding, the asbestos litigation against PPG (as well as against PC) has been stayed and the filing of additional asbestos suits against them has been enjoined, until 30 days after the effective date of a confirmed plan of reorganization for PC substantially in accordance with the settlement arrangement among PPG and several other parties discussed below. The stay may be terminated if the Bankruptcy Court determines that such a plan will not be confirmed, or the settlement arrangement set forth below is not likely to be consummated.

On May 14, 2002, PPG announced that it had agreed with several other parties, including certain of its insurance carriers, the official committee representing asbestos claimants in the PC bankruptcy, and the legal representatives of future asbestos claimants appointed in the PC bankruptcy, on the terms of a settlement arrangement relating to certain asbestos claims against PPG and PC (the "2002 PPG Settlement Arrangement").

On March 28, 2003, Corning Incorporated announced that it had separately reached its own arrangement with the representatives of asbestos claimants for the settlement of certain asbestos claims against Corning Incorporated and PC (the "2003 Corning Settlement Arrangement").

The terms of the 2002 PPG Settlement Arrangement and the 2003 Corning Settlement Arrangement were incorporated into a bankruptcy reorganization plan for PC along with a disclosure statement describing the plan, which PC filed with the Bankruptcy Court on April 30, 2003. Amendments to the plan and disclosure statement were subsequently filed. On November 26, 2003, after considering objections to the second amended disclosure

statement and plan of reorganization, the Bankruptcy Court entered an order approving such disclosure statement and directing that it be sent to creditors, including asbestos claimants, for voting. In March 2004, the second amended PC plan of reorganization (the "second amended PC plan of reorganization") received the required votes to approve the plan with a channeling injunction for present and future asbestos claimants under §524(g) of the Bankruptcy Code. After voting results for the second amended PC plan of reorganization were received, the Bankruptcy Court judge conducted a hearing regarding the fairness of the settlement, including whether the plan would be fair with respect to present and future claimants, whether such claimants would be treated in substantially the same manner, and whether the protection provided to PPG and its participating insurers would be fair in view of the assets they would convey to the asbestos settlement trust (the "Trust") to be established as part of the second amended PC plan of reorganization. At that hearing, creditors and other parties in interest raised objections to the second amended PC plan of reorganization. Following that hearing, the Bankruptcy Court scheduled oral arguments for the contested items.

The Bankruptcy Court heard oral arguments on the contested items on November 17-18, 2004. At the conclusion of the hearing, the Bankruptcy Court agreed to consider certain post-hearing written submissions. In a further development, on February 2, 2005, the Bankruptcy Court established a briefing schedule to address whether certain aspects of a decision of the U.S. Third Circuit Court of Appeals in an unrelated case had any applicability to the second amended PC plan of reorganization. Oral arguments on these matters were subsequently held in March 2005. During an omnibus hearing on February 28, 2006, the Bankruptcy Court judge stated that she was prepared to rule on the PC plan of reorganization in the near future, provided certain amendments were made to the plan. Those amendments were filed, as directed, on March 17, 2006. After further conferences and supplemental briefings, in December 2006, the court denied confirmation of the second amended PC plan of reorganization, on the basis that the plan was too broad in the treatment of allegedly independent asbestos claims not associated with PC.

Terms of 2002 PPG Settlement Arrangement

PPG had no obligation to pay any amounts under the 2002 PPG Settlement Arrangement until 30 days after the second amended PC plan of reorganization was finally approved by an appropriate court order that was no longer subject to appellate review (the "Effective Date"). If the second amended PC plan of reorganization had been approved as proposed, PPG and certain of its insurers (along with PC) would have made payments on the Effective Date to the Trust, which would have provided the sole source of payment for all present and future asbestos bodily injury claims against PPG, its subsidiaries or PC alleged to be caused by the manufacture, distribution or sale of asbestos products by these companies. PPG would have conveyed the following assets to the Trust: (i) the stock it owns in PC and Pittsburgh Corning Europe, (ii) 1,388,889 shares of PPG's common stock and (iii) aggregate cash payments to the Trust of approximately $998 million, payable according to a fixed payment schedule over 21 years, beginning on June 30, 2003, or, if later, the Effective Date. PPG would have had the right, in its sole discretion, to prepay these cash payments to the Trust at any time at a discount rate of 5.5 percent per annum as of the prepayment date. In addition to the conveyance of these assets, PPG would have paid $30 million in legal fees and expenses on behalf of the Trust to recover proceeds from certain historical insurance assets, including policies issued by certain insurance carriers that were not participating in the settlement, the rights to which would have been assigned to the Trust by PPG.

Under the proposed 2002 PPG Settlement Arrangement, PPG's participating historical insurance carriers would have made cash payments to the Trust of approximately $1.7 billion between the Effective Date and 2023. These payments could also have been prepaid to the Trust at any time at a discount rate of 5.5 percent per annum as of the prepayment date. In addition, as referenced above, PPG would have assigned to the Trust its rights, insofar as they related to the asbestos claims to have been resolved by the Trust, to the proceeds of policies issued by certain insurance carriers that were not participating in the 2002 PPG Settlement Arrangement and from the estates of insolvent insurers and state insurance guaranty funds.

Under the proposed 2002 PPG Settlement Arrangement, PPG would have granted asbestos releases to all participating insurers, subject to a coverage-in-place agreement with certain insurers for the continuing coverage of premises claims (discussed below). PPG would have granted certain participating insurers full policy releases on primary policies and full product liability releases on excess coverage policies. PPG would have also granted certain other participating excess insurers credit against their product liability coverage limits.

If the second amended PC plan of reorganization incorporating the terms of the 2002 PPG Settlement Arrangement and the 2003 Corning Settlement Arrangement had been approved by the Bankruptcy Court, the Court would have entered a channeling injunction under §524(g) and other provisions of the Bankruptcy Code, prohibiting present and future

claimants from asserting bodily injury claims after the Effective Date against PPG or its subsidiaries or PC relating to the manufacture, distribution or sale of asbestos-containing products by PC or PPG or its subsidiaries. The injunction would have also prohibited codefendants in those cases from asserting claims against PPG for contribution, indemnification or other recovery. All such claims would have been filed with the Trust and only paid from the assets of the Trust.

Modified Third Amended PC Plan of Reorganization

To address the issues raised by the Bankruptcy Court in its December 2006 ruling, the interested parties engaged in extensive negotiations regarding the terms of a third amended PC plan of reorganization, including modifications to the 2002 PPG Settlement Arrangement. A modified third amended PC plan of reorganization (the "third amended PC plan of reorganization"), including a modified PPG settlement arrangement (the "2009 PPG Settlement Arrangement"), was filed with the Bankruptcy Court on January 29, 2009. The parties also filed a disclosure statement describing the third amended PC plan of reorganization with the court. The third amended PC plan of reorganization also includes a modified settlement arrangement of Corning Incorporated.

Several creditors and other interested parties filed objections to the disclosure statement. Those objections were overruled by the Bankruptcy Court by order dated July 6, 2009 approving the disclosure statement. The third amended PC plan of reorganization and disclosure statement were then sent to creditors, including asbestos claimants, for voting. The report of the voting agent, filed on February 18, 2010, revealed that all voting classes, including asbestos claimants, voted overwhelmingly in favor of the third amended PC plan of reorganization, which included the 2009 PPG Settlement Arrangement. In light of the favorable vote on the third amended PC plan of reorganization, the Bankruptcy Court conducted a hearing regarding the fairness of the proposed plan, including whether (i) the plan would be fair with respect to present and future claimants, (ii) such claimants would be treated in substantially the same manner, and (iii) the protection provided to PPG and its participating insurers would be fair in view of the assets they would convey to the Trust to be established as part of the third amended PC plan of reorganization. The hearing was held in June of 2010. The remaining objecting parties (a number of objections were resolved through plan amendments and stipulations filed before the hearing) appeared at the hearing and presented their cases. At the conclusion of the hearing, the Bankruptcy Court established a briefing schedule for its consideration of confirmation of the plan and the objections to confirmation. That briefing was completed and final oral arguments held in October 2010. On June 16, 2011 the Bankruptcy Court issued a decision denying confirmation of the third amended PC plan of reorganization. Although denying confirmation, PPG believes that the decision viewed favorably many features of that plan. Several parties filed motions for reconsideration of specific aspects of the Bankruptcy Court's ruling. PPG filed a motion jointly with PC, Corning Incorporated, the official committee representing asbestos claimants, and the legal representatives of future asbestos claimants, and requested a deferred hearing and briefing schedule in view of potential plan amendments that might be considered in response to the June 16, 2011 ruling. Those amendments, along with other technical amendments, were filed on September 23, 2011. Further, PPG and other interested parties have had settlement negotiations with the remaining objectors. The September 23, 2011 amendments have been the subject of briefings and of hearings before the Bankruptcy Court, the most recent of which was held on December 14, 2011. The September 23, 2011 amendments will be the subject of further briefings and of hearings before the Bankruptcy Court on February 17, 2012. If the Bankruptcy Court ultimately finds the third amended PC plan of reorganization, as amended, to be acceptable, after considering any objections to the amendments, the Bankruptcy Court will enter a confirmation order if all requirements to confirm a plan of reorganization under the Bankruptcy Code have been satisfied. Such an order could be appealed to the U. S. District Court for the Western District of Pennsylvania. Assuming that the District Court approves a confirmation order, interested parties could appeal the order to the U.S. Third Circuit Court of Appeals and subsequently could seek review by the U.S. Supreme Court.

The 2009 PPG Settlement Arrangement will not become effective until the third amended PC plan of reorganization is finally approved by an appropriate court order that is no longer subject to appellate review, and PPG's initial contributions will not be due until 30 business days thereafter (the "Funding Effective Date").

Asbestos Claims Subject to Bankruptcy Court's Channeling Injunction

If the third amended PC plan of reorganization is approved by the Bankruptcy Court and becomes effective, a channeling injunction will be entered under §524(g) of the Bankruptcy Code prohibiting present and future claimants from asserting asbestos claims against PC. With regard to PPG, the channeling injunction by its terms will prohibit present and future claimants from asserting claims against PPG that arise, in whole or in part, out of exposure to Unibestos, or any other asbestos or asbestos-containing products manufactured, sold and/or distributed by PC, or asbestos on or emanating from any PC premises. The injunction by its terms will also

prohibit codefendants in these cases that are subject to the channeling injunction from asserting claims against PPG for contribution, indemnification or other recovery. Such injunction will also preclude the prosecution of claims against PPG arising from alleged exposure to asbestos or asbestos-containing products to the extent that a claimant is alleging or seeking to impose liability, directly or indirectly, for the conduct of, claims against or demands on PC by reason of PPG's: (i) ownership of a financial interest in PC; (ii) involvement in the management of PC, or service as an officer, director or employee of PC or a related party; (iii) provision of insurance to PC or a related party; or (iv) involvement in a financial transaction affecting the financial condition of PC or a related party. The foregoing PC related claims are referred to as "PC Relationship Claims" and constitute, in PPG management's opinion, the vast majority of the pending asbestos personal injury claims against PPG. All claims channeled to the Trust will be paid only from the assets of the Trust.

Asbestos Claims Retained by PPG

The channeling injunction provided for under the third amended PC plan of reorganization will not extend to any claim against PPG that arises out of exposure to any asbestos or asbestos-containing products manufactured, sold and/or distributed by PPG or its subsidiaries that is not a PC Relationship Claim, and in this respect differs from the channeling injunction contemplated by the second amended PC plan of reorganization filed in 2003. While management believes that the vast majority of the approximately 114,000 claims against PPG alleging personal injury from exposure to asbestos relate to products manufactured, distributed or sold by PC, the potential liability for any non-PC Relationship Claims will be retained by PPG. Because a determination of whether an asbestos claim is a non-PC Relationship Claim would typically not be known until shortly before trial and because the filing and prosecution of asbestos claims (other than certain premises claims) against PPG has been enjoined since April 2000, the actual number of non-PC Relationship Claims that may be pending at the expiration of the stay or the number of additional claims that may be filed against PPG in the future cannot be determined at this time. PPG does not expect the Bankruptcy Court to lift the stay until after confirmation or rejection of the third amended PC plan of reorganization. PPG intends to defend against all such claims vigorously and their ultimate resolution in the court system is expected to occur over a period of years.

In addition, similar to what was contemplated by the second amended PC plan of reorganization, the channeling injunction will not extend to claims against PPG alleging personal injury caused by asbestos on premises owned, leased or occupied by PPG (so called "premises claims"), which generally have been subject to the stay imposed by the Bankruptcy Court. Historically, a small proportion of the claims against PPG and its subsidiaries have been premises claims, and based upon review and analysis, PPG believes that the number of premises claims currently comprises less than 2 percent of the total asbestos related claims against PPG. Beginning in late 2006, the Bankruptcy Court lifted the stay with respect to certain premises claims against PPG. As a result, PPG and its primary insurers have settled approximately 500 premises claims. PPG's insurers agreed to provide insurance coverage for a major portion of the payments made in connection with the settled claims, and PPG accrued the portion of the settlement amounts not covered by insurance. PPG, in conjunction with its primary insurers as appropriate, evaluates the factual, medical, and other relevant information pertaining to additional claims as they are being considered for potential settlement. The number of such claims under consideration for potential settlement, currently approximately 350, varies from time to time. Premises claims remain subject to the stay, as outlined above, although certain claimants have requested the Court to lift the stay with respect to these claims and the stay has been lifted as to some claims. PPG believes that any financial exposure resulting from such premises claims, taking into account available insurance coverage, will not have a material adverse effect on PPG's consolidated financial position, liquidity or results of operations.

PPG's Funding Obligations

PPG has no obligation to pay any amounts under the third amended PC plan of reorganization until the Funding Effective Date. If the third amended PC plan of reorganization is approved, PPG and certain of its insurers will make the following contributions to the Trust. On the Funding Effective Date, PPG will relinquish any claim to its equity interest in PC, convey the stock it owns in Pittsburgh Corning Europe and transfer 1,388,889 shares of PPG's common stock or cash equal to the fair value of such shares as defined in the 2009 PPG Settlement Arrangement. PPG will make aggregate cash payments to the Trust of approximately $825 million, payable according to a fixed payment schedule over a period ending in 2023. The first payment is due on the Funding Effective Date. PPG would have the right, in its sole discretion, to prepay these cash payments to the Trust at any time at a discount rate of 5.5 percent per annum as of the prepayment date. PPG's historical insurance carriers participating in the third amended PC plan of reorganization will also make cash payments to the Trust of approximately $1.7 billion between the Funding Effective Date and 2027. These payments could also be prepaid to the Trust at any time at a discount rate of 5.5 percent per annum as of the prepayment date. PPG

will grant asbestos releases and indemnifications to all participating insurers, subject to amended coverage-in-place arrangements with certain insurers for remaining coverage of premises claims. PPG will grant certain participating insurers full policy releases on primary policies and full product liability releases on excess coverage policies. PPG will also grant certain other participating excess insurers credit against their product liability coverage limits.

PPG's obligation under the 2009 PPG Settlement Arrangement at December 31, 2008 was $162 million less than the amount that would have been due under the 2002 PPG Settlement Arrangement. This reduction is attributable to a number of negotiated provisions in the 2009 PPG Settlement Arrangement, including the provisions relating to the channeling injunction under which PPG retains liability for any non-PC Relationship Claims. PPG will retain such amount as a reserve for asbestos-related claims that will not be channeled to the Trust, as this amount represents PPG's best estimate of its liability for these claims. PPG does not have sufficient current claim information or settlement history on which to base a better estimate of this liability, in light of the fact that the Bankruptcy Court's stay has been in effect since 2000. As a result, PPG's reserve at December 31, 2011 and 2010 for asbestos-related claims that will not be channeled to the Trust is $162 million. This amount is included within Other liabilities on the accompanying consolidated balance sheets. In addition, under the 2009 PPG Settlement Arrangement, PPG will retain for its own account rights to recover proceeds from certain historical insurance assets, including policies issued by non-participating insurers. Rights to recover these proceeds would have been assigned to the Trust by PPG under the 2002 PPG Settlement Arrangement.

Following the effective date of the third amended PC plan of reorganization and the lifting of the Bankruptcy Court stay, PPG will monitor the activity associated with asbestos claims which are not channeled to the Trust pursuant to the third amended PC plan of reorganization, and evaluate its estimated liability for such claims and related insurance assets then available to the Company as well as underlying assumptions on a periodic basis to determine whether any adjustment to its reserve for these claims is required.

Of the total obligation of $834 million and $821 million under the 2009 PPG Settlement Arrangement at December 31, 2011 and 2010, respectively, $593 million and $578 million are reported as a current liabilities and the present value of the payments due in the years 2013 to 2023 totaling $241 and 2012 to 2023 totaling $243 million are reported as a non-current liability in the accompanying consolidated balance sheet as of December 31, 2011 and 2010. The future accretion of the non-current portion of the liability totals $122 million at December 31, 2011, and will be reported as expense in the consolidated statement of income over the period through 2023, as follows (in millions):

2012	$ 14
2013	14
2014 – 2023	94
Total	$122

The following table summarizes the impact on PPG's financial statements for the three years ended December 31, 2011 resulting from the 2009 PPG Settlement Arrangement including the change in fair value of the stock to be transferred to the Trust and the related equity forward instrument (see Note 11, "Derivative Financial Instruments and Hedge Activities") and the increase in the net present value of the future payments to be made to the Trust.

	Consolidated Balance Sheet			
	Asbestos Settlement Liability		*Equity Forward (Asset) Liability*	*Pretax Charge*
(Millions)	*Current*	*Long-term*		
Balance as of January 1, 2009	$491	$244	$ 6	$ 4
Change in fair value:				
PPG stock	23	—	—	23
Equity forward instrument	—	—	(24)	(24)
Accretion of asbestos liability	—	14	—	14
Reclassification	20	(20)	—	—
Balance as of and Activity for the year ended December 31, 2009	$534	$238	$(18)	$ 13
Change in fair value:				
PPG stock	35	—	—	35
Equity forward instrument	—	—	(37)	(37)
Accretion of asbestos liability	—	14	—	14
Reclassification	9	(9)	—	—
Balance as of and Activity for the year ended December 31, 2010	$578	$243	$(55)	$ 12
Change in fair value:				
PPG stock	(1)	—	—	(1)
Equity forward instrument	—	—	(1)	(1)
Accretion of asbestos liability	—	14	—	14
Reclassification	16	(16)	—	—
Balance as of and Activity for the year ended December 31, 2011	$593	$241	$(56)	$ 12

The fair value of the equity forward instrument is included as an Other current asset as of December 31, 2011 and 2010 in the accompanying consolidated balance sheet. Payments under the fixed payment schedule

require annual payments that are due each June. The current portion of the asbestos settlement liability included in the accompanying consolidated balance sheet as of December 31, 2011, consists of all such payments required through June 2012, the fair value of PPG's common stock and the value of PPG's investment in Pittsburgh Corning Europe. The amount due June 30, 2013 of $17 million and the net present value of the remaining payments is included in the long-term asbestos settlement liability in the accompanying consolidated balance sheet as of December 31, 2011.

Enjoined Claims

If the 2009 PPG Settlement Arrangement is not implemented, for any reason, and the Bankruptcy Court stay expires, PPG intends to defend vigorously the pending and any future asbestos claims, including PC Relationship Claims, asserted against it and its subsidiaries. PPG continues to assert that it is not responsible for any injuries caused by PC products, which it believes account for the vast majority of the pending claims against PPG. Prior to 2000, PPG had never been found liable for any PC-related claims. In numerous cases, PPG was dismissed on motions prior to trial, and in others PPG was released as part of settlements by PC. PPG was found not responsible for PC-related claims at trial in two cases. In January 2000, one jury found PPG, for the first time, partly responsible for injuries to five plaintiffs alleged to be caused by PC products. The plaintiffs holding the judgment on that verdict moved to lift the injunction as applied to their claims. Before the hearing on that motion, PPG entered into a settlement with those claimants in the second quarter of 2010 to avoid the costs and risks associated with the possible lifting of the stay and appeal of the adverse 2000 verdict. The settlement resolved both the motion to lift the injunction and the judgment against PPG. The cost of this settlement was not significant to PPG's results of operations for the second quarter of 2010 and was fully offset by prior insurance recoveries. Although PPG has successfully defended asbestos claims brought against it in the past, in view of the number of claims, and the significant verdicts that other companies have experienced in asbestos litigation, the result of any future litigation of such claims is inherently unpredictable.

Environmental Matters

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

As of December 31, 2011 and 2010, PPG had reserves for environmental contingencies totaling $226 million and $272 million, respectively, of which $59 million and $83 million, respectively, were classified as current liabilities. The reserve at December 31, 2011 included $129 million for environmental contingencies associated with PPG's former chromium manufacturing plant in Jersey City, N.J. ("Jersey City"), $50 million for environmental contingencies associated with the Calcasieu River estuary located near the Lake Charles, La. chlor-alkali plant and three operating plant sites in PPG's chemicals business and $47 million for other environmental contingencies, including National Priority List sites and legacy glass manufacturing sites. The reserve at December 31, 2010 included $168 million for environmental contingencies associated with the former chromium manufacturing plant in Jersey City, $50 million for environmental contingencies associated with the Calcasieu River Estuary and three operating plant sites in PPG's chemicals business and $54 million for other environmental contingencies, including National Priority List sites and legacy glass manufacturing sites. Pretax charges against income for environmental remediation costs in 2011, 2010 and 2009 totaled $16 million, $21 million and $11 million, respectively, and are included in "Other charges" in the accompanying consolidated statement of income. Cash outlays related to such environmental remediation aggregated $59 million, $34 million, and $24 million in 2011, 2010 and 2009, respectively. The impact of foreign currency decreased the liability by $3 million in 2011 and by $2 million in 2010.

The Company's continuing efforts to analyze and assess the environmental issues associated with a former chromium manufacturing plant site located in Jersey City ("New Jersey Chrome") and at the Calcasieu River Estuary resulted in a pretax charge of $173 million in the third quarter of 2006 for the estimated costs of remediating these sites. These charges for estimated environmental remediation costs in 2006 were significantly higher than PPG's historical range of annual environmental remediation charges. Excluding 2006, pretax charges against income have ranged between $10 million and $35 million per year for the past 15 years. Information is being generated from the continuing remedial investigation activities related to New Jersey Chrome that will be incorporated into a final remedial action work plan to be submitted in mid 2012 which may result in adjustments to the existing reserve.

Management expects cash outlays for environmental remediation costs to range from $50 million to $70 million annually through 2016. It is possible that technological, regulatory and enforcement developments, the results of environmental studies and other factors could alter the Company's expectations with respect to future charges against income and future cash outlays. Specifically, the level of expected future remediation costs and cash outlays is highly dependent upon activity related to New Jersey Chrome as discussed below.

Remediation: New Jersey Chrome

Since 1990, PPG has remediated 47 of 61 residential and nonresidential sites under the 1990 Administrative Consent Order ("ACO") with the New Jersey Department of Environmental Protection ("NJDEP"). The most significant of the 14 remaining sites is the former chromium manufacturing location in Jersey City. The principal contaminant of concern is hexavalent chromium. Based on current estimates, at least 700,000 tons of soil may be potentially impacted for all remaining sites. The Company submitted a feasibility study work plan to the NJDEP in October 2006 that included a review of the available remediation technology alternatives for the former chromium manufacturing location. Under the feasibility study work plan, remedial alternatives which will be assessed include, but are not limited to, soil excavation and offsite disposal in a licensed disposal facility, in situ chemical stabilization of soil and groundwater, and in situ solidification of soils.

As a result of the extensive analysis undertaken in connection with the preparation and submission of the feasibility study work plan for the former chromium manufacturing location described above, the Company recorded a pretax charge of $165 million in the third quarter of 2006. The charge included estimated costs for remediation at the 14 remaining ACO sites, including the former manufacturing site, and for the resolution of litigation filed by NJDEP in May 2005 as discussed below. The principal estimated cost elements of the third quarter 2006 charge and of the remaining reserve at December 31, 2011 were based on competitively derived or readily available remediation industry cost data for representative remedial options, e.g., excavation and in situ stabilization/solidification. The major cost components are (i) transportation and disposal of excavated soil and in place soil treatment and (ii) construction services (related to soil excavation, groundwater management and site security), which account for approximately 55 percent and 25 percent of the reserve, respectively, as of December 31, 2011. The reserve also includes estimated costs for remedial investigation, interim remedial measures, engineering and project management. The most significant assumptions underlying the reserve are those related to the extent and concentration of chromium impacts in the soil, as these will determine the quantity of soil that must be treated in place, the quantity that will have to be excavated and transported for offsite disposal, and the nature of disposal required. The charges are exclusive of any third party indemnification, as the prospects of any such recovery are uncertain.

In May 2005, the NJDEP filed a complaint against PPG and two other former chromium producers seeking to hold the parties responsible for a further 53 sites where the source of chromium contamination is not known and to recover costs incurred by the agency in connection with its response activities at certain of those sites. During the third quarter of 2008, the parties reached an agreement in principle on all claims relating to these 53 sites (the "Orphan Sites Settlement"). Under the terms of this Orphan Sites Settlement, PPG accepted responsibility for remediation of six of the 53 sites, one half of the cost for remediating nine sites where chrome ore processing residue was used as fill in connection with the installation or repair of sewer pipes owned by Jersey City, reimburse the NJDEP for a portion of past costs in the amount of $5 million and be responsible for the NJDEP's oversight costs associated with the sites for which PPG is wholly or partially responsible. This settlement was finalized and issued for public comment in June 2011. After the close of the public comment period, NJDEP determined that no changes to the settlement were necessary and a motion was filed with the court to enter the settlement as a final order. In September 2011, the court entered the Orphan Site Settlement as a final order. PPG paid its share of past costs in October 2011. This Orphan Sites Settlement does not affect PPG's responsibilities for the 14 remaining unremediated sites covered by PPG's ACO. A settlement agreement among PPG, NJDEP and Jersey City (which had asserted claims against PPG for lost tax revenue) has been reached and memorialized in the form of a Judicial Consent Order (the "JCO") that was entered by the court on June 26, 2009. PPG's remedial obligations under the ACO with NJDEP have been incorporated into the JCO. Pursuant to the JCO, a new process has been established for the review of the technical reports PPG must submit for the investigation and remedy selection for the 14 ACO sites and the six sites for which PPG has accepted sole responsibility under the terms of the Orphan Sites Settlement (i.e., 20 PPG sites). The JCO also provided for the appointment of a court-approved Site Administrator who is responsible for establishing a master schedule for the remediation of the 20 PPG sites. The JCO established a goal, based on currently applicable remedial provisions, to remediate soils and sources of contamination at the PPG sites as expeditiously as possible with a goal for completion near the end of 2014 in accordance with the master schedule developed by the Site Administrator. On July 6, 2009, former United States Environmental

Protection Agency Deputy Administrator, Michael McCabe, was appointed as Site Administrator under the JCO. The JCO also resolved the claims for reparations for lost tax revenues by Jersey City with the payment of $1.5 million over a five year time period. The JCO did not otherwise affect PPG's responsibility for the remediation of the 14 ACO sites. PPG's estimated costs under the JCO are included in the December 31, 2011 reserve for New Jersey Chrome environmental remediation matters.

On February 6, 2009, the Natural Resources Defense Council ("NRDC") and the Interfaith Community Organization ("ICO") filed suit against PPG in federal court under the federal Resource Conservation and Recovery Act seeking, among other things, to compel PPG to further evaluate and remediate the chromium contaminated sites covered by the 1990 ACO and the settlement with NJDEP and Jersey City. The Complaint sought to compel PPG to clean up the former chromium manufacturing site and certain sites immediately adjacent to the former chromium manufacturing site and also to pay the plaintiffs' attorney's fees related to this lawsuit. NRDC and ICO subsequently amended their complaint to add GRACO Community Organization ("GRACO"), a New Jersey non-profit corporation, as an additional plaintiff. In April 2011, a final settlement of the plaintiffs' remediation claims was reached among the parties to this lawsuit. The settlement was memorialized in the form of a consent decree which has been entered by the United States District Court for the District of New Jersey. Pursuant to the terms of this settlement PPG has agreed to remediate the former chromium manufacturing site and the sites immediately adjacent to the former chromium manufacturing site in a manner that is consistent with PPG's existing proposed excavation-based remedial proposal under the JCO. Therefore, PPG's estimated remediation costs under this settlement with NRDC, ICO and GRACO are included in the December 31, 2011 reserve for New Jersey Chrome environmental remediation matters. In addition to the specified remediation actions, the settlement also requires PPG to pay the sum of $150,000 in five equal annual installments to NRDC, which the NRDC has indicated it intends to use to monitor PPG's cleanup activities at these sites. In October 2011, PPG reached an agreement with the plaintiffs to resolve their claim for attorney's fees.

The feasibility study work plan for the former chromium manufacturing site previously submitted in 2006 is being incorporated into a remedial action work plan. PPG submitted a preliminary draft remedial action work plan for the former chromium manufacturing site to NJDEP in June 2011. Following review and comment by the NJDEP, PPG will submit a final remediation work plan and associated cost estimate for the site, which is expected to occur by mid-2012. The work plans for interim remedial measures at that site, which consisted of the removal and off-site disposal of approximately 70,000 tons of chromium impacted soil and concrete foundations, was approved by NJDEP and the associated work was completed in the third quarter 2011.

PPG has submitted a final remedial action work plan for one other remaining site under the ACO. This proposal has been submitted to the NJDEP for approval, with remedial activities expected to begin in 2012. In addition, investigation activities are ongoing for an additional six sites covered by the ACO adjacent to the former manufacturing site with completion expected in 2012. Investigation activities for the remaining six sites covered by the ACO are also expected to be completed in 2012 and PPG believes the results of the study at the former chromium manufacturing location will provide the Company with relevant information concerning remediation alternatives at these sites. The investigation and remediation of the soils and sources of contamination of all ACO sites and the six orphan sites for which PPG has accepted sole responsibility is scheduled to be completed by the end of 2014.

As described above, multiple future events, including completion of feasibility studies, remedy selection, remedy design and remedy implementation involving governmental agency action or approvals will be required, and considerable uncertainty exists regarding the timing of these future events for the remaining 14 sites covered by the ACO and the six orphan sites for which PPG has accepted responsibility under the terms of the Orphan Sites Settlement. Final resolution of these events is expected to occur over an extended period of time. As these events occur and to the extent that the cost estimates of the environmental remediation remedies change, the existing reserve for this environmental remediation will be adjusted.

Remediation: Calcasieu River Estuary

In Lake Charles, La. the U.S. Environmental Protection Agency ("USEPA") completed an investigation of contamination levels in the Calcasieu River Estuary and issued a final remedial investigation report in September 2003, which incorporates the Human Health and Ecological Risk Assessments, indicating that elevated levels of risk exist in the estuary. PPG and other potentially responsible parties have completed a feasibility study under the authority of the Louisiana Department of Environmental Quality ("LDEQ"). PPG's exposure with respect to the Calcasieu Estuary is focused on the lower few miles of Bayou d'Inde, a small tributary to the Calcasieu Estuary near PPG's Lake Charles, La. facility, and about 150 to 200 acres of adjacent marshes. The Company and three other potentially responsible parties submitted a draft remediation feasibility study report to

the LDEQ in October 2006. The proposed remedial alternatives include sediment dredging, sediment capping, and biomonitoring of fish and shellfish. Principal contaminants of concern which may require remediation include various metals, dioxins and furans, and polychlorinated biphenyls. In response to agency comments on the draft study, the companies conducted additional investigations and submitted a revised feasibility report to the agencies in the third quarter of 2008. Government officials have indicated that a U.S. Army Corps of Engineers' study has concluded that the proposed remedy will not adversely affect drainage in communities adjacent to Bayou d'Inde. In response to the revised feasibility study, LDEQ issued a draft decision document for the Bayou d'Inde area in February 2010. The decision document includes LDEQ's selection of remedial alternatives for the Bayou d'Inde area and are in accordance with those recommended in the revised feasibility study. LDEQ held a public hearing on March 23, 2010 and subsequently issued its final decision document in March 2011. As in its draft document, LDEQ's selection of remedial approaches is in accordance with those proposed in the feasibility study.

On June 10, 2011, LDEQ met with the Company and the three other potentially responsible parties to discuss implementation of a remedy for Bayou d'Inde based on the final decision document. The agency proposed entering into a new Cooperative Agreement with the four companies and on July 12, 2011 transmitted a draft document for the company's consideration. At the same time, the companies have initiated discussions among themselves on allocation of costs associated with remedy implementation. On October 20, 2011, one of the three other potentially responsible parties that had participated in funding the remedial feasibility report withdrew from further participation regarding implementation of the remedy. In mid-November 2011, PPG and the two remaining parties submitted comments to LDEQ on the proposed Cooperative Agreement. Allocation discussions are continuing among the remaining potentially responsible parties.

Multiple future events, such as remedy design and remedy implementation involving agency action or approvals related to the Calcasieu River Estuary will be required and considerable uncertainty exists regarding the timing of these future events. Final resolution of these events is expected to occur over an extended period of time. However, based on currently available information, design approval could occur in 2012. The remedy implementation could occur during 2012 to 2015, with some period of long-term monitoring for remedy effectiveness to follow. In addition, PPG's obligation related to any potential remediation will be dependent in part upon the final allocation of responsibility among the potentially responsible parties. Negotiations with respect to this allocation are ongoing, but the outcome is uncertain.

Remediation: Reasonably Possible Matters

In addition to the amounts currently reserved for environmental remediation, the Company may be subject to loss contingencies related to environmental matters estimated to be as much as $200 million to $400 million. Such unreserved losses are reasonably possible but are not currently considered to be probable of occurrence. This range of reasonably possible unreserved loss relates to environmental matters at a number of sites; however, about 50 percent of this range relates to additional costs at New Jersey Chrome, about 25 percent relates to the Calcasieu River Estuary and the three operating PPG plant sites in the Company's chemicals businesses and the remaining 25 percent relates to a number of other sites, including legacy glass manufacturing sites. The loss contingencies related to these sites include significant unresolved issues such as the nature and extent of contamination at these sites and the methods that may have to be employed to remediate them.

The status of the remediation activity at New Jersey Chrome and at the Calcasieu River Estuary and the factors that could result in the need for additional environmental remediation reserves at those sites are described above. Initial remedial actions are occurring at the three operating plant sites in the chemicals businesses. These three operating plant sites are in Barberton, Ohio, Lake Charles, Louisiana and Natrium, West Virginia. At Barberton, PPG has completed a Facility Investigation and Corrective Measure Study ("CMS") under USEPA's Resource Conservation and Recycling Act ("RCRA") Corrective Action Program. PPG has been implementing the remediation alternatives recommended in the CMS using a performance-based approach with USEPA Region V oversight. However, USEPA Region V transferred its oversight authority to the Ohio Environmental Protection Agency ("OEPA") in 2010. The Barberton Corrective Action Permit was issued by Ohio EPA on September 24, 2010. As part of this permit, PPG is responsible for filing engineering remedies for various issues at this site. These remedies have not yet been filed with the OEPA. Similarly, the Company has completed a Facility Investigation and CMS for the Lake Charles facility under the oversight of the LDEQ. The LDEQ has accepted the proposed remedial alternatives. PPG received notice of LDEQ issuance of the final Hazardous Waste Post-Closure/HSWA Permit on June 28, 2010. The Permit was issued in final form on September 23, 2010. Planning for or implementation of these proposed alternatives is in progress. At Natrium, a facility investigation has been completed and initial interim remedial measures have been implemented to mitigate soil impacts. There is additional investigation of groundwater contamination

ongoing which may indicate the need for further remedial actions to address specific areas of the facility. Installation of a groundwater treatment system has been completed. PPG has been addressing impacts from a legacy plate glass manufacturing site in Kokomo, Indiana under the Voluntary Remediation Program of the Indiana Department of Environmental Management. PPG has agreed to expand the scope of the investigation activities.

With respect to certain waste sites, the financial condition of any other potentially responsible parties also contributes to the uncertainty of estimating PPG's final costs. Although contributors of waste to sites involving other potentially responsible parties may face governmental agency assertions of joint and several liability, in general, final allocations of costs are made based on the relative contributions of wastes to such sites. PPG is generally not a major contributor to such sites.

The impact of evolving programs, such as natural resource damage claims, industrial site reuse initiatives and state remediation programs, also adds to the present uncertainties with regard to the ultimate resolution of this unreserved exposure to future loss. The Company's assessment of the potential impact of these environmental contingencies is subject to considerable uncertainty due to the complex, ongoing and evolving process of investigation and remediation, if necessary, of such environmental contingencies, and the potential for technological and regulatory developments.

Other Matters

PPG is a defendant in a matter in the California State Court in San Francisco in which the City of Modesto and its Redevelopment Authority claim that PPG and other defendants manufactured a defective product, the dry cleaning solvent perchloroethylene ("PCE"), and failed to provide adequate warnings regarding the environmental risks associated with the use of PCE. The plaintiffs claimed the defendants are responsible for remediation of soil and groundwater contamination at numerous dry cleaner sites in Modesto, California. In 2006, a Phase 1 trial was conducted as to four sites. The jury returned a verdict in the amount of $3.1 million against PPG, The Dow Chemical Company, Vulcan, Oxy, and R.R. Street. The verdict was not apportioned.

Subsequent to the Phase 1 verdict, Vulcan and Oxy settled. In 2008, trial commenced on 18 Phase 2 Sites. Prior to submission of the case to the jury, the Court granted motions that limited PPG's potential liability to one of the 18 sites. The damages sought at this one site totaled $27 million. A jury verdict in the amount of $18 million was returned against PPG and The Dow Chemical Company on May 18, 2009. The verdict was not apportioned. The jury was not able to reach a verdict on the statute of limitations issue on the site in question. However, on August 24, 2009, the trial court issued an opinion finding that the City's claims were barred by the statute of limitations. The effect of the ruling was to nullify the jury's Phase 2 damage award. In October 2009, the trial court held a non-jury trial of the Redevelopment Authority's damage claims under the "Polanco Act". On November 11, 2011, the court entered a final judgment consistent with all of the above results finding that prior settlements offset the $3.1 million verdict against PPG and others. Cost petitions are being pursued by plaintiffs and defendants. Appeals are expected.

16. Shareholders' Equity

A class of 10 million shares of preferred stock, without par value, is authorized but unissued. Common stock has a par value of $1.66 ⅔ per share; 600 million shares are authorized.

The following table summarizes the shares outstanding for the three years ended December 31, 2011:

	Common Stock	*Treasury Stock*	*Shares Outstanding*
Balance, Jan. 1, 2009	290,573,068	(126,374,435)	164,198,633
Purchases	—	(1,500,000)	(1,500,000)
Issuances	—	2,969,026	2,969,026
Balance, Dec. 31, 2009	290,573,068	(124,905,409)	165,667,659
Purchases	—	(8,124,621)	(8,124,621)
Issuances	—	2,838,777	2,838,777
Balance, Dec. 31, 2010	290,573,068	(130,191,253)	160,381,815
Purchases	—	(10,236,694)	(10,236,694)
Issuances	—	1,743,659	1,743,659
Balance, Dec. 31, 2011	290,573,068	(138,684,288)	151,888,780

Per share cash dividends paid were $2.26 in 2011, $2.18 in 2010 and $2.13 in 2009.

17. Accumulated Other Comprehensive Loss

(Millions)	*Unrealized Currency Translation Adjustments*	*Pension and Other Postretirement Benefit Adjustments*	*Unrealized Gain (Loss) on Marketable Securities*	*Unrealized Gain (Loss) on Derivatives*	*Accumulated Other Comprehensive (Loss) Income*
Balance, January 1, 2009	$(107)	$(1,461)	$(1)	$(59)	$(1,628)
Net change	173	169	—	25	367
Balance, December 31, 2009	$ 66	$(1,292)	$(1)	$(34)	$(1,261)
Net change	(13)	(136)	1	(2)	(150)
Balance, December 31, 2010	$ 53	$(1,428)	$—	$(36)	$(1,411)
Net change	(188)	(169)	—	(32)	(389)
Balance, December 31, 2011	$(135)	$(1,597)	$—	$(68)	$(1,800)

With the exception of unrealized currency translation adjustments, all other components of accumulated other comprehensive loss are reported net of tax.

Unrealized currency translation adjustments related to translation of foreign denominated balance sheets are not presented net of tax given that no deferred U.S. income taxes have been provided on undistributed earnings of non-U.S. subsidiaries because they are deemed to be reinvested for an indefinite period of time.

The tax (cost) benefit related to unrealized currency translation adjustments other than translation of foreign denominated balance sheets, for the years ended December 31, 2011, 2010 and 2009 was $(7) million, $8 million and $62 million, respectively.

The tax benefit related to the adjustment for pension and other postretirement benefits for the years ended December 31, 2011, 2010 and 2009 was $98 million, $65 million and $18 million, respectively. The cumulative tax benefit related to the adjustment for pension and other postretirement benefits at December 31, 2011 and 2010 was $990 million and $889 million, respectively. The tax (cost) benefit related to the change in the unrealized gain (loss) on marketable securities for the years ended December 31, 2011, 2010 and 2009 was $(0.2) million, $0.6 million and $0.1 million, respectively. The tax benefit (cost) related to the change in the unrealized gain (loss) on derivatives for the years ended December 31, 2011, 2010 and 2009 was $19 million, $1 million and $(16) million, respectively.

18. Employee Savings Plan

PPG's Employee Savings Plan ("Savings Plan") covers substantially all U.S. employees. The Company makes matching contributions to the Savings Plan 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 a maximum of 6% of eligible participant compensation. For those participants whose employment is covered by a collective bargaining agreement, the level of Company-matching contribution, if any, is determined by the relevant collective bargaining agreement.

The Company-matching contribution was 100% for the first two months of 2009. The Company-matching contribution was suspended from March 2009 through June 2010 as a cost savings measure in recognition of the adverse impact of the global recession. Effective July 1, 2010, the Company match was reinstated at 50% on the first 6% of compensation contributed for most employees eligible for the Company-matching contribution feature. This included the union represented employees in accordance with their collective bargaining agreements. On January 1, 2011, the Company match was increased to 75% on the first 6% of compensation contributed by these eligible employees.

Compensation expense and cash contributions related to the Company match of participant contributions to the Savings Plan for 2011, 2010 and 2009 totaled $26 million, $9 million and $7 million, respectively. A portion of the Savings Plan qualifies under the Internal Revenue Code as an Employee Stock Ownership Plan. As a result, the tax deductible dividends on PPG shares held by the Savings Plan were $20 million, $24 million and $28 million for 2011, 2010 and 2009, respectively.

19. Other Earnings

(Millions)	*2011*	*2010*	*2009*
Royalty income	55	58	45
Share of net earnings (loss) of equity affiliates (See Note 5)	37	45	(5)
Gain on sale of assets	12	8	36
Other	73	69	74
Total	$177	$180	$150

20. Stock-Based Compensation

The Company's stock-based compensation includes stock options, restricted stock units ("RSUs") and grants of contingent shares that are earned based on achieving targeted levels of total shareholder return. All current grants of stock options, RSUs and contingent shares are made under the PPG Industries, Inc. Amended and Restated Omnibus Incentive Plan ("PPG Amended Omnibus Plan"), which was amended and restated effective April 21, 2011. Shares available for future grants under the PPG Amended Omnibus Plan were 9.7 million as of December 31, 2011.

Total stock-based compensation cost was $36 million, $52 million and $34 million in 2011, 2010 and 2009, respectively. The total income tax benefit recognized in the accompanying consolidated statement of income related to the stock-based compensation was $13 million, $18 million and $12 million in 2011, 2010 and 2009, respectively.

Stock Options

PPG has outstanding stock option awards that have been granted under two stock option plans: the PPG Industries, Inc. Stock Plan ("PPG Stock Plan") and the PPG Amended Omnibus Plan. Under the PPG Amended Omnibus Plan and the PPG Stock Plan, certain employees of the Company have been granted options to purchase shares of common stock at prices equal to the fair market value of the shares on the date the options were granted. The options are generally exercisable beginning from six to 48 months after being granted and have a maximum term of 10 years. Upon exercise of a stock option, shares of Company stock are issued from treasury stock. The PPG Stock Plan includes a restored option provision for options originally granted prior to January 1, 2003 that

allows an optionee to exercise options and satisfy the option cost by certifying ownership of mature shares of PPG common stock with a market value equal to the option cost.

The fair value of stock options issued to employees is measured on the date of grant and is recognized as expense over the requisite service period. PPG estimates the fair value of stock options using the Black-Scholes option pricing model. The risk-free interest rate is determined by using the U.S. Treasury yield curve at the date of the grant and using a maturity equal to the expected life of the option. The expected life of options is calculated using the average of the vesting term and the maximum term, as prescribed by accounting guidance on the use of the simplified method for determining the expected term of an employee share option. This method is used as the vesting term of stock options was changed to three years in 2004 and, as a result, the historical exercise data does not provide a reasonable basis upon which to estimate the expected life of options. The expected dividend yield and volatility are based on historical stock prices and dividend amounts over past time periods equal in length to the expected life of the options.

The following weighted average assumptions were used to calculate the fair values of stock option grants in each year:

	2011	2010	2009
Risk free interest rate	2.9%	2.8%	2.8%
Expected life of option in years	6.4	5.9	6.5
Expected dividend yield	3.3%	3.4%	3.2%
Expected volatility	28.0%	28.5%	25.7%

The weighted average fair value of options granted was $19.00 per share, $13.45 per share, and $7.02 per share for the years ended December 31, 2011, 2010, and 2009, respectively.

A summary of stock options outstanding and exercisable and activity for the year ended December 31, 2011 is presented below:

	Number of Shares	*Weighted Average Exercise Price*	*Weighted Average Remaining Contractual Life (in years)*	*Intrinsic Value (in millions)*
Outstanding, January 1, 2011	5,694,718	$57.37	5.5	$152
Granted	654,866	$88.42		
Exercised	(1,366,049)	$60.80		
Forfeited/Expired	(75,650)	$72.90		
Outstanding, December 31, 2011	4,907,885	$60.52	5.6	$116
Vested or expected to vest, December 31, 2011	4,869,885	$60.42	5.6	$115
Exercisable, December 31, 2011	2,641,008	$62.40	3.5	$ 56

At December 31, 2011, unrecognized compensation cost related to outstanding stock options that have not yet vested totaled $7 million. This cost is expected to be recognized as expense over a weighted average period of 1.6 years.

The following table presents stock option activity for the years ended December 31, 2011, 2010 and 2009:

(Millions)	2011	2010	2009
Total intrinsic value of stock options exercised	$40	$ 37	$ 2
Cash received from stock option exercises	81	146	12
Income tax benefit from the exercise of stock options	9	9	1
Total fair value of stock options vested	10	13	10

Restricted Stock Units

Long-term incentive value is delivered to selected key management employees by granting RSUs, which have either time or performance-based vesting features. The fair value of an RSU is equal to the market value of a share of PPG stock on the date of grant. Time-based RSUs vest over the three-year period following the date of grant, unless forfeited, and will be paid out in the form of stock, cash or a combination of both at the Company's discretion at the end of the three year vesting period. Performance-based RSUs vest based on achieving specific annual performance targets for earnings per share growth and cash flow return on capital over the three calendar year-end periods following the date of grant. Unless forfeited, the performance-based RSUs will be paid out in the form of stock, cash or a combination of both at the Company's discretion at the end of the three-year performance period if PPG meets the performance targets. The amount paid for performance-based awards may range from 0% to 180% of the original grant, based upon the frequency with which the annual earnings per share growth and cash flow return on capital performance targets are met over the three calendar year periods. For the purposes of expense recognition, PPG has assumed that performance-based RSUs granted in 2009 will vest at 150% and those granted in 2010 and 2011 will vest at the 100% level. Five of the six performance targets were met during the performance vesting period of the 2009 grant. At December 31, 2011, four of the four possible performance targets had been met for the 2010 grant, and two of the two possible performance targets had been met for the 2011 grants.

The following table summarizes RSU activity for the year ended December 31, 2011:

	Number of Shares	*Weighted Average Fair Value*	*Intrinsic Value (in millions)*
Outstanding, January 1, 2011	1,205,123	$44.03	$101
Granted	221,009	$82.14	
Released from restrictions	(333,549)	$55.25	
Forfeited	(86,826)	$49.08	
Outstanding, December 31, 2011	1,005,757	$46.98	$ 84
Vested or expected to vest, December 31, 2011	998,106	$46.79	$ 83

There was $11 million of total unrecognized compensation cost related to unvested RSUs outstanding as of December 31, 2011. This cost is expected to be recognized as expense over a weighted average period of 1.6 years.

Contingent Share Grants

The Company also provides grants of contingent shares to selected key executives that may be earned based on PPG total shareholder return over the three-year period following the date of grant. Contingent share grants (referred to as "TSR awards") are made annually and are paid out at the end of each three-year period based on the Company's performance. Performance is measured by determining the percentile rank of the total shareholder return of PPG common stock in relation to the total shareholder return of the S&P 500 for the three-year period following the date of grant. The payment of awards following the three-year award period will be based on performance achieved in accordance with the scale set forth in the plan agreement and may range from 0 percent to 220 percent of the initial grant. A payout of 100 percent is earned if the target performance is achieved. Contingent share awards for the 2009-2011, 2010-2012, and 2011-2013 periods earn dividend equivalents for the award period, which will be paid to participants with the award payout at the end of the period based on the actual number of contingent shares that are earned. Any payments made at the end of the award period may be in the form of stock, cash or a combination of both. The TSR awards qualify as liability awards, and compensation expense is recognized over the three-year award period based on the fair value of the awards (giving consideration to the Company's percentile rank of total shareholder return) remeasured in each reporting period until settlement of the awards.

As of December 31, 2011, there was $6.6 million of total unrecognized compensation cost related to outstanding TSR awards based on the current estimate of fair value. This cost is expected to be recognized as expense over a weighted average period of 1.5 years.

21. Advertising Costs

Advertising costs are expensed in the year incurred and totaled $245 million, $288 million and $268 million in 2011, 2010 and 2009, respectively.

22. Research and Development

(Millions)	2011	2010	2009
Research and development – total	$445	$408	$403
Less depreciation on research facilities	15	14	15
Research and development – net	$430	$394	$388

Notes to the Consolidated Financial Statements

23. Quarterly Financial Information (unaudited)

Millions (except per share amounts)	2011 Quarter Ended March 31	June 30	Sept. 30	Dec. 31	Total
Net sales	$3,533	$3,986	$3,849	$3,517	$14,885
Cost of Sales[1]	2,127	2,417	2,353	2,184	9,081
Net income (attributable to PPG)	228	340	311	216	1,095
Earnings per common share	1.42	2.15	1.98	1.41	6.96
Earnings per common share – assuming dilution	$ 1.40	$ 2.12	$ 1.96	$ 1.39	$ 6.87

Millions (except per share amounts)	2010 Quarter Ended March 31	June 30	Sept. 30	Dec. 31	Total
Net sales	$3,126	$3,458	$3,460	$3,379	$13,423
Cost of Sales[1]	1,944	2,076	2,108	2,086	8,214
Net income (attributable to PPG)	30	272	262	205	769
Earnings per common share	0.18	1.64	1.59	1.26	4.67
Earnings per common share – assuming dilution	$ 0.18	$ 1.63	$ 1.58	$ 1.24	$ 4.63

(1) Exclusive of depreciation and amortization.

24. Reportable Business Segment Information

Segment Organization and Products

PPG is a multinational manufacturer with 13 operating segments that are organized based on the Company's major products lines. These operating segments are also the Company's reporting units for purposes of testing goodwill for impairment (see Note 1, "Summary of Significant Accounting Policies"). The operating segments have been aggregated based on economic similarities, the nature of their products, production processes, end-use markets and methods of distribution into six reportable business segments.

The Performance Coatings reportable segment is comprised of the refinish, aerospace, architectural coatings – Americas and Asia Pacific and protective and marine coatings operating segments. This reportable segment primarily supplies a variety of protective and decorative coatings, sealants and finishes along with paint strippers, stains and related chemicals, as well as transparencies and transparent armor.

The Industrial Coatings reportable segment is comprised of the automotive OEM, industrial coatings and packaging coatings operating segments. This reportable segment primarily supplies a variety of protective and decorative coatings and finishes along with adhesives, sealants, inks and metal pretreatment products.

The Architectural Coatings – EMEA reportable segment is comprised of the architectural coatings – EMEA operating segment. This reportable segment primarily supplies a variety of coatings under a number of brands and purchased sundries to painting contractors and consumers in Europe, the Middle East and Africa.

The Optical and Specialty Materials reportable segment is comprised of the optical products and silicas businesses. The primary Optical and Specialty Materials products are *Transitions*® lenses, optical lens materials and high performance sunlenses; amorphous precipitated silicas for tire, battery separator and other end-use markets; and *Teslin*® substrate used in such applications as radio frequency identification (RFID) tags and labels, e-passports, drivers' licenses and identification cards. *Transitions*® lenses are processed and distributed by PPG's 51 percent-owned joint venture with Essilor International.

The Commodity Chemicals reportable segment is comprised of the chlor-alkali and derivatives operating segment. The primary chlor-alkali and derivative products are chlorine, caustic soda, vinyl chloride monomer, chlorinated solvents, calcium hypochlorite, ethylene dichloride, hydrochloric acid and phosgene derivatives.

The Glass reportable segment is comprised of the flat glass and fiber glass operating segments. This reportable segment primarily supplies flat glass and continuous-strand fiber glass products.

Production facilities and markets for Performance Coatings, Industrial Coatings, Architectural Coatings – EMEA, Optical and Specialty Materials, Commodity Chemicals and Glass are global. PPG's reportable segments continue to pursue opportunities to further develop markets in Asia, Eastern Europe and Latin America. Each of the reportable segments in which PPG is engaged is highly competitive. The diversification of our product lines and the worldwide markets served tend to minimize the impact on PPG's total sales and earnings of changes in demand in a particular market or in a particular geographic area.

The accounting policies of the operating segments are the same as those described in the summary of significant accounting policies. The Company allocates resources to operating segments and evaluates the performance of operating segments based upon segment income, which is earnings before interest expense – net, income taxes and noncontrolling interests and excludes certain charges which are considered to be unusual or non-recurring. The Company also evaluates performance of operating segments based on working capital reduction, margin growth and sales growth. Legacy items include current costs related to former operations of the Company, including certain environmental remediation, pension and other postretirement benefit costs, and certain charges for legal and other matters which are considered to be unusual or non-recurring. These legacy costs are excluded from the segment income that is used to evaluate the

performance of the operating segments. Legacy items also include equity earnings (loss) from PPG's approximate 40 percent investment in its former automotive glass and services business and $35 million and $30 million of costs in 2011 and 2010, respectively, related to the pension and other postemployment benefit liabilities of the divested business retained by PPG. Corporate unallocated costs include the costs of corporate staff functions not directly associated with the operating segments, the cost of corporate legal cases, net of related insurance recoveries, and the cost of certain insurance and employee benefit programs. Net periodic pension expense is allocated to the operating segments and the portion of net periodic pension expense related to the corporate staff functions is included in the Corporate unallocated costs.

For Optical and Specialty Materials, Commodity Chemicals and Glass, intersegment sales and transfers are recorded at selling prices that approximate market prices. Product movement between Performance Coatings, Industrial Coatings and Architectural Coatings – EMEA is limited, is accounted for as an inventory transfer and is recorded at cost plus a mark-up, the impact of which is not significant to the segment income of the three coatings reportable segments.

(Millions) **Reportable Business Segments**	*Performance Coatings*	*Industrial Coatings*	*Architectural Coatings – EMEA*	*Optical and Specialty Materials*	*Commodity Chemicals*	*Glass*	*Corporate / Eliminations / Non-Segment Items*[1]	*Consolidated Totals*
2011								
Net sales to external customers	$4,626	$4,158	$2,104	$1,204	$1,732	$1,061	$ —	$14,885
Intersegment net sales	—			3	9	—	(12)	—
Total net sales	$4,626	$4,158	$2,104	$1,207	$1,741	$1,061	$(12)	$14,885
Segment income	$ 673	$ 438	$ 123	$ 326	$ 370	$ 97	$ —	$ 2,027
Legacy items[2]								(66)
Interest expense, net of interest income								(168)
Acquisition-related gain, net[3]								9
Corporate unallocated[4]								(205)
Income before income taxes								$ 1,597
Depreciation and amortization (See Note 1)	$ 115	$ 90	$ 113	$ 36	$ 41	$ 52	$ 20	$ 467
Share of net earnings of equity affiliates	2	1	2	—	1	24	7	37
Segment assets[5]	4,017	2,614	2,626	610	690	919	2,906	14,382
Investment in equity affiliates	12	12	20	—	—	170	47	261
Expenditures for property	79	73	48	54	89	56	41	440
2010								
Net sales to external customers	$4,281	$3,708	$1,874	$1,141	$1,434	$ 985	$ —	$13,423
Intersegment net sales	—	(1)	1	3	7	—	(10)	—
Total net sales	$4,281	$3,707	$1,875	$1,144	$1,441	$ 985	$(10)	$13,423
Segment income	$ 661	$ 378	$ 113	$ 307	$ 189	$ 74	$ —	$ 1,722
Legacy items[2]								(67)
Interest expense, net of interest income								(155)
Corporate unallocated[4]								(205)
Income before income taxes								$ 1,295
Depreciation and amortization (See Note 1)	$ 117	$ 95	$ 107	$ 36	$ 39	$ 56	$ 20	$ 470
Share of net earnings (loss) of equity affiliates	2	2	1	—	(1)	26	15	45
Segment assets[5]	4,027	2,620	2,759	597	587	893	3,492	14,975
Investment in equity affiliates	13	13	18	—	1	156	215	416
Expenditures for property	89	68	51	39	40	32	20	339

Notes to the Consolidated Financial Statements

(Millions) Reportable Business Segments	Performance Coatings	Industrial Coatings	Architectural Coatings – EMEA	Optical and Specialty Materials	Commodity Chemicals	Glass	Corporate / Eliminations / Non-Segment Items[1]	Consolidated Totals
2009								
Net sales to external customers	$4,095	$3,068	$1,952	$1,002	$1,273	$849	$ —	$12,239
Intersegment net sales	—	—	—	3	9	—	(12)	—
Total net sales	$4,095	$3,068	$1,952	$1,005	$1,282	$849	$(12)	$12,239
Segment income	$ 551	$ 159	$ 128	$ 235	$ 152	$ (39)	$ —	$ 1,186
Legacy items[2]								(76)
Business restructuring (See Note 8)								(186)
Interest expense, net of interest income								(166)
Corporate unallocated[4]								(141)
Income before income taxes								$ 617
Depreciation and amortization (See Note 1)	$ 120	$ 98	$ 109	$ 36	$ 40	$ 58	$ 19	$ 480
Share of net earnings (loss) of equity affiliates	2	1	1	—	(3)	(5)	(1)	(5)
Segment assets[5]	4,003	2,592	2,987	576	564	846	2,672	14,240
Investment in equity affiliates	11	9	19	—	2	117	207	365
Expenditures for property	51	48	38	32	24	27	11	231

(Millions) Geographic Information	2011	2010	2009
Net sales[6]			
The Americas			
United States	$ 6,203	$ 5,623	$ 5,113
Other Americas	1,121	1,040	867
Europe, Middle East and Africa ("EMEA")	5,043	4,536	4,458
Asia Pacific	2,518	2,224	1,801
Total	$14,885	$13,423	$12,239
Segment income			
The Americas			
United States	$ 1,116	$ 893	$ 623
Other Americas	97	99	61
EMEA	454	387	263
Asia Pacific	360	343	239
Total	$ 2,027	$ 1,722	$ 1,186
Property—net			
The Americas			
United States	$ 1,345	$ 1,274	$ 1,294
Other Americas	98	106	113
EMEA	841	897	997
Asia Pacific	437	409	350
Total	$ 2,721	$ 2,686	$ 2,754

(1) *Corporate intersegment net sales represent intersegment net sales eliminations. Corporate unallocated costs include the costs of corporate staff functions not directly associated with the operating segments and certain legal and benefit costs.*

(2) *Legacy items include current costs related to former operations of the Company, including certain environmental remediation, pension and other postretirement benefit costs, legal costs and certain charges which are considered to be non-recurring, including a charge related to flat glass antitrust matters in the third quarter of 2010. Legacy items also include equity earnings (loss) from PPG's approximate 40 percent investment in the former automotive glass and services business. Beginning in 2011, the earnings impact of adjustments to the Company's proposed asbestos settlement liability is presented in Legacy items. Prior year amounts have been conformed to this presentation.*

(3) *The year ended December 31, 2011 includes a second quarter 2011 net benefit stemming primarily from a bargain purchase gain, reflecting the excess of the fair value of the net assets acquired from Equa-Chlor during the quarter over the price paid.*

(4) *Beginning in 2011, unallocated stock-based compensation costs will be reported as part of other unallocated corporate expense. Prior year amounts have been conformed to this presentation.*

(5) *Segment assets are the total assets used in the operation of each segment. Corporate assets are principally cash and cash equivalents, cash held in escrow, short term investments, deferred tax assets and the approximate 40 percent investment in the former automotive glass and services business.*

(6) *Net sales to external customers are attributed to geographic regions based upon the location of the operating unit shipping the product.*

Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

(a) *Evaluation of disclosure controls and procedures.*

Based on their evaluation as of the end of the period covered by this Form 10-K, the Company's principal executive officer and principal financial officer have concluded that the Company's disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934 (the "Exchange Act")) are effective to ensure that information required to be disclosed by the Company in reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in Securities and Exchange Commission rules and forms and to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the Company's management, including its principal executive and principal financial officers, as appropriate, to allow timely decisions regarding required disclosure.

(b) *Changes in internal control.*

There were no changes in the Company's internal control over financial reporting that occurred during the Company's most recent fiscal quarter that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

See Management Report on page 33 for management's annual report on internal control over financial reporting. See Report of Independent Registered Public Accounting Firm on page 32 for Deloitte & Touche LLP's attestation report on the Company's internal control over financial reporting.

Item 9B. Other Information

None.

Part III

Item 10. Directors, Executive Officers and Corporate Governance

The information about the Company's directors required by Item 10 and not otherwise set forth below is contained under the caption "Proposal 1: Election of Directors" in PPG's definitive Proxy Statement for the 2012 Annual Meeting of Shareholders (the "Proxy Statement") which the Company anticipates filing with the Securities and Exchange Commission, pursuant to Regulation 14A, not later than 120 days after the end of the Company's fiscal year, and is incorporated herein by reference.

The executive officers of the Company are elected by the Board of Directors. The information required by this item concerning the Company's executive officers is incorporated by reference herein from Part I of this report under the caption "Executive Officers of the Company."

Information regarding the Company's Audit Committee is included in the Proxy Statement under the caption "Corporate Governance – Audit Committee" and is incorporated herein by reference.

Information regarding the Company's codes of ethics is included in the Proxy Statement under the caption "Corporate Governance – Codes of Ethics" and is incorporated herein by reference.

Information about compliance with Section 16(a) of the Exchange Act is included in the Proxy Statement under the caption "Beneficial Ownership – Section 16(a) Beneficial Ownership Reporting Compliance" and is incorporated herein by reference.

Item 11. Executive Compensation

The information required by Item 11 is contained in the Proxy Statement under the captions "Compensation of Directors," "Compensation Discussion and Analysis," "Compensation of Executive Officers," "Potential Payments upon Termination or Change in Control," "Corporate Governance – Compensation Committee Interlocks and Insider Participation," and "Corporate Governance – Officers-Directors Compensation Committee Report to Shareholders" and is incorporated herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information required by Item 12 is contained in the Proxy Statement under the captions "Beneficial Ownership" and "Equity Compensation Plan Information" and is incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information required by Item 13 is contained in the Proxy Statement under the captions "Corporate Governance – Director Independence," "Corporate Governance – Review and Approval or Ratification of Transactions with Related Persons" and "Corporate Governance – Certain Relationships and Related Transactions" and is incorporated herein by reference.

Item 14. Principal Accounting Fees and Services

The information required by Item 14 is contained in the Proxy Statement under the caption "Independent Registered Public Accounting Firm" and is incorporated herein by reference.

Part IV

Item 15. Exhibits, Financial Statement Schedules

(a)(1) Consolidated Financial Statements and Reports of Independent Registered Public Accounting Firm (see Part II, Item 8 of this Form 10-K).

The following information is filed as part of this Form 10-K:

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Consolidated Statement of Income for the Years Ended December 31, 2011, 2010 and 2009	34
Consolidated Balance Sheet as of December 31, 2011 and 2010	35
Consolidated Statement of Shareholders' Equity for the Years Ended December 31, 2011, 2010 and 2009	36
Consolidated Statement of Comprehensive Income for the Years Ended December 31, 2011, 2010 and 2009	36
Consolidated Statement of Cash Flows for the Years Ended December 31, 2011, 2010 and 2009	37
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(a)(2) Consolidated Financial Statement Schedule for years ended December 31, 2011, 2010 and 2009.

The following Consolidated Financial Statement Schedule should be read in conjunction with the previously referenced financial statements:

Schedule II – Valuation and Qualifying Accounts

Allowance for Doubtful Accounts for the Years Ended December 31, 2011, 2010 and 2009

(Millions)	*Balance at Beginning of Year*	*Charged to Costs and Expenses*	*Deductions*[1]	*Balance at End of Year*
2011	$ 91	$31	$(51)	$ 71
2010	$122	$18	$(49)	$ 91
2009	$103	$59	$(40)	$122

(1) Notes and accounts receivable written off as uncollectible, net of recoveries, amounts attributable to divestitures and changes attributable to foreign currency translation.

(2) Expenses and deductions during 2011 were elevated by $9 million due to a U.K. based retail do-it-yourself customer who filed for bankruptcy during the second quarter of 2011.

All other schedules are omitted because they are not applicable.

(a)(3) Exhibits. The following exhibits are filed as a part of, or incorporated by reference into, this Form 10-K.

3 PPG Industries, Inc., Restated Articles of Incorporation, as amended, were filed as Exhibit 3 to the Registrant's Quarterly Report on Form 10-Q for the period ended March 31, 1995.

3.1 Statement with Respect to Shares, amending the Restated Articles of Incorporation effective April 21, 1998, was filed as Exhibit 3.1 to the Registrant's Annual Report on Form 10-K for the period ended December 31, 1998.

3.2 Amendment to Restated Articles of Incorporation of PPG Industries, Inc., as amended, effective April 27, 2007, was filed as Exhibit 3.1b to the Registrant's Quarterly Report on Form 10-Q for the period ended March 31, 2007.

3.3 PPG Industries, Inc., Bylaws, as amended and restated on April 19, 2007, were filed as Exhibit 3.2 to the Registrant's Quarterly Report on Form 10-Q for the period ended March 31, 2007.

4 Indenture, dated as of Aug. 1, 1982, was filed as Exhibit 4.1 to the Registrant's Registration Statement on Form S-3 (No. 333-44397) dated January 16, 1998.

4.1 First Supplemental Indenture, dated as of April 1, 1986, was filed as Exhibit 4.2 to the Registrant's Registration Statement on Form S-3 (No. 333-44397) dated January 16, 1998.

4.2 Second Supplemental Indenture, dated as of October 1, 1989, was filed as Exhibit 4.3 to the Registrant's Registration Statement on Form S-3 (No. 333-44397) dated January 16, 1998.

4.3 Third Supplemental Indenture, dated as of November 1, 1995, was filed as Exhibit 4.4 to the Registrant's Registration Statement on Form S-3 (No. 333-44397) dated January 16, 1998.

4.4 Indenture, dated as of June 24, 2005, was filed as Exhibit 4.1 to the Registrant's Current Report on Form 8-K dated June 20, 2005.

4.5 Indenture, dated as of March 18, 2008, was filed as Exhibit 4.1 to the Registrant's Current Report on Form 8-K filed on March 18, 2008.

4.6 Supplemental Indenture, dated as of March 18, 2008, was filed as Exhibit 4.2 to the Registrant's Current Report on Form 8-K filed on March 18, 2008.

4.7 Second Supplemental Indenture, dated as of November 12, 2010, was filed as Exhibit 4.3 to the Registrant's Current Report on Form 8-K filed on November 12, 2010.

†*10 PPG Industries, Inc. Nonqualified Retirement Plan, as amended and restated September 24, 2008.

*10.1 Form of Change in Control Employment Agreement entered into with executives prior to January 1, 2008, as amended, was filed as Exhibit 10.2 to the Registrant's Annual Report on Form 10-K for the period ended December 31, 2007.

*10.2 Form of Change in Control Employment Agreement entered into with executives on or after January 1, 2008 through December 31, 2009, was filed as Exhibit 10.24 to the Registrant's Annual Report on Form 10-K for the period ended December 31, 2007.

*10.3 Form of Change in Control Employment Agreement entered into with executives on or after January 1, 2010, was filed as Exhibit 10.3 to the Registrant's Annual Report on Form 10-K for the period ended December 31, 2009.

*10.4 PPG Industries, Inc. Deferred Compensation Plan for Directors related to compensation deferred prior to January 1, 2005, was filed as Exhibit 10.3 to the Registrant's Annual Report on Form 10-K for the period ended December 31, 1997.

*10.5 PPG Industries, Inc. Deferred Compensation Plan for Directors related to compensation deferred on or after January 1, 2005, as amended February 15, 2006, was filed as Exhibit 10.4 to the Registrant's Quarterly Report on Form 10-Q for the period ended March 31, 2006.

*10.6 PPG Industries, Inc. Deferred Compensation Plan related to compensation deferred prior to January 1, 2005, as amended effective July 14, 2004, was filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the period ended June 30, 2004.

*10.7 PPG Industries, Inc. Deferred Compensation Plan related to compensation deferred on or after January 1, 2005, as amended and restated September 24, 2008, was filed as Exhibit 10.6 to the Registrant's Annual Report on Form 10-K for the period ended December 31, 2008.

*10.8 PPG Industries, Inc. Executive Officers' Long Term Incentive Plan was filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K dated February 16, 2005.

*10.9 PPG Industries, Inc. Incentive Compensation Plan for Key Employees, as amended April 20, 2006, was filed as Exhibit 10.8 to the Registrant's Annual Report on Form 10-K for the period ended December 31, 2008.

*10.10 PPG Industries, Inc. Management Award Plan, as amended April 20, 2006, was filed as Exhibit 10.9 to the Registrant's Annual Report on Form 10-K for the period ended December 31, 2008.

*10.11 PPG Industries, Inc. Stock Plan, dated as of April 17, 1997, as amended July 20, 2005, was filed as Exhibit 10.13 to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2005.

*10.12 PPG Industries, Inc. Omnibus Incentive Plan was filed as Exhibit 10.18 to the Registrant's Quarterly Report on Form 10-Q for the period ended March 31, 2006.

*10.13 PPG Industries, Inc. Amended and Restated Omnibus Incentive Plan, was filed as Annex A to the Registrant's Definitive Proxy Statement for its 2011 Annual Meeting of Shareholders filed on March 10, 2011.

*10.14 Form of Non-Qualified Option Agreement for Directors was filed as Exhibit 10.4 to the Registrant's Current Report on Form 8-K dated February 15, 2005.

*10.15 Form of Time-Vested Restricted Stock Unit Award Agreement, was filed as Exhibit 10.13 to the Registrant's Annual Report on Form 10-K for the period ended December 31, 2008.

*10.16 Form of Time-Vested Restricted Stock Unit Award Agreement for Directors, was filed as Exhibit 10.8 to the Registrant's Quarterly Report on Form 10-Q for the period ended June 30, 2011.

*10.17 Form of Non-Qualified Stock Option Award Agreement, was filed as Exhibit 10.14 to the Registrant's Annual Report on Form 10-K for the period ended December 31, 2008.

*10.18 Form of Nonqualified Stock Option Award Agreement, was filed as Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2009.

*10.19 Form of Nonqualified Stock Option Award Agreement, was filed as Exhibit 10.4 to the Registrant's Quarterly Report on Form 10-Q for the period ended June 30, 2011.

*10.20 Form of TSR Share Award Agreement, was filed as Exhibit 10.15 to the Registrant's Annual Report on Form 10-K for the period ended December 31, 2008.

*10.21 Form of TSR Share Award Agreement, was filed as Exhibit 10.7 to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2009.

*10.22 Form of TSR Share Award Agreement, was filed as Exhibit 10.9 to the Registrant's Quarterly Report on Form 10-Q for the period ended June 30, 2011.

*10.23 Form of Performance-Based Restricted Stock Unit Award Agreement for Key Employees, was filed as Exhibit 10.16 to the Registrant's Annual Report on Form 10-K for the period ended December 31, 2008.

*10.24 Form of Performance-Based Restricted Stock Unit Award Agreement for Key Employees, was filed as Exhibit 10.4 to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2009.

*10.25 Form of Performance-Based Restricted Stock Unit Award Agreement, was filed as Exhibit 10.17 to the Registrant's Annual Report on Form 10-K for the period ended December 31, 2008.

*10.26 Form of Performance-Based Restricted Stock Unit Award Agreement, was filed as Exhibit 10.5 to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2009.

*10.27 Form of Performance-Based Restricted Stock Unit Award Agreement for Key Employees, was filed as Exhibit 10.5 to the Registrant's Quarterly Report on Form 10-Q for the period ended June 30, 2011.

*10.28 Form of Performance-Based Restricted Stock Unit Award Agreement, was filed as Exhibit 10.6 to the Registrant's Quarterly Report on Form 10-Q for the period ended June 30, 2011.

*10.29 Form of Time-Vested Restricted Stock Unit Award Agreement, was filed as Exhibit 10.6 to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2009.

*10.30 Form of Time-Vested Restricted Stock Unit Award Agreement, was filed as Exhibit 10.7 to the Registrant's Quarterly Report on Form 10-Q for the period ended June 30, 2011.

*10.31 Form of letter to certain executives regarding 2008 deferred compensation plan elections, was filed as Exhibit 10.20 to the Registrant's Annual Report on Form 10-K for the period ended December 31, 2007.

10.32 Three-Year Credit Agreement, dated August 2, 2010, among PPG Industries, Inc.; the several banks and financial institutions party thereto; JPMorgan Chase Bank, N.A., as administrative agent; J.P. Morgan Securities, Inc., The Bank of Tokyo-Mitsubishi UFJ, Ltd. and BNP Paribas Securities Corp., as co-lead arrangers and co-bookrunners; and The Bank of Tokyo-Mitsubishi UFJ, Ltd. and BNP Paribas, as co-syndication agents was filed Exhibit 10 to the Registrant's Current Report on Form 8-K filed on August 6, 2010.

*10.33 Letter agreement with Robert J. Dellinger, was filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2009.

*10.34 Separation Agreement, dated June 8, 2011, between PPG Industries, Inc. and Robert J. Dellinger, was filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the period ended June 30, 2011.

*10.35 Employment Agreement between PPG Industries Europe Sàrl, Rolle and Pierre-Marie DeLeener, was filed as Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2009.

*10.36 Employment Agreement, dated September 12, 2011, between PPG Industries, Inc. and Pierre-Marie De Leener, was filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2011.

*10.37 Agreement, dated September 12, 2011, between PPG Industries Europe Sárl and Pierre-Marie De Leener terminating the Employment Agreement, between PPG Industries Europe Sárl and Pierre-Marie De Leener, was filed as Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2011.

*10.38 Letter Agreement with David B. Navikas, was filed as Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q for the period ended June 30, 2011.

†12 Computation of Ratio of Earnings to Fixed Charges for the Five Years Ended December 31, 2011.

†13.1 Market Information, Dividends and Holders of Common Stock.

†13.2 Selected Financial Data for the Five Years Ended December 31, 2011.

†21 Subsidiaries of the Registrant.

†23 Consent of Independent Registered Public Accounting Firm.

†24 Powers of Attorney.

†31.1 Certification of Principal Executive Officer Pursuant to Rule 13a-14(a) or 15d-14(a) of the Exchange Act, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.

†31.2 Certification of Principal Financial Officer Pursuant to Rule 13a-14(a) or 15d-14(a) of the Exchange Act, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.

†32.1 Certification of Chief Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

†32.2 Certification of Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

**101.INS	XBRL Instance Document
**101.SCH	XBRL Taxonomy Extension Schema Document
**101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
**101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
**101.LAB	XBRL Taxonomy Extension Label Linkbase Document
**101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

† Filed herewith.

* Management contracts, compensatory plans or arrangements required to be filed as an exhibit hereto pursuant to Item 601 of Regulation S-K.

** Attached as Exhibit 101 to this report are the following documents formatted in XBRL (Extensible Business Reporting Language) for the year ended December 31, 2011: (i) the Consolidated Statement of Income, (ii) the Consolidated Balance Sheet, (iii) the Consolidated Statement of Shareholders' Equity, (iv) the Consolidated Statement of Comprehensive Income (Loss), (v) the Consolidated Statement of Cash Flows, (vi) Notes to Consolidated Financial Statements and (vii) Financial Schedule of Valuation and Qualifying Accounts. Users of this data are advised pursuant to Rule 406T of Regulation S-T that this interactive data file is deemed not filed or part of a registration statement or prospectus for purposes of sections 11 or 12 of the Securities Act of 1933, is deemed not filed for purposes of section 18 of the Securities and Exchange Act of 1934, and otherwise is not subject to liability under these sections.

Signatures

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized on February 16, 2012.

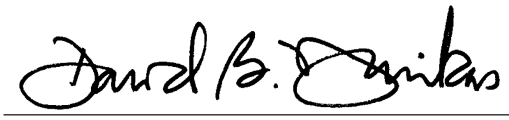
PPG INDUSTRIES, INC.
(Registrant)

By

D. B. Navikas, *Senior Vice President, Finance and Chief Financial Officer*

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed by the following persons on behalf of the Registrant and in the capacities indicated on February 16, 2012.

Signature.	Capacity
C. E. Bunch	Director, Chairman of the Board and Chief Executive Officer
D. B. Navikas	Senior Vice President, Finance and Chief Financial Officer (Principal Financial and Accounting Officer)
S. F. Angel	Director
J. G. Berges	Director
H. Grant	Director
V. F. Haynes	Director
M. J. Hooper	Director
R. Mehrabian	Director
M. H. Richenhagen	Director
R. Ripp	Director
T. J. Usher	Director
D. R. Whitwam	Director

By 

D. B. Navikas, *Attorney-in-Fact*

Certifications

PRINCIPAL EXECUTIVE OFFICER CERTIFICATION

I, Charles E. Bunch, certify that:

1. I have reviewed this annual report on Form 10-K of PPG Industries, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

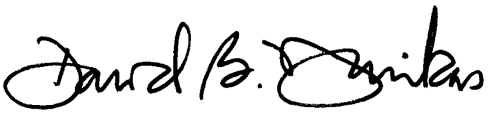
Charles E. Bunch
Chairman of the Board and Chief Executive Officer
February 16, 2012

Certifications

PRINCIPAL FINANCIAL OFFICER CERTIFICATION

I, David B. Navikas, certify that:

1. I have reviewed this annual report on Form 10-K of PPG Industries, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.



David B. Navikas
Senior Vice President, Finance and Chief Financial Officer (Principal Financial and Accounting Officer)
February 16, 2012

Certifications

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the annual report on Form 10-K of PPG Industries, Inc. for the period ended December 31, 2011 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Charles E. Bunch, Chairman and Chief Executive Officer of PPG Industries, Inc., certify to the best of my knowledge, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of PPG Industries, Inc.

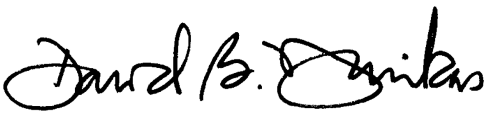
Charles E. Bunch
Chairman of the Board and Chief Executive Officer
February 16, 2012

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the annual report on Form 10-K of PPG Industries, Inc. for the period ended December 31, 2011 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, David B. Navikas, Senior Vice President, Finance and Chief Financial Officer of PPG Industries, Inc., certify to the best of my knowledge, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of PPG Industries, Inc.



David B. Navikas
Senior Vice President, Finance and Chief Financial Officer (Principal Financial and Accounting Officer)
February 16, 2012

Officer Changes

The following are officer changes since March 2011:

March 2011

Denise R. Cade, Assistant General Counsel and Secretary, resigned

April 2011

Anne M. Foulkes, Assistant General Counsel was appointed Assistant General Counsel and Secretary

Donna Lee Walker, Vice President, Tax Administration, retired

May 2011

Johann F. Kolling was appointed Vice President, Tax Administration from Director, U.S. Taxes

Gary R. Danowski was appointed Vice President, Automotive Refinish, EMEA, from Vice President, Flat Glass

Richard A. Beuke was appointed Vice President, Flat Glass from Vice President, Silicas

June 2011

Robert J. Dellinger, Senior Vice President, Finance and Chief Financial Officer, resigned

David B. Navikas was appointed Senior Vice President, Finance and Chief Financial Officer from Vice President and Controller

July 2011

David B. Navikas joined the Executive Committee replacing Robert J. Dellinger

September 2011

J. Rich Alexander, Executive Vice President, assumed responsibility for all global Architectural Coatings businesses and the Asia Pacific region. Alexander retained responsibility for Glass segment and the marketing function.

Pierre-Marie De Leener, Executive Vice President, assumed responsibility for the Aerospace, Protective & Marine Coatings, and Automotive Refinish business units and Latin America region. De Leener retained corporate IT responsibility.

Michael Horton was appointed President, PPG Asia/Pacific, and Vice President, Automotive Refinish and Architectural Coatings, Asia/Pacific from Vice President, Asia/Pacific Coatings and General Manager, Refinish, Architectural, and Protective and Marine Coatings, Asia/Pacific

Viktoras R. Sekmakas was appointed Senior Vice President, Industrial Coatings and President, PPG Europe from Senior Vice President, Industrial Coatings and President, Asia/Pacific Coatings

Jorge A. Steyerthal, Vice President, Coatings and Managing Director Latin America, retired

Trademarks

The following are trademarks and/or registered trademarks of PPG and its related entities and used in this report:
Amercoat, Balakryl, Boonstoppel, Brander, CR-39, Dekoral, Freitag, Guittet, Hera, Histor, Ivy, Johnstone's, Leyland, Master's Mark, Olympic, Penitures Gauthier, PPG logo, PPG Pittsburgh Paints, PPG Porter Paints, Primalex, Prominent Paints, Rambo, Ripolin, Seigneurie, Sigma Coatings, Taubmans, Teslin, Trinat, Trivex.

Lucite is a registered trademark of E.I. DU PONT DE NEMOURS AND COMPANY, used under license.

Renner is a registered trademark of Renner Herrmann S.A. and Renner Sayerlack S.A., used under license.

FSC and tree logo is a registered certification mark of Forest Stewardship Council, A.C., used under license.

Transitions is a registered trademark of Transitions Optical, Inc.

Dyrup and *Bondex* are registered trademarks of Dyrup A/S.

Other company, product and service names used in this report may be trademarks or service marks of other parties.

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Five-Year Digest

All amounts are in millions of dollars except per share data and number of employees.	2011	2010	2009	2008	2007
Consolidated Statement of Income					
Net sales	14,885	13,423	12,239	15,849	12,220
Income before income taxes	1,597	1,295	617	908	1,315
Income tax expense	385	415	191	284	383
Income from continuing operations, net of tax	1,095	769	336	538	856
(Loss) income from discontinued operations, net of tax	—	—	—	—	(22)
Net income (attributable to PPG)	1,095	769	336	538	834
Return on average capital (%)[1]	16.6	12.9	6.6	8.6	16.4
Return on average equity (%)	29.8	21.0	10.1	13.0	22.4
Earnings per common share:					
Income from continuing operations	6.96	4.67	2.04	3.27	5.20
(Loss) income from discontinued operations	—	—	—	—	(0.13)
Net income (attributable to PPG)	6.96	4.67	2.04	3.27	5.07
Weighted average common shares outstanding	157.3	164.5	164.8	164.6	164.5
Earnings per common share – assuming dilution:					
Income from continuing operations	6.87	4.63	2.03	3.25	5.16
(Loss) income from discontinued operations	—	—	—	—	(0.13)
Net income (attributable to PPG)	6.87	4.63	2.03	3.25	5.03
Adjusted weighted average common shares outstanding	159.3	165.9	165.5	165.4	165.9
Dividends	355	360	353	343	335
Per share	2.26	2.18	2.13	2.09	2.04
Consolidated Balance Sheet					
Current assets	6,694	7,058	5,981	6,348	6,941
Current liabilities	3,702	3,625	3,577	4,210	4,632
Working capital	2,992	3,433	2,404	2,138	2,309
Property (net)	2,721	2,686	2,754	2,798	2,578
Total assets	14,382	14,975	14,240	14,698	12,629
Long-term debt	3,574	4,043	3,074	3,009	1,201
Total PPG shareholders' equity	3,249	3,638	3,753	3,333	4,151
Per share	20.40	21.93	22.65	20.30	25.34
Other Data					
Capital spending[2]	446	341	265	2,056	597
Depreciation expense	346	346	354	428	345
Amortization expense	121	124	126	135	58
Interest expense	210	189	193	254	93
Quoted market price					
High	97.81	84.59	62.31	71.00	82.42
Low	66.43	56.96	28.16	35.94	64.01
Year end	83.49	84.07	58.54	42.43	70.23
Price/earnings ratio[3]					
High	14	18	31	22	16
Low	10	12	14	11	13
Average number of employees	38,400	38,300	39,900	44,900	34,900

(1) Return on average capital is calculated using pre-interest, aftertax earnings and average debt and equity during the year.
(2) Includes the cost of businesses acquired.
(3) Price/earnings ratios were calculated based on high and low market prices during the year and the respective year's earnings per common share.

PPG Shareholder Information

Quarterly Stock Market Price

	2011			2010		
Quarter Ended	High	Low	Close	High	Low	Close
March 31	$ 96.56	$ 78.75	$ 95.21	$ 66.63	$ 56.96	$ 65.40
June 30	97.81	82.76	90.79	72.24	59.01	60.41
September 30	93.85	68.27	70.66	73.99	59.69	72.80
December 31	90.00	66.43	83.49	84.59	72.10	84.07

The number of holders of record of PPG common stock as of Jan. 31, 2012, was 18,151 per the records of the company's transfer agent.

Dividends

	2011		2010	
Month of Payment	*Amount (Millions)*	*Per Share*	*Amount (Millions)*	*Per Share*
March	$ 89	$ .55	$ 90	$ .54
June	89	.57	90	.54
September	90	.57	90	.55
December	87	.57	90	.55
Total	$ 355	$ 2.26	$ 360	$ 2.18

PPG has paid uninterrupted annual dividends since 1899. The latest quarterly dividend of 57 cents per share was approved by the board of directors Jan. 19, 2012, payable March 12, 2012, to shareholders of record Feb. 17, 2012. The company has increased its annual dividend payment for the past 40 consecutive years. PPG's last dividend increase was announced in April 2011.

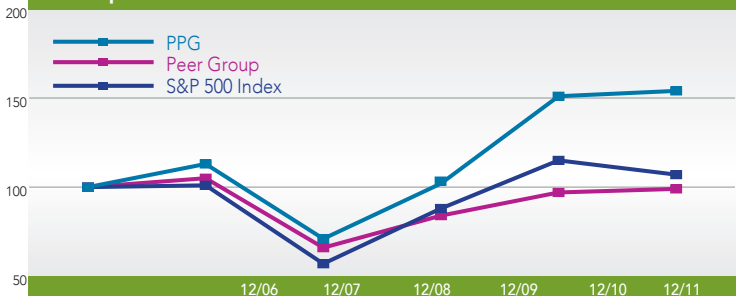
Shareholder Return Performance Graph

These line graphs compare the yearly percentage changes in the cumulative total shareholder value return of the company's common stock with the cumulative total return of the Standard & Poor's Composite 500 Stock Index ("S&P 500 Index") and a defined Peer Group, for the five-year and ten-year periods beginning Dec. 31, 2006, and Dec. 31, 2001, respectively, and ending Dec. 31, 2011.

The information presented in these graphs assumes that the investment in the company's common stock and each index was $100 on Dec. 31, 2006, and Dec. 31, 2001, and that all dividends were reinvested.

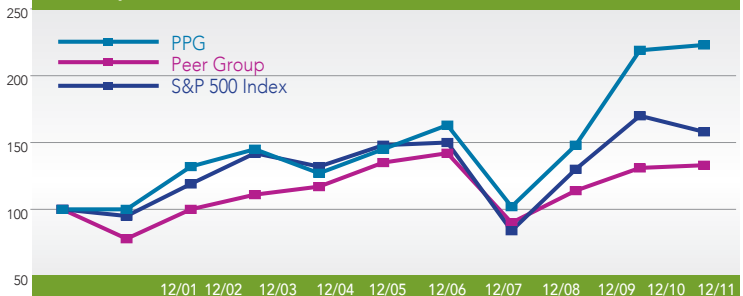
The Peer Group includes coatings companies AkzoNobel NV, The Dow Chemical Co., Eastman Chemical Co., E.I. DuPont de Nemours & Co., FMC Corp., RPM International Inc., Masco Corp., The Sherwin-Williams Co., and The Valspar Corp.

Comparison of Five-Year Cumulative Total Return



	12/06	12/07	12/08	12/09	12/10	12/11
PPG Industries, Inc.	100	113	71	102	151	154
Peer Group	100	101	57	88	115	107
S&P 500 Index	100	105	66	84	97	99

Comparison of Ten-Year Cumulative Total Return



	12/01	12/02	12/03	12/04	12/05	12/06	12/07	12/08	12/09	12/10	12/11
PPG Industries, Inc.	100	100	132	145	127	145	163	102	148	219	223
Peer Group	100	95	119	142	132	148	150	84	130	170	158
S&P 500 Index	100	78	100	111	117	135	142	90	114	131	133

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PPG-dedicated phone: (800) 648-8160
www.bnymellon.com/shareowner/equityaccess

Annual Meeting of Shareholders
Thursday, April 19, 2012, 11 a.m.
David L. Lawrence Convention Center
Spirit of Pittsburgh Ballroom B
1000 Fort Duquesne Blvd.
Pittsburgh, PA 15222

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Specific questions regarding the transfer or replacement of stock certificates, dividend check replacement, dividend tax information or the direct purchase plan with dividend reinvestment option should be made to Computershare directly at (800) 648-8160, or by logging on to Investor Service Direct at www.bnymellon.com/shareowner/equityaccess.

Stock Exchange Listings
PPG common stock is listed on the New York Stock Exchange (symbol: PPG).

Publications Available to Shareholders
Copies of the following publications will be furnished without charge upon written request to Corporate Communications, PPG Industries, Inc., One PPG Place, Pittsburgh, PA 15272. Most of these are also available on the Internet at www.ppg.com, Investor Center, Publications. The publications include: Annual Report and Form 10-K, including the financial schedule and other exhibits; PPG Industries Blueprint; PPG's Global Code of Ethics; PPG's Code of Ethics for Senior Financial Officers; PPG's Corporate Sustainability Report; and Facts About PPG.

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