



Annual Report 2024



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We protect and
beautify the world®



Our Valued Shareholders,

PPG's approximately 46,000 employees throughout the world remain focused on being a trusted partner for customers, delivering value for shareholders and supporting the communities where the company operates. Throughout 2024, we demonstrated resilience in a challenging industrial macroeconomic environment.

The PPG team delivered:

- **Portfolio optimization** - At the core of our enterprise growth strategy is a focus on markets where we hold leading positions and offer a differentiated portfolio of paints, coatings and surface solutions. In 2024, we further strengthened that focus and optimized our portfolio through the divestitures of both our silica products and our architectural coatings U.S. and Canada businesses. These divestitures improve our financial profile, including higher operating margins, and better positions the company to deliver sustainable organic growth. As a result, PPG is a sharper, more focused company.
- **Increased margin and earnings** - We have delivered nine consecutive quarters of segment margin and segment EBITDA margin expansion through the end of 2024. Full-year 2024 net sales from continuing operations were \$15.8 billion and adjusted EPS increased 6% supported by favorable business mix and driven by sales of our technology-advantaged products and strong brands. We delivered record results in several of our businesses, including aerospace coatings, automotive refinish coatings, and architectural coatings Latin America.

- **Rewarding shareholders** - The team's work throughout the year has enabled PPG to continue to reward our shareholders throughout 2024 by returning a total of \$1.4 billion to them. In 2024, the company paid approximately \$620 million in dividends and repurchased \$750 million of stock, which represented approximately 3% of our outstanding shares. PPG has raised its annual dividend payout for 53 consecutive years and has paid uninterrupted annual dividends for 125 years.

- **Accelerated digital transformation** - From rolling out global ecommerce platforms to using artificial intelligence to expedite manufacturing, PPG is using digital technology to streamline how we serve customers and conduct business. One example of our progress this year was our continued growth in subscriptions to our PPG LINQ™ services. In addition, we added more than 600 PPG MOONWALK® installations in 2024, further supporting customer productivity and related share gain.

- **Enhanced sustainability** - In 2024, PPG continued to innovate and deliver sustainably-advantaged solutions based on demand from our customers to improve their productivity and reduce overall value chain impacts. These products comprised 41% of our sales.

- **Community support** - We invested \$18.4 million worldwide in 2024, an increase of \$900,000 over 2023. The 2024 funding supported more than 400 community partners and programs that are focused on advancing education and delivering community support, while encouraging PPG employee volunteerism.

In 2025, the COLORFUL COMMUNITIES® program is reaching an important milestone, marking 10 years since the program's launch and a decade of brightening communities around the world alongside our employee volunteers and community partners. We have extended the *Colorful Communities* program for 10 more years and doubled the initial investment to contribute an additional \$15 million through 2035, bringing the total investment to more than \$25 million.

Looking ahead:

We are focused on accelerating the impact of our enterprise growth strategy. As we anticipate a slow start to 2025, we will be controlling the controllables, including executing our self-help cost savings initiatives. Despite the macroeconomic environment, we expect to deliver organic sales growth for the full year based on stronger results in the second half of 2025 and the launch of recently won share gains. In the meantime, we are taking decisive action to reduce costs, including global structural costs and European manufacturing consolidations. Our balance sheet remains strong, which continues to provide us with financial flexibility, and we remain committed to driving shareholder value creation.

Thank you to our PPG team around the world who make it happen and deliver on our purpose every day: WE PROTECT AND BEAUTIFY THE WORLD®. And thank you for your continued confidence and investment in PPG.

Tim Knavish
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, 2024

or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the transition period from _____ to _____

Commission File Number 1-1687



PPG INDUSTRIES, INC.

(Exact name of registrant as specified in its charter)

Pennsylvania

25-0730780

(State or other jurisdiction of incorporation or organization)

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

One PPG Place Pittsburgh Pennsylvania

15272

(Address of principal executive offices)

(Zip code)

Registrant's telephone number, including area code:

412 434-3131

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

<u>Title of each class</u>	<u>Trading Symbol(s)</u>	<u>Name of each exchange on which registered</u>
Common Stock – Par Value \$1.66 2/3	PPG	New York Stock Exchange
0.875% Notes due 2025	PPG 25	New York Stock Exchange
1.875% Notes due 2025	PPG 25A	New York Stock Exchange
1.400% Notes due 2027	PPG 27	New York Stock Exchange
2.750% Notes due 2029	PPG 29A	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 every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

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

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

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

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

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, 2024, was \$29,338 million.

As of January 31, 2025, 226,953,559 shares of the Registrant's common stock, with a par value of \$1.66²/₃ per share, were outstanding. As of that date, the aggregate market value of common stock held by non-affiliates was \$26,163 million.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of PPG Industries, Inc. Proxy Statement for its 2025 Annual Meeting of Shareholders (the "Proxy Statement") to be filed with the Securities and Exchange Commission within 120 days after the end of the Company's fiscal year, are incorporated herein by reference into Part III of this report.

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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Part I

Item 1. Business

PPG Industries, Inc. manufactures and distributes a broad range of paints, coatings and specialty products. PPG was incorporated in Pennsylvania in 1883. PPG's vision is to be the first-choice partner to meet our customers' evolving needs for innovative paints, coatings and surface solutions to protect and beautify the world.

PPG has a proud heritage with a demonstrated commitment to innovation, sustainability, community engagement and development of leading-edge paint, coatings and specialty products. Through dedication and industry-leading expertise, we solve our customers' biggest challenges, collaborating closely to find the right path forward. PPG is a global leader with manufacturing facilities and equity affiliates in more than 70 countries.

PPG supplies paints, coatings and specialty products to customers serving a wide array of end-uses, including industrial equipment and components; packaging material; aircraft and marine equipment; automotive original equipment; automotive refinish and aftermarket; pavement marking products; as well as coatings for other industrial and consumer products. PPG also serves commercial and residential new build and maintenance customers by supplying coatings to painting and maintenance contractors and directly to consumers for decoration and maintenance.

The coatings industry is highly competitive and consists of several large firms with global presence and many firms supplying local or regional markets. PPG competes in its primary markets with the world's largest coatings companies, most of which have global operations, and with many regional coatings companies.

In December 2024, PPG completed the sale of 100% of its architectural coatings business in the U.S. and Canada. Accordingly, the Company's consolidated results of operations and cash flows have been recast to present the results of the architectural coatings business in the U.S. and Canada as discontinued operations for all periods presented, and the Company's December 31, 2023 balance sheet has been recast to present the assets and liabilities of the U.S. and Canada architectural coatings business as held for sale. Refer to Note 2, "Divestitures" under Item 8 of this Form 10-K for further information relating to this transaction.

PPG's business is comprised of three reportable business segments: Global Architectural Coatings, Performance Coatings and Industrial Coatings as described below:

GLOBAL ARCHITECTURAL COATINGS

<i>Strategic Business Unit</i>	<i>Products</i>	<i>Primary Customers / End-uses</i>	<i>Main Distribution Methods</i>	<i>Primary Brands</i>
Architectural Coatings Latin America and Asia Pacific	Paints, wood stains, adhesives, sealants and purchased sundries	Painting and maintenance contractors and consumers for decoration and maintenance of residential and commercial building structures	Company-owned stores, home centers and other regional or national consumer retail outlets, paint dealers, concessionaires, independent distributors and direct to consumers	COMEX®, PPG®, GLIDDEN®, MERIDIAN®, POLYFORM®, RENNER®, TAUBMANS® and WHITE KNIGHT®
Architectural Coatings Europe, Middle East and Africa (EMEA)				SIGMA®, HISTOR®, SEIGNEURIE®, GUITTET®, PEINTURES GAUTHIER®, RIPOLIN®, JOHNSTONE'S®, LEYLAND®, PRIMALEX®, DEKORAL®, TRILAK®, GORI®, BONDEX®, DANKE!® and TIKKURILA®

Segment Overview	This reportable business segment primarily supplies a variety of decorative coatings, adhesives, sealants and finishes along with paint strippers, stains and related chemicals.
Major Competitive Factors	Product performance, technology, quality, technical and customer service, price, customer productivity, distribution and brand recognition
Global Competitors	Akzo Nobel N.V., BASF Corporation, Hempel A/S, Nippon Paint, the Jotun Group, The Sherwin-Williams Company
Principal Manufacturing and Distribution Facilities	Amsterdam, Netherlands; Birstall, United Kingdom; Debica, Poland; Mexico City, Mexico; Moreuil, France; Nykvarn, Sweden; Ruitz, France; San Juan del Rio, Mexico; Tepexpan, Mexico; Vantaa, Finland; and Wroclaw, Poland.

PERFORMANCE COATINGS

<i>Strategic Business Unit</i>	<i>Products</i>	<i>Primary Customers / End-uses</i>	<i>Main Distribution Methods</i>	<i>Primary Brands</i>
Aerospace Coatings	Coatings, sealants, transparencies, adhesives, engineered materials, packaging and chemical management services for the aerospace industry	Commercial, military, regional jet and general aviation aircraft	Direct to customers and company-owned distribution network	PPG®
Automotive Refinish Coatings	Coatings, solvents, adhesives, sealants, purchased sundries, digital solutions and paint films	Automotive and commercial transport/fleet repair and refurbishing, light industrial coatings and specialty coatings for signs	Independent distributors and direct to customers	PPG®, SEM®, SPRINT®
Protective and Marine Coatings	Coatings and finishes for the protection of metals and structures	Metal fabricators, heavy duty maintenance contractors and manufacturers of ships, bridges and rail cars	Direct to customers, company-owned architectural coatings stores, independent distributors and concessionaires	PPG®, SIGMA®
Traffic Solutions	Paints, thermoplastics, raised pavement markers and other advanced technologies for pavement marking	Government, commercial infrastructure, painting and maintenance contractors	Direct to customers, government agencies and independent distributors	Ennis-Flint®

Segment Overview	This reportable business segment primarily supplies a variety of protective coatings, adhesives, sealants and finishes along with pavement marking products and related chemicals, transparencies and paint films.
Alliances	PPG has an established alliance with Asian Paints Ltd. to serve certain automotive refinish customers in India.
Major Competitive Factors	Product performance, technology, quality, technical and customer service, price, customer productivity, distribution and brand recognition
Global Competitors	Akzo Nobel N.V., Axalta Coating Systems Ltd., BASF Corporation, Hempel A/S, Kansai Paints, the Jotun Group, Nippon Paint, RPM International Inc., The Sherwin-Williams Company and 3M Company
Principal Manufacturing and Distribution Facilities	Amsterdam, Netherlands; Birstall, United Kingdom; Busan, South Korea; Clayton, Australia; Delaware, Ohio; Deurne, Belgium; Ennis, Texas; Gonfreville, France; Greensboro, North Carolina; Huntsville, Alabama; Kunshan, China; Little Rock, Arkansas; Milan, Italy; Mojave, California; Nykvarn, Sweden; Ontario, Canada; Ostrow Wielkopolski, Poland; Ruitz, France; Shildon, United Kingdom; Sylmar, California; Stowmarket, United Kingdom; Tepexpan, Mexico; Vantaa, Finland; and Wroclaw, Poland.

INDUSTRIAL COATINGS

<i>Strategic Business Unit</i>	<i>Products</i>	<i>Primary Customers / End-uses</i>	<i>Main Distribution Methods</i>	<i>Primary Brands</i>
Automotive OEM^(a) Coatings	Specifically formulated coatings, adhesives and sealants, metal pretreatments and paint films; technical services and coatings applications	Automotive original equipment manufacturers and tier supplier network, including combustion engine, commercial, and electric vehicles, and automotive parts and accessories, including battery-related components; On-site coatings services within several customer manufacturing locations as well as at regional service centers.	Direct to manufacturing companies and various coatings applicators	PPG®
Industrial Coatings	Specifically formulated coatings, adhesives and sealants and metal pretreatments	Appliances, agricultural and construction equipment, consumer electronics, building products (including residential and commercial construction), kitchenware, transportation vehicles and numerous other finished products.		
Packaging Coatings	Specifically formulated coatings	Metal cans, closures, and plastic and aluminum tubes for food, beverage and personal care, and promotional and specialty packaging		
Specialty Products	TESLIN® substrate, Organic Light Emitting Diode (OLED) materials, optical lens materials and photochromic dyes	TESLIN® - Labels, including blood bag labels, e-passports, drivers' licenses, breathable membranes, loyalty cards and identification cards OLED - displays and lighting Lens materials - optical lenses, coatings and color-change products		

(a) Original equipment manufacturer (OEM)

Segment Overview	This reportable business segment primarily supplies a variety of protective and decorative coatings and finishes along with adhesives, sealants, metal pretreatment products, optical monomers and coatings, low-friction coatings and other specialty products.
Alliances	PPG has established alliances with Kansai Paints to serve Japanese-based automotive OEM customers in North America and Europe and Asian Paints Ltd. to serve certain aftermarket customers and automotive OEM customers in India.
Major Competitive Factors	Product performance, technology, quality, technical and customer service, price, customer productivity and distribution.
Global Competitors	Akzo Nobel N.V., Axalta Coating Systems Ltd., BASF Corporation, Kansai Paints, Nippon Paint and The Sherwin-Williams Company
Principal Manufacturing and Distribution Facilities	Barberton, Ohio; Cheonan, South Korea; Cieszyn, Poland; Circleville, Ohio; Cleveland, Ohio; Monroeville, Pennsylvania; Oak Creek, Wisconsin; Quattordio, Italy; San Juan del Rio, Mexico; Springdale, Pennsylvania; Sumaré, Brazil; Weingarten, Germany; and Tianjin and Zhangjiagang, China.

Research and Development

(\$ in millions, except percentages)	2024	2023	2022
Research and development costs, including depreciation of research facilities	\$447	\$446	\$457
% of annual net sales	2.8%	2.7%	2.9%

Technology innovation has been a hallmark of PPG's success throughout its history. The Company seeks to optimize its investment in research and development to create new products to drive profitable growth. We align our product development with the macro trends in the markets we serve, including a focus on sustainability and productivity, and leverage core technology platforms to develop products to address unmet market needs. Additionally, we operate laboratories in close geographic proximity to our customers, and we customize our products for our customers' end-use applications. Our history of successful technology introductions is based on a commitment to an efficient and effective innovation process and disciplined portfolio management. We have obtained government funding for a small portion of the Company's research efforts, and we will continue to pursue government funding, where appropriate.

We own and operate several facilities to conduct research and development for new and improved products and processes. In addition to the Company's centralized principal research and development centers (see Item 2. "Properties" of this Form 10-K), operating segments manage their development through centers of excellence. As part of our ongoing efforts to manage our formulations and raw material costs effectively, we operate global competitive sourcing laboratories. Because of our broad array of products and customers, we are not materially dependent upon any single technology platform.

Raw Materials, Energy and Logistics

PPG uses a wide variety of complex raw materials that serve as the building blocks of our manufactured products. The Company's most significant raw materials include resins, solvents, reactants, titanium dioxide, additives and epoxy. Raw materials include both organic, primarily petroleum-derived, materials and inorganic materials, including titanium dioxide. Raw materials represent PPG's single largest production cost component.

Most of the raw materials and energy used in production are purchased from outside sources, and the Company has made, and continues to make, supply arrangements to meet our planned operating requirements for the future. Supply of critical raw materials and energy is managed by establishing contracts with multiple sources and identifying alternative materials or technology whenever possible. In support of our decarbonization efforts, we continue to increase the amount of renewable energy secured for our operating facilities, and we are increasingly evaluating alternative raw materials that offer sustainable benefits and support the circular economy, including recycled and renewable feedstocks. Prices for certain of our raw materials typically fluctuate with energy prices and global supply and demand changes; however, pricing may be impacted by the fact that the manufacture of our raw materials is several steps downstream from crude oil, natural gas, and other key feedstocks.

Through effective management of raw materials, energy and logistics, the Company aims to maintain a competitive cost position and ensure ongoing security of supply. Security of a sufficient supply of high-quality raw materials is important to PPG's continued success as it allows the Company to increase production as necessary to keep pace with customer demand. While PPG faced certain raw material shortages and logistical challenges during 2021 and 2022, raw material and logistics availability improved in 2023 and 2024 and is now comparable to pre-pandemic conditions. We continue to focus on improving our competitive cost position and expanding our supply of high-quality raw materials, including strategic initiatives to qualify multiple sources of supply.

We typically experience fluctuating prices for energy and raw materials driven by various factors, including changes in supplier feedstock costs and inventories, global industry activity levels, foreign currency exchange rates, government regulation, tariffs, and global supply and demand factors. In 2024, raw material costs remained high compared to historic levels, but moderated compared to 2022 levels, resulting in a low single-digit percentage decrease to cost of goods sold compared to 2023. The Company expects raw material costs to increase by a low single-digit percentage during 2025, primarily due to already enacted tariffs.

We are subject to existing and evolving standards relating to the regulation and registration of chemicals which could potentially impact the availability and viability of some of the raw materials we use in our production processes. Our ongoing, global product stewardship efforts are directed at maintaining our compliance with these standards. We anticipate that the number of chemical registration regulations will continue to increase globally, and we have implemented programs to track and comply with these regulations.

Our commitment to sustainability extends to our suppliers as an extension of our internal focus on sustainability. The PPG Global Supplier Code of Conduct clarifies our global expectations in the areas of business integrity, labor practices, associate health and safety, and environmental management. Our Supplier Sustainability Policy builds upon our Global Supplier Code of Conduct by establishing expectations for sustainability within our supply chain. These policies reinforce

our expectations that our suppliers, as well as their subcontractors, will comply fully with applicable laws and adhere to internationally recognized environmental, social and corporate-governance standards.

Global Operations

PPG has significant non-U.S. operations. This broad geographic footprint serves to lessen the significance to us of economic impacts occurring in any one region of the world. As a result of our global footprint, we are subject to certain inherent risks, including economic and political conditions in international markets, trade protection measures and fluctuations in foreign currency exchange rates. During 2024, unfavorable foreign currency translation decreased Net sales by approximately \$70 million and Income before income taxes by approximately \$20 million.

Refer to Note 20, "Revenue Recognition" in Item 8 of this Form 10-K for additional geographic information pertaining to sales and Note 21, "Reportable Business Segment Information" in Item 8 of this Form 10-K for geographic information related to PPG's property, plant and equipment.

Seasonality

PPG's Income before income taxes has typically been greater in the second and third quarters and Cash from operating activities has been greatest in the fourth quarter due to end-use market seasonality, primarily in our architectural coatings and traffic solutions businesses. Demand for our architectural coatings in Europe and traffic solutions products in the U.S. and Canada is typically the strongest in the second and third quarters due to higher home improvement, maintenance and construction activity during the spring and summer months. The Latin American paint season is the strongest in the fourth quarter. These cyclical activity levels result in the collection of outstanding receivables and lower inventory on hand in the fourth quarter generating higher Cash from operating activities.

Human Capital

As of December 31, 2024, PPG employed approximately 46,000 people, of which approximately 11,700 were in the United States and approximately 34,300 were elsewhere in the world. The Company has numerous collective bargaining agreements throughout the world. We observe local customs, laws and practices in labor relations when negotiating collective bargaining agreements. There were no significant work stoppages in 2024. While we have experienced occasional work stoppages and may experience some work stoppages in the future, we believe that we will be able to negotiate all labor agreements on satisfactory terms. To date, these work stoppages have not had a significant impact on our results of operations. Overall, we believe we have good relationships with our employees.

The PPG Way is a set of behaviors that enables, empowers and engages each employee to fully live our values and realize our full potential as an organization. It guides our employees and leaders as we strive to achieve our purpose of protecting and beautifying the world. Employee engagement is a measure of the extent to which our employees are involved in, enthusiastic about, and committed to our work and workplace. We conduct employee surveys to increase dialogue among teams and implement meaningful action to improve results.

Our human capital management strategies provide the foundation for our teams to thrive and deliver exceptional performance. These strategies in the areas of culture and purpose, employee engagement, development and pay equity are overseen by the Human Capital Management and Compensation Committee of our Board of Directors. We are committed to ensuring our employees are safe, healthy, enabled, engaged and valued for the unique talents they bring to PPG. We believe that having quality dialogue with our people, recognizing the value they bring and championing an authentic culture generates engaged employees and a company that is more innovative, productive and competitive. Our focus on and investment in learning and development are crucial to ensuring we keep our people engaged, productive and successful at every stage of their careers. We are committed to promoting from within wherever possible while also bringing in new ideas, thoughts and insights.

One of PPG's greatest strengths is our people. Their talents and unique perspectives enable us to meet challenges quickly, creatively and effectively, providing a significant competitive advantage in today's global economy. To ensure our people feel valued and respected, we are committed to providing a workplace that embraces a culture of collaboration and is free from harassment and bullying.

Our environmental, health and safety policy and standards define our expectations, and we implement programs and initiatives to reduce health and safety risk in our operations. We measure progress against our health and safety goals using the injury and illness rate, which is calculated as the number of illness and injury incidents per 200,000 work hours. For 2024, our injury and illness rate was 0.31.

More information about PPG's human capital management strategies and our workforce can be found in the Proxy Statement for our 2025 Annual Meeting of Shareholders and in our Sustainability Report located at <http://sustainability.ppg.com>.

Environmental Matters

PPG is committed to operating in a sustainable and productive manner and to helping our customers meet their sustainability goals. Our sustainability efforts are overseen by the Sustainability and Innovation Committee of our Board of Directors. At the management level, day-to-day implementation of our sustainability initiatives is led by our Vice President, Global Sustainability who coordinates PPG's sustainability programs, integrates these programs into our business and communicates the benefits of our sustainably advantaged products to our customers, shareholders and other stakeholders. The Vice President, Global Sustainability works with PPG's Sustainability Committee, a committee of management consisting of senior corporate executives, to establish and monitor our sustainability goals, policies, programs and procedures that incorporate sustainability into our business practices, including resource management, innovation, community engagement, communications, procurement, manufacturing and employee wellness.

Our dedication to innovation is intertwined with sustainability. In 2024, PPG continued to innovate and deliver sustainably-advantaged solutions based on our customers' desire to improve their productivity and to reduce overall value chain environmental impacts. Our products contribute to lighter, more fuel-efficient vehicles, airplanes and ships, and they help our customers reduce their energy consumption, conserve water and reduce waste. These products include compact automotive paint processes and low temperature cure capabilities that save energy and reduce water usage at customer manufacturing sites; sustainably-advantaged waterborne coatings formulations; sustainably-advantaged powder coatings; lightweight sealants and coatings for aircraft; coatings that cool surfaces; coatings for recyclable metal packaging; antimicrobial products; coatings that contain reduced materials of concern; architectural coatings that contain lower carbon content raw materials; and solutions for autonomous and battery-powered vehicles. For the year ended December 31, 2024, 41% of sales were from sustainably-advantaged products and processes that we have defined as addressing multiple sustainability benefits, including lower emissions, lower toxicity, energy efficiency, use of renewable raw materials or extending durability.

PPG is committed to using resources efficiently and driving sustainability throughout our entire value chain, including continued focus on reducing greenhouse gas emissions, water withdrawal and total energy use. In 2023, PPG announced its near-term 2030 sustainability goals, including greenhouse gas ("GHG") emissions targets that have been validated by the Science Based Targets initiative. PPG's 2030 sustainability goals include a commitment to reduce absolute emissions from its own operations (scope 1 and 2) by 50% by 2030 from a 2019 base year and to reduce absolute scope 3 GHG emissions from purchased goods and services, processing of sold products, and end-of-life treatment of sold products by 30% within the same timeframe.

We are subject to existing and evolving standards relating to the protection of the environment. In management's opinion, the Company operates in an environmentally sound manner and is well positioned, relative to environmental matters, within the industries in which it operates. PPG is negotiating with various government agencies concerning current and former manufacturing sites and offsite waste disposal locations, including certain 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 of loss can be reasonably estimated.

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

In addition to the \$222 million currently reserved for environmental remediation efforts, we may be subject to loss contingencies related to environmental matters estimated to be approximately \$100 million to \$200 million. These reasonably possible unreserved losses relate to environmental matters at a number of sites, none of which are individually significant. 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.

Management believes that 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. Refer to Note 15, "Commitments and Contingent Liabilities" in Item 8 of this Form 10-K for additional information related to environmental matters and our accrued liability for estimated environmental remediation costs.

(\$ in millions)	2024	2023	2022
Capital expenditures for environmental control projects	\$24	\$26	\$21

We believe that the amount spent on capital expenditures for environmental control projects in 2025 will be similar to 2024. Actual future capital expenditures may differ from expectations due to the inherent uncertainties involved in estimating future environmental remediation compliance costs, including possible technological, regulatory and enforcement developments, the results of environmental studies and other factors.

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 of its annual reports on Form 10-K, quarterly reports on Form 10-Q and its proxy statements as soon as reasonably practicable after such reports are filed with the Securities and Exchange Commission ("SEC"). The Company also posts all financial press releases, including earnings releases, and all other reports filed or furnished to the SEC, including current reports on Form 8-K to its website. Reference to the Company's, the SEC's or other 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 paints, coatings and specialty products, we operate in a business environment that includes risks. Each of the risks described in this section could adversely affect our results of operations, financial position and liquidity. While the factors listed here are considered to be the more significant factors, no such list should be considered to be a complete statement of all potential risks and uncertainties. Unlisted factors may present significant additional obstacles which may adversely affect our businesses and our results of operations, financial position and liquidity.

Economic Risks

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. Raw materials include both organic, primarily petroleum-derived, materials and inorganic materials, including titanium dioxide. These raw materials represent PPG's single largest production cost component. Most of our raw materials 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. Adequate supply of critical raw materials is managed by establishing contracts, procuring from multiple sources, and identifying alternative materials or technology whenever possible. While not our customary practice, 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 may be lower.

The Company is continuing its aggressive sourcing initiatives to effectively broaden our supply of high quality raw materials. These initiatives include qualifying multiple and local sources of supply, within Asia and other lower cost regions of the world, diversification of our resin supply, including adding on-site resin production at certain manufacturing locations, and a reduction in the amount of titanium dioxide and certain other raw materials used in our product formulations.

PPG continues to undertake actions to maintain supply arrangements adequate to meet planned operating requirements. However, raw material supply chain disruptions, including logistical and transportation challenges, could adversely impact our ability to procure raw materials. An inability to obtain certain critical raw materials has adversely impacted our ability to produce certain products in the past and could do so in the future. Additionally, the cost of raw materials fluctuates due to a number of factors, including changes in supplier feedstock costs and inventories, global industry activity levels, foreign currency exchange rates, government regulation, tariffs, and global supply and demand factors, any of which could drive an increase in raw material costs. If raw material costs increase and we are unable to offset these higher costs in a timely manner, this would adversely impact Income from continuing operations and Cash from operating activities.

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

Demand for our products and services depends, in part, on the general economic conditions affecting the countries and markets in which we do business. Weak economic conditions in certain geographies and changing supply and demand balances in the markets we serve have negatively impacted demand for our products and services in the past and may do so in the future. There is a high level of uncertainty surrounding future global economic conditions due to a number of factors, including the impact of higher interest rates, geopolitical uncertainty, including the international impacts of the ongoing wars in Ukraine and Israel and increasing tensions between China and the United States, commodity market volatility, potential changes to international trade agreements, the imposition of tariffs and the threat of additional tariffs,

and labor shortages in certain regions of the world. PPG provides products and services to a variety of end-use markets in many geographies. This broad end-use market exposure and expanded geographic presence lessens the significance of any individual decrease in activity levels; nonetheless, lower demand levels may result in lower sales, which would adversely impact Income from continuing operations and Cash from operating activities.

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

We are exposed to foreign currency exchange rate risk with respect to our sales, expenses, profits, assets and liabilities denominated in 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 currencies will affect our Net sales, Net income and the value of balance sheet items denominated in foreign currencies. We may 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 or weakening of the U.S. dollar against major currencies, could adversely or positively affect our financial condition and results of operations which are expressed in U.S. dollars.

The industries in which we operate are highly competitive.

With each of our businesses, an increase in competition may cause us to lose market share or lose customers, adversely impacting our sales volumes, or compel us to reduce prices to remain competitive, which could result in reduced margins for our products. Additionally, our ability to increase prices may impact the overall economics for the products we offer. Competitive pressures may not only reduce our margins but may also impact our revenues and our growth which could adversely affect our results of operations.

Public health crises, including pandemics and the measures taken by public health and government authorities to address them, have adversely impacted our financial condition and results of operations in the past, and could adversely impact us in the future.

Our financial condition, liquidity and results of operations were adversely impacted by public health crises in the past, including impacts from efforts by public health officials to contain the public health crises. The effects of public health crises could interfere with the ability of PPG, our suppliers, our customers, and others to conduct business and negatively affect consumer confidence and the global economy. Preventative and protective actions taken by public health officials, governments and PPG in response to public health crises could adversely impact our business, suppliers, distribution channels, and customers, due to business shutdowns, reduced workforce availability, reduced ability to supply products, or reduced demand for our products.

Legal, Regulatory, and Tax Risks

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 waste, and the investigation and remediation of soil and groundwater affected by hazardous substances. In addition, various laws regulate health and safety matters. The environmental laws and regulations we are subject to 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, including rules requiring expanded reporting of certain environmental, safety and governance information, 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.

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 may relate to contract, patent, environmental, product liability, asbestos exposure, antitrust, employment, securities 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 and 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 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 those described in Note 15, "Commitments and Contingent Liabilities" in Item 8 of this Form 10-K, 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, and such outcomes could have a material adverse effect on our results of operations, Cash from operating activities or financial condition.

We are subject to a variety of laws and regulations, which could increase our compliance costs and could adversely affect our results of operations.

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, as well as interpretations by courts and regulators. These laws and regulations effectively expand our compliance obligations and costs.

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

Further, although we believe that we have appropriate risk management and compliance programs in place, we cannot guarantee that our internal controls and compliance systems will always protect us from improper acts committed by employees, agents, business partners or businesses that we acquire. Any non-compliance, improper actions or allegations of such could damage our reputation and subject us to civil or criminal investigations and shareholder lawsuits, could lead to substantial civil and criminal, monetary and non-monetary penalties, and could cause us to incur significant legal and investigatory costs.

Changes in the tax regimes and related government policies and regulations in the countries in which we operate could adversely affect our results and our effective tax rate.

As a multinational corporation, we are subject to various taxes in both the U.S. and non-U.S. jurisdictions. Due to economic and political conditions, tax rates in these various jurisdictions may be subject to significant changes. For example, the Organisation for Economic Co-operation and Development has proposed modernizing international tax rules, including global minimum tax standards (referred to as Pillar 2), which has caused an increase to our effective tax rate. Our effective income tax rate is also affected by changes in the mix of earnings in countries with differing statutory tax rates, changes in the valuation of deferred tax assets, the introduction of new taxes and changes in tax laws or their interpretation. If our effective income tax rate were to increase, our Cash from operating activities, financial condition and results of operations would be adversely affected. Although we believe that our tax filing positions are appropriate, the final determination of tax audits or tax disputes may be different from what is reflected in our historical income tax provisions and accruals. If future audits find that additional taxes are due, we may be subject to incremental tax liabilities, possibly including interest and penalties, which could have a material adverse effect on our Cash from operating activities, financial condition and results of operations.

Operational and Strategic Risks

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

PPG has a significant investment in global operations. This broad geographic footprint serves to lessen the significance of economic impacts occurring in any one region. Notwithstanding the benefits of geographic diversification, our ability to achieve and maintain profitable growth in international markets is subject to risks related to the differing legal, political, social and regulatory requirements and economic conditions of many countries. As a result of our operations 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. Recently, there has been an increase in global geopolitical uncertainty due to a number of factors, including the international impacts of the ongoing wars in Ukraine and Israel and increasing tensions between China and the United States. In 2024, PPG completed the divestiture of its U.S. and Canada Architectural Coatings business, which further increases the percentage of sales recognized outside the U.S. During 2024, approximately 68% of the Company's total net sales were recognized outside of the United States.

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

Unexpected events, including supply disruptions, temporary plant and/or power outages, work stoppages, natural disasters and severe weather events, significant public health issues, computer system disruptions, challenges implementing, upgrading or transitioning enterprise resource planning systems, 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 our

ability to supply products, 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.

The security of our information technology systems could be compromised which could adversely affect our operations or reputation.

We rely extensively on global information technology systems, networks and services, certain of which are managed, hosted, provided and/or used by third parties or their vendors, to conduct our business. We use information technology systems, networks, and services throughout many of our key business processes, including, but not limited to, receiving customer orders, purchasing materials, producing inventory, shipping inventory to customers, collecting customer payments, and paying our employees and vendors.

Numerous and evolving information security threats, including advanced persistent threats and ransomware, pose a risk to the security of our systems, networks and services, as well as to the confidentiality, availability and integrity of our data and of our critical business operations. The techniques, tools and tactics used in cyber-attacks evolve rapidly, including from emerging technologies such as advanced automation or artificial intelligence and may be difficult to detect for periods of time. As a result we may face difficulties in anticipating and implementing adequate preventative measures or fully mitigating harms after such an attack. Our information technology systems, networks and services have been, and will likely continue to be, subject to cybersecurity attacks. We have implemented and operate a cybersecurity program designed to protect and preserve the confidentiality, integrity and availability of our networks and systems as well as information that we own or is in our care. Notwithstanding our cybersecurity preparedness activities, we cannot guarantee that our security efforts or the security efforts of our third-party service providers will prevent all cybersecurity events. A material cybersecurity event could result in negative publicity, theft or other financial loss, modification or destruction of proprietary information or key information, manufacture of defective products, theft of personally identifiable information, and/or production downtimes and operational disruptions, which could adversely affect our results of operations.

We may not effectively integrate acquired businesses into our existing operations.

Growth through acquisitions is an important component of the Company's strategy. Over the last decade, we have successfully completed more than 50 acquisitions, and we will likely acquire additional businesses and enter into additional joint ventures in the future. Growth through acquisitions and the formation of joint ventures involve risks, including:

- difficulties in assimilating acquired companies and products into our existing business;
- delays in realizing the benefits from the acquired companies or products;
- diversion of our management's time and attention from other business concerns;
- difficulties due to lack of or limited prior experience in any new markets we may enter;
- unforeseen claims and liabilities, including unexpected environmental exposures, product liability, or existing information technology vulnerabilities;
- unexpected losses of customers or suppliers of the acquired or existing business;
- difficulty in conforming the acquired business' standards, processes, procedures and controls to those of our operations; and
- difficulties in retaining key employees of the acquired businesses.

These risks or other challenges encountered in connection with our past or future acquisitions and joint ventures could cause delays in realizing the anticipated benefits of such acquisitions or joint ventures, or such anticipated benefits may never be realized, which could adversely affect our results of operations, Cash from operating activities or financial condition.

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

Our business relies on continued global demand for our brands and products. To achieve our business goals, we must develop and sell products that appeal to customers. This is dependent on a number of factors, including our ability to produce products that meet the quality, performance and price expectations of our customers and our ability to develop effective sales, advertising and marketing programs.

We believe the automotive industry will experience significant and continued change in the coming years, including an increase in the production of electric vehicles. Vehicle manufacturers continue to develop new safety features such as collision avoidance technology and self-driving vehicles that may reduce vehicle collisions in the future, potentially lowering demand for our automotive refinish coatings. In addition, through the introduction of new technologies, new

business models or new methods of travel, such as ridesharing, the number of automotive OEM new-builds may decline, potentially reducing demand for our automotive OEM coatings and related automotive parts.

PPG is committed to developing and selling sustainably-advantaged products, which are designed to help our customers achieve their sustainability goals, including by reducing the amount of materials used in their processes. We expect that our focus on sustainably-advantaged products will drive future sales growth; however, as customers transition to sustainably-advantaged products, this could adversely impact our sales volumes as customers may require a lower quantity of our products due to reduced customer waste, extended durability and other similar impacts of using our sustainably-advantaged products.

Additionally, the development of customer-facing digital channels has and will continue to transform certain retail industries. An inability to develop such solutions and our customer's pace of adoption of those solutions could negatively affect our business or the market demand for our products. We manage our innovation pipeline and introduction of new products through a rigorous stage gate process. We continuously look at ways to optimize and improve the effectiveness of this process to deliver innovation and growth.

Our future growth will depend on our ability to continue to innovate our existing products and to develop and introduce new products. If we fail to keep pace with product innovation on a competitive basis or to predict market demands for our products, our businesses, financial condition and results of operations could be adversely affected.

Our business success depends on attracting, developing and retaining a qualified workforce.

Our continued business success depends on the efforts and abilities of our management team and employees. The skills, experience and industry knowledge of our employees significantly benefit our operations and performance. We compete with other companies both within and outside of our industry for talented personnel in a highly competitive labor market, and we may face challenges attracting or retaining qualified employees. If we are unable to effectively attract, develop and retain a qualified workforce, our businesses, financial condition and results of operations could be adversely affected.

PPG's aerospace coatings business depends, in part, on our ability to successfully meet customer demand, production targets and commitments.

PPG is currently under contract to supply transparencies, coatings and sealants for use on existing and new commercial, general aviation and military aircraft manufactured by many of the largest global and regional aerospace manufacturers. Our aerospace business is currently experiencing a backlog resulting in product shortages to certain of our customers. In addition, many of our contracts contemplate production increases over the next several years. If we fail to meet production targets and commitments, or encounter difficulty or unexpected costs in meeting such levels, it could have a material effect on our reputation, business, operating results, or financial condition. Similarly, to the extent demand for our products increases rapidly and significantly in future periods, we may not be able to ramp up production quickly enough to meet the demand, which could result in production delays at our customers, lost opportunities for growth and adversely affect our business, financial condition, results of operations or competitive position. Additionally, delivery delays by us due to production interruptions or delays may subject us to liability from customer claims that such delay resulted in losses to the customer.

Item 1B. Unresolved Staff Comments

None.

Item 1C. Cybersecurity

PPG's cybersecurity program is designed to protect and preserve the confidentiality, integrity and availability of our networks and systems as well as information that we own or is in our care through a risk-based approach. The Company's program is based on the U.S. National Institute for Standards and Technology (NIST) cybersecurity framework and other applicable industry frameworks.

Our cybersecurity program includes:

- ongoing employee cybersecurity awareness and training activities, which include frequent phishing testing;
- access management and access controls intended to implement Principle of Least Privilege (PoLP) access;
- protection of certain data through encryption at rest and in transit;
- monitoring and protection software;
- a vulnerability management program that includes managing the risk of third-party software;
- a cyber incident response plan that provides controls and procedures to support appropriate containment, response, investigation, reporting and recovery of cybersecurity incidents;

- periodic testing of our cybersecurity posture, including by independent third-party consultants; and
- integrating cybersecurity requirements and other provisions into various contracts.

PPG has continued to invest in cybersecurity to evolve and improve its program. PPG regularly assesses and measures itself against industry practices to identify opportunities to improve its people, processes and technology used to identify, prevent, detect, respond and recover from cybersecurity incidents. When such improvements are identified and validated as appropriate in PPG's business context, they are incorporated in the roadmap for implementation.

To date, the risks from cybersecurity threats have not materially affected the Company. We have significantly increased our cybersecurity investments over the last five years and have implemented cybersecurity safeguards designed to detect and prevent cybersecurity events that may have a material adverse effect on the Company. Notwithstanding our increased cybersecurity investments and preparedness activities, sophisticated and targeted computer crime perpetrated by threat actors internal or external to the Company poses a risk to the security of our systems, facilities, and networks and to the confidentiality, availability and integrity of our data, including but not limited to intellectual property and confidential and personal data. This could lead to negative publicity, theft or other financial loss, modification or destruction of proprietary information or key information, manufacture of defective products, production downtimes and operational disruptions, which could materially and adversely affect our reputation, competitiveness and results of operations. Refer to the risk factor titled "*The security of our information technology systems could be compromised which could adversely affect our operations or reputations*" in Item 1A of this Form 10-K for further detail regarding cybersecurity risks that could affect PPG's operations. We maintain insurance covering certain costs that we may incur in connection with cybersecurity incidents, which we believe is commensurate with the size and the nature of our operations. However, the Company may incur expenses and losses related to a cyber incident that are not covered by insurance or are in excess of our insurance coverage.

The PPG Board of Directors (the "Board") has overall responsibility for the oversight of risk management at PPG, which includes cybersecurity risks. The Audit Committee of the Board (the "Audit Committee"), is responsible for oversight of the Company's enterprise risk management ("ERM") program which provides oversight and governance of all of the Company's operational and financial risks including risks from cybersecurity threats to the Company. The Audit Committee receives bi-annual reports and periodic briefings on cybersecurity matters, including key risks to the Company, recent developments, and risk mitigation activities from our Vice President and Chief Information Officer ("CIO") and our Chief Information Security Officer ("CISO"), who are both responsible for overseeing our cybersecurity program. In addition, the full Board receives bi-annual briefings from our CIO on our cybersecurity program. The Board and the Audit Committee also periodically review the results of exercises performed by our advisors as part of an independent assessment of PPG's cybersecurity program and internal preparedness.

In addition, the Enterprise Risk Committee, a committee of senior executives who identify and monitor the risks to PPG and are responsible for our ERM program, receives updated information on cybersecurity risks at each of its meetings.

As part of their oversight of our cybersecurity program, our CIO and our CISO oversee a team of cybersecurity professionals and are responsible for assessing and managing our material risks from cybersecurity threats. Our CIO and CISO are trained information technology professionals, each of whom has earned degrees in information systems and business administration and has many years of experience in or managing global enterprise information technology at various organizations.

PPG maintains an internal communication hierarchy that is designed to communicate the occurrence of certain cybersecurity events and/or incidents into our systems to our CISO, our CIO, our company crisis response team, and, as appropriate, to certain members of senior management. This communication hierarchy includes protocols for informing the Audit Committee and the full Board of certain cybersecurity events and/or incidents and for determining the materiality thereof.

Item 2. Properties

PPG's corporate headquarters is located in the United States in Pittsburgh, Pa. The Company's manufacturing facilities, sales offices, research and development centers and distribution centers are located throughout the world. Refer to Item 1. "Business" of this Form 10-K for the principal manufacturing and distribution facilities by reportable business segment.

The Company's principal research and development centers are located in Allison Park, Pa.; Tianjin, China; Cleveland, Oh.; Springdale, Pa.; Milan, Italy; Monroeville, Pa.; Ingersheim, Germany; Marly, France; Oak Creek, Wi.; Sumare, Brazil; Amsterdam, Netherlands; Vantaa, Finland; Tepexpan, Mexico; Burbank, Ca.; Zhangjiagang, China; Cheonan, Republic of Korea; Wroclaw, Poland; Bangplee, Thailand; and Sylmar, Ca.

Our headquarters, certain distribution centers and substantially all company-owned paint stores are located in facilities that are leased while our 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 may relate to contract, patent, environmental, product liability, asbestos exposure, antitrust, employment, securities and other matters arising out of the conduct of PPG's current and past business activities. To the extent these lawsuits and claims involve personal injury, property damage and certain other claims, 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 may contest coverage. 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.

From the late 1880's until the early 1970's, PPG owned property located in Cadogan and North Buffalo Townships, Pennsylvania which was used for the disposal of solid waste from PPG's former glass manufacturing facility in Ford City, Pennsylvania. In October 2018, the Pennsylvania Department of Environmental Protection (the "DEP") approved PPG's cleanup plan for the Cadogan Property. In April 2019, PPG and the DEP entered into a consent order and agreement ("CO&A") which incorporated PPG's approved cleanup plan and a draft final permit for the collection and discharge of seeps emanating from the former disposal area. The CO&A includes a civil penalty of \$1.2 million for alleged past unauthorized discharges. PPG's former disposal area is also the subject of a citizens' suit filed by the Sierra Club and PennEnvironment seeking remedial measures beyond the measures specified in PPG's approved cleanup plan, a civil penalty in addition to the penalty included in the CO&A and plaintiffs' attorneys fees. PPG and the plaintiffs settled plaintiffs' claims for injunctive relief and PPG agreed to enhancements to the DEP approved cleanup plan and a \$250,000 donation to a Pennsylvania nonprofit organization. This settlement has been memorialized by an amendment to the CO&A which was appended to a Consent Agreement between PPG and the plaintiffs which has been entered by the federal court. The remaining claims in the case for attorneys' fees and a civil penalty are not affected by this settlement. A trial on the issue of a civil penalty under the Clean Water Act was held in June 2024. Following the trial, the parties filed Proposed Findings of Fact and Conclusions of Law and the matter is now ready for a decision by the Court. With regard to plaintiffs' motion for attorneys' fees, the Court appointed a Special Master to review the parties' positions regarding the amount of fees that should be awarded.

In 2006, a lawsuit was filed in Manaus, Brazil, captioned Di Gregório Navegação LTDA v. PPG Industries, Inc. (the "Di Gregório litigation"). The lawsuit asserted claims arising from a November 1998 fire on a cargo ship off the coast of Brazil; the lawsuit alleges the fire was caused by PPG chemical products that were part of the ship's cargo. The plaintiff, a charterer of the ship, brought claims for various alleged damages. This litigation was pending as of July 18, 2012 when PPG and Eagle Spingo Inc. ("Eagle Spingo") signed a Separation Agreement setting forth the separation of the assets and liabilities of PPG's commodity chemicals business to an entity to be later identified by Eagle Spingo. The assets and liabilities identified in the Separation Agreement specifically included all liabilities relating to the Di Gregório litigation. On January 22, 2013, PPG and Eagle US 2, LLC ("Eagle US 2") signed a Contribution Agreement, by which PPG transferred to Eagle US 2 the assets and liabilities as set forth in the Separation Agreement. Georgia Gulf Corporation then acquired Eagle Spingo and Eagle US 2 in a merger transaction after which Georgia Gulf was renamed Axiall Corporation ("Axiall"). Thereafter, Axiall owned Eagle Spingo and Eagle US 2. Under the terms of the Contribution Agreement, Eagle US 2 acquired the assets and liabilities as defined in the Separation Agreement, including the Di Gregório litigation. In 2016, Westlake Corporation acquired Axiall and its subsidiaries, including Eagle Spingo and Eagle US 2. For convenience, Westlake Corporation, Axiall, Eagle Spingo, and Eagle US 2 collectively are referred to as "Westlake."

Under the Separation Agreement and Contribution Agreement, Eagle US 2 assumed the Di Gregório litigation liability, and Eagle Spingo and Eagle US 2 were required to remove PPG as an obligor for this liability. To the extent PPG was not removed as an obligor, the Separation Agreement provides that Eagle Spingo and Axiall must act as agents or subcontractors of PPG and pay any liability in the matter on PPG's behalf. The Separation Agreement also provides PPG an uncapped right of indemnification for all damages PPG incurs arising from the Di Gregório litigation and for any breach of the Separation Agreement or Contribution Agreement.

Since 2013, Westlake exclusively has controlled the defense of the Di Gregório litigation. In 2024, PPG learned that Westlake never substituted itself into the case in place of PPG or otherwise informed the Brazilian court that Westlake is the real party in interest and assumed all liability for the matter. On May 30, 2024, Westlake informed PPG that the Brazilian court entered an award against PPG (which remains the nominal defendant) that with prejudgment interest, fees, and costs would total over \$700 million. More recently, Westlake informed PPG that it believes simple prejudgment interest applies to the judgment which would result in the final award being approximately \$350 million. Westlake informed PPG that although it will continue to defend the case and pursue an appeal of the award, it will not post any bond, pay any judgment, or take any steps to prevent the plaintiff from attempting to execute on the judgment against PPG.

On May 17, 2024, Eagle Spinco filed a lawsuit against PPG in Delaware Superior Court alleging breach of the Separation Agreement and requesting declaratory relief (the “Eagle Spinco Lawsuit”). In its lawsuit, Eagle Spinco sought to have the Di Gregório liability determined to be one in which its obligation is only to indemnify PPG for any damages PPG incurs net of any insurance coverage available from PPG’s insurers.

On June 13, 2024, PPG filed a lawsuit against Westlake in the Court of Chancery in Delaware (the “PPG Lawsuit”), asserting claims for specific performance, declaratory relief, breach of contract, and equitable estoppel. The PPG Lawsuit asserts: (a) Westlake assumed all liability for the Di Gregório litigation, (b) Westlake is obligated to remove PPG as an obligor in the litigation and has a continuing duty to act as PPG’s agent to satisfy any award if PPG is not removed as an obligor in the case, (c) Westlake has the duty to pay any award, bond, court fees and other costs awarded in the Di Gregório litigation, (d) Westlake’s obligations are unconditional and not contingent upon the recovery of any insurance proceeds and Westlake did not acquire any right to PPG’s insurance assets, and (e) PPG has an uncapped right of indemnification if Westlake fails to satisfy its obligations under the Separation Agreement and Contribution Agreement. Eagle Spinco filed counterclaims in the PPG Lawsuit restating the claims originally asserted in the Eagle Spinco Lawsuit, and dismissed the Eagle Spinco Lawsuit.

PPG intends to vigorously enforce its rights under the Separation Agreement and Contribution Agreement and to hold Westlake accountable for any damages PPG suffers as a result of Westlake’s breach of contract. The Delaware Court of Chancery has set a trial date of May 6, 2025 for the PPG Lawsuit. PPG believes the risk of loss associated with this matter is remote.

For many 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, see Note 15, “Commitments and Contingent Liabilities” to the accompanying consolidated financial statements in Part I, Item 8 of this Form 10-K.

Information About Our Executive Officers

Set forth below is information related to the Company's executive officers as of February 20, 2025.

<i>Name</i>	<i>Age</i>	<i>Title</i>
Timothy M. Knavish ^(a)	59	Chairman and Chief Executive Officer since October 2023
Anne M. Foulkes ^(b)	62	Senior Vice President and General Counsel since September 2018
Vincent J. Morales ^(c)	59	Senior Vice President and Chief Financial Officer since March 2017
K. Henrik Bergström ^(d)	52	Senior Vice President, Architectural Coatings, Latin America, EMEA and Asia Pacific since May 2023
Kevin D. Braun ^(e)	56	Senior Vice President, Operations since October 2024
Amy R. Ericson ^(f)	59	Senior Vice President, Protective and Marine Coatings since January 2023
Chancey E. Hagerty ^(g)	51	Senior Vice President, Automotive Refinish Coatings since May 2023

- (a) Mr. Knavish served as President and Chief Executive Officer from January 2023 until September 2023. Mr. Knavish served as Chief Operating Officer from March 2022 through December 2022, Executive Vice President from October 2019 through February 2022, Senior Vice President, Architectural Coatings and President, PPG EMEA from January 2019 through September 2019, Senior Vice President, Industrial Coatings from October 2017 through December 2018, Senior Vice President, Automotive Coatings from March 2016 through September 2017, Vice President, Protective and Marine Coatings from August 2012 through February 2016 and Vice President, Automotive Coatings, Americas from March 2010 through July 2012.
- (b) Ms. Foulkes served as Senior Vice President, General Counsel and Secretary from April 2022 to June 2022 and from August 2018 to September 2018, Vice President and Associate General Counsel and Secretary from March 2016 through July 2018 and Assistant General Counsel and Secretary from April 2011 through February 2016.
- (c) Mr. Morales served as Vice President, Finance from June 2016 through February 2017. From June 2015 through June 2016, he served as Vice President, Investor Relations and Treasurer and from October 2007 through May 2015 he served as Vice President, Investor Relations.
- (d) Mr. Bergström served as Vice President, Architectural Coatings, Latin America, EMEA and Asia Pacific from February 2022 through April 2023 and as Vice President Architectural Coatings, Latin America from April 2017 through January 2022.
- (e) Effective October 1, 2024, Mr. Braun was named Senior Vice President, Operations. Mr. Braun served as Senior Vice President, Industrial Coatings Segment from May 2023 through September 2024, Vice President, Global Industrial Coatings from January 2020 through April 2023 and as Vice President, Industrial Coatings, Americas from September 2013 through December 2019.
- (f) Ms. Ericson served as Senior Vice President, Packaging Coatings from July 2018 through December 2022. She served as President of SUEZ Chemical Monitoring and Solutions from 2017 until 2018, President of General Electric Water Services Company from 2015 to 2017 and President and Chief Executive Officer of Alstom SA's U.S. business from 2013 to 2015.
- (g) Mr. Hagerty served as Vice President, Global Automotive Refinish Coatings from January 2020 through April 2023 and as Vice President, Global Industrial Coatings from January 2019 through December 2019.

Item 4. Mine Safety Disclosures

Not Applicable.

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 PPG's stock exchange listing and quarterly stock market prices, dividends, holders of common stock, and the stock performance graph is included in Exhibit 13.1 filed with this Form 10-K and is incorporated herein by reference.

Issuer Purchases of Equity Securities - Fourth Quarter 2024

Month	Total Number of Shares Purchased	Avg. Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Programs	Max. Number of Shares That May Yet Be Purchased Under the Programs ⁽¹⁾
October 2024				
Repurchase program	—	\$—	—	24,177,629
November 2024				
Repurchase program	—	\$—	—	24,204,845
December 2024				
Repurchase program	2,034,464	\$122.92	2,034,464	23,108,291
Total quarter ended December 31, 2024				
Repurchase program	2,034,464	—	2,034,464	23,108,291

- (1) In December 2017, PPG's board of directors approved a \$2.5 billion share repurchase program. In April 2024, PPG's Board of Directors authorized the repurchase of an additional \$2.5 billion of outstanding common stock. The remaining shares yet to be purchased under the program has been calculated using PPG's closing stock price on the last business day of the respective month. The repurchase programs do not have an expiration date.

Item 6. [Reserved]

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

The following discussion includes a comparison of our results of operations and liquidity and capital resources for the years ended December 31, 2024, 2023 and 2022. The Company's financial results have been recast to present the results of the architectural coatings business in the U.S. and Canada as discontinued operations for all periods presented.

Highlights

Net sales were approximately \$15.8 billion in 2024, a decrease of 2% compared to the prior year, due to sales volumes declining and the combination of unfavorable foreign currency translation and divestitures reducing net sales. Despite decreased sales due to lower industry demand in automotive OEM coatings, industrial coatings and architectural coatings in Europe, results were supported by record sales in aerospace coatings and growth in several other key technology-driven businesses.

Income before income taxes was \$1,852 million in 2024, an increase of \$162 million compared to the prior year. This increase was primarily due lower raw material costs, lower performance-based compensation costs and restructuring savings, partially offset by overhead inflation and the impact of lower sales volumes.

Performance Overview

Net Sales by Region

(\$ in millions, except percentages)	% Change				
	2024	2023	2022	2024 vs. 2023	2023 vs. 2022
United States and Canada	\$5,352	\$5,485	\$5,346	(2.4)%	2.6%
Europe, Middle East and Africa (EMEA)	5,386	5,617	5,458	(4.1)%	2.9%
Asia Pacific	2,912	2,873	2,824	1.4%	1.7%
Latin America	2,195	2,267	1,986	(3.2)%	14.1%
Total	\$15,845	\$16,242	\$15,614	(2.4)%	4.0%
2024 vs. 2023					

Net sales decreased \$397 million due to the following:

- Lower sales volumes (-1%)
- Unfavorable foreign currency translation and divestitures (-1%)

For specific business results, see the Performance of Reportable Business Segments section within Item 7 of this Form 10-K.

2023 vs. 2022

Net sales increased \$628 million due to the following:

- Higher selling prices (+5%)
- Favorable foreign currency translation (+1%)

Partially offset by:

- Lower sales volumes (-2%)

For specific business results, see the Performance of Reportable Business Segments section within Item 7 of this Form 10-K.

Cost of sales, exclusive of depreciation and amortization

	% Change				
(\$ in millions, except percentages)	2024	2023	2022	2024 vs. 2023	2023 vs. 2022
Cost of sales, exclusive of depreciation and amortization	\$9,252	\$9,678	\$9,975	(4.4)%	(3.0)%
Cost of sales as a % of net sales	58.4%	59.6%	63.9%	(1.2)%	(4.3)%

2024 vs. 2023

Cost of sales, exclusive of depreciation and amortization, decreased \$426 million due to the following:

- Moderating raw material costs
- Lower sales volume

2023 vs. 2022

Cost of sales, exclusive of depreciation and amortization, decreased \$297 million due to the following:

- Moderating raw material costs
- Lower sales volume

Partially offset by:

- Wage and other cost inflation

Selling, general and administrative expenses

	% Change				
(\$ in millions, except percentages)	2024	2023	2022	2024 vs. 2023	2023 vs. 2022
Selling, general and administrative expenses	\$3,391	\$3,401	\$3,037	(0.3)%	12.0%
Selling, general and administrative expenses as a % of net sales	21.4%	20.9%	19.5%	0.5%	1.4%

2024 vs. 2023

Selling, general and administrative expenses decreased \$10 million primarily due to:

- Restructuring cost savings
- Lower performance-based compensation

Partially offset by:

- Wage and other cost inflation

2023 vs. 2022

Selling, general and administrative expenses increased \$364 million primarily due to:

- Wage and other cost inflation
- Unfavorable foreign currency translation
- Higher performance-based compensation expense

- Selling, general and administrative expenses from acquired businesses

Partially offset by:

- Restructuring cost savings

Other charges and other income

	% Change				
(\$ in millions, except percentages)	2024	2023	2022	2024 vs. 2023	2023 vs. 2022
Interest expense	\$241	\$247	\$167	(2.4)%	47.9%
Interest income	(\$177)	(\$140)	(\$54)	26.4%	159.3%
Business restructuring, net	\$233	(\$2)	\$33	N/A	N/A
Impairment and other related charges, net	\$146	\$160	\$231	(8.8)%	(30.7)%
Pension settlement charge	\$—	\$190	\$—	N/A	N/A
Other charges/(income), net	(\$8)	\$80	(\$66)	N/A	N/A

Interest expense

Interest expense decreased \$6 million in 2024 versus 2023 primarily due to lower debt balances.

Interest expense increased \$80 million in 2023 versus 2022 primarily due to the unfavorable impact of higher interest rates on PPG's variable debt obligations.

Interest income

Interest income increased \$37 million in 2024 versus 2023 primarily due to the favorable impact of higher interest rates.

Interest income increased \$86 million in 2023 versus 2022 primarily due to strong cash generation, resulting in higher levels of cash and cash equivalents, as well as the favorable impact of higher interest rates.

Business restructuring, net

In October 2024, the Company approved a comprehensive cost reduction program focused on reducing structural costs primarily in Europe and in certain other global businesses, along with other corporate costs following the divestitures of PPG's silicas products business and the architectural coatings business in the U.S. and Canada. In connection with approval of this restructuring program, the Company recorded a pretax restructuring charge of \$239 million, representing employee severance and other cash costs. Refer to Note 8, "Business Restructuring" in Item 8 of this Form 10-K for additional information.

In 2022, the Company approved a business restructuring plan which included actions to reduce its global cost structure in response to economic conditions, including softening demand in Europe and lower than expected demand recovery in China. In connection with approval of this restructuring program, the Company recorded a pretax restructuring charge of \$33 million.

Impairment and other related charges, net

During 2024, the Company received written approval from Russian regulatory authorities of a definitive agreement to sell the Company's remaining Russian business. As a result, the Company classified the business as held for sale as of December 31, 2024 and recognized an impairment charge of \$146 million, primarily related to accumulated foreign currency translation losses.

During 2023, as a result of its annual impairment testing performed in the fourth quarter, the Company recorded Impairment and other related charges, net of \$158 million due to the goodwill impairment recognized for the traffic solutions reporting unit and \$2 million to reduce the carrying value of certain indefinite-lived trademarks.

During 2022, the Company recorded Impairment and other related charges, net of \$231 million primarily related to the wind down of the Company's operations in Russia.

Refer to Note 6, "Goodwill and Other Identifiable Intangible Assets" and Note 7 "Impairment and Other Related Charges, Net" in Item 8 of this Form 10-K for additional information.

Pension settlement charge

In March 2023, the Company purchased group annuity contracts that transferred to third-party insurance companies pension benefit obligations for certain of the Company's retirees in the U.S. who were receiving their monthly retirement benefit payments from the U.S. pension plan. This transaction resulted in a pension settlement charge of \$190 million. Refer to Note 14, "Employee Benefit Plans" in Item 8 of this Form 10-K for additional information.

Other (income)/charges, net

Other (income)/charges, net was higher in 2024 compared to 2023 primarily due to a gain recognized on the divestiture of the silicas products business, partially offset by the recognition of accumulated foreign currency translation losses related to the Company's exit of its Argentina operations. Refer to Note 18, "Other (Income)/Charges, Net" in Item 8 of this Form 10-K for additional information.

Other (income)/charges, net was lower in 2023 compared to 2022 due to an increase in the non-service cost components of pension and other postretirement benefit expense, an increase in environmental remediation costs and foreign currency losses recognized in Argentina related to a central bank adjustment to official foreign currency rates.

Effective tax rate and earnings per diluted share, continuing operations

				% Change	% Change
(\$ in millions, except percentages)	2024	2023	2022	2024 vs. 2023	2023 vs. 2022
Income tax expense	\$475	\$428	\$320	11.0%	33.8%
Effective tax rate	25.6%	25.3%	23.6%	0.3%	1.7%
Adjusted effective tax rate, continuing operations*	22.9%	22.2%	22.1%	0.7%	0.1%
Earnings per diluted share, continuing operations	\$5.72	\$5.16	\$4.24	10.9%	21.7%
Adjusted earnings per diluted share, continuing operations*	\$7.87	\$7.42	\$5.84	6.1%	27.1%
*See the Regulation G reconciliations - results of operations					

The effective tax rate on continuing operations for the year ended December 31, 2024 was 25.6%, an increase of 0.3% compared to the prior year. The adjusted effective tax rate was 22.9%, which was higher than the prior year adjusted effective tax rate in part due to the adverse impact of the Pillar 2 global minimum tax.

The effective tax rate on continuing operations for the year ended December 31, 2023 was 25.3%, an increase of 1.7% compared to the prior year due in part to the goodwill impairment charge, for which there was no tax benefit. The adjusted effective tax rate for the year ended December 31, 2023 was 22.2%, an increase of 0.1% compared to the prior year.

Earnings per diluted share from continuing operations for the year ended December 31, 2024 increased year over year primarily due to lower overhead costs, restructuring cost savings and moderating raw material costs, partially offset by lower sales volumes. Earnings per diluted share from continuing operations for the year ended December 31, 2023 increased year over year primarily due to increased selling prices, moderating raw material cost inflation and favorable foreign currency translation impact, partially offset by lower sales volumes. Refer to the Regulation G Reconciliations - Results from Operations for additional information.

Review and Outlook

During 2024, PPG demonstrated resilience in a challenging industrial macroeconomic environment by growing adjusted EPS, improving aggregate segment margins and generating \$1.4 billion in operating cash flow. Net sales were \$15.8 billion, a decrease of 2% over the prior year. Results were supported by the breadth and diversity of the business portfolio, as the Company benefited from higher prices in several businesses which was more than offset by unfavorable foreign currency translation, divestitures and lower sales volumes. Net sales, excluding the impact of currency, acquisitions and divestitures ("organic sales") decreased 1% during the year with continued strong growth in our aerospace coatings business, which was more than offset by declines in the industrial coatings and automotive OEM coatings businesses. On a regional basis, sales volumes were modestly higher in the Asia Pacific and Latin America regions. Earnings per diluted share from continuing operations was \$5.72, compared to \$5.16 in the prior year. Adjusted earnings per diluted share was \$7.87, up 6% compared to \$7.42 in 2023. Combined, segment income increased by 2%. Aggregate segment margins were 70 basis points higher than the prior year, driven by sales of our technology-advantaged products and strong brands.

Demand for PPG products was mixed by end-use market and geographic region during 2024. Demand for aerospace coatings, which was impacted by mobility restrictions in 2020 and 2021, continues to recover. Global automotive OEM manufacturers' production decreased by about 1% versus 2023 due to lower demand and extended maintenance periods in the U.S. and Europe. Despite the lower demand, PPG outperformed the market in both Latin America and Asia Pacific. In the U.S. and Canada, demand was strong for aerospace coatings, packaging coatings and traffic solutions but declined for most other businesses. In Latin America, demand was solid throughout the year with steady demand for architectural products and growth in automotive OEM products and packaging coatings. The PPG Comex business made strong contributions, supported by a focus on its omnichannel sales approach. Demand was soft in Europe with the largest impact on the automotive OEM coatings business and the architectural coatings business. In Asia, demand was strong

with sales volume growth in aerospace coatings, protective and marine coatings, automotive OEM coatings, industrial coatings and packaging coatings.

We anticipate a slow start to 2025 as demand in Europe and in global industrial end-use markets remains challenged. Despite the macroeconomic environment, we expect to deliver organic sales growth of a low single-digit percentage for the year. We anticipate demand growth in China, India and Mexico, continued strength in aerospace coatings as well as protective and marine coatings and expect growth in automotive refinish coatings above industry rates. Gaining momentum in infrastructure spending should aid the traffic solutions business in 2025. Global industrial production is expected to be a headwind and remain at a low level in the first quarter with improvement in the Asia Pacific and Latin America regions offset by sluggishness in Europe and in the U.S. In general, most end-use markets do not have significant excess inventories, and any demand improvement should lead to a faster ramp-up of sales volumes.

Significant other factors

During the year, PPG successfully executed various strategic initiatives to strengthen the company. In December, the Company completed the divestitures of both the silicas products business and the architectural coatings U.S. and Canada business. These divestitures improve our financial profile, including higher operating margins, and result in a more focused organization which positions the Company to deliver sustainable organic growth. In conjunction with the divestiture of U.S. and Canada architectural coatings business, PPG entered into a supply agreement with the divested business to sell certain products, which will be recognized as Net sales in the refinish coatings, industrial coatings and protective and marine coatings businesses going forward. However, PPG has entered into transition services agreements to provide administrative services subsequent to the sale. The fees for services rendered under the transition services agreements are expected to offset the cost of providing the services.

PPG made significant progress to reduce costs and improve the profitability of the overall business portfolio through the global restructuring programs that were announced in 2022 and 2023. Total restructuring savings were approximately \$40 million in 2024. In October 2024, the Company approved a comprehensive cost reduction program with anticipated annualized pre-tax savings of approximately \$175 million once fully implemented, including savings of \$60 million in 2025. The multi-year program is focused on reducing structural costs primarily in Europe and in certain other global businesses, along with other corporate costs following the divestitures of PPG's silicas products business and the architectural coatings business in the U.S. and Canada. The Company will continue to monitor and manage its cost structure to ensure alignment with the overall demand environment.

Raw materials are the Company's most significant input cost. PPG experiences fluctuating energy and raw material costs driven by various factors, including changes in supplier feedstock costs and inventories, global industry activity levels, foreign currency exchange rates, and global supply and demand factors.

In 2024, the company incurred wage inflation, which adversely impacted operating costs compared to 2023. There was an ample supply of commodity-related raw materials in all regions, and raw material costs were a favorable impact to our operating costs for 2024 versus 2023. In 2025, we anticipate that increased raw material costs and enacted tariffs will result in low single-digit percentage inflation. Additionally, we expect manufacturing efficiencies to improve as the year progresses.

We achieved selling price improvement across several businesses in 2024 stemming from our advantaged products and solutions. The Company will carefully monitor all costs during 2025 and assess the need for additional selling price increases.

In 2024, foreign currency exchange rates were volatile, with the U.S. dollar strengthening in the second half of the year against certain currencies in the countries within the regions where PPG operates, resulting in a net unfavorable impact to net income from continuing operations of approximately \$20 million. We expect that foreign currency exchange rates will have a net unfavorable impact on net income from continuing operations in 2025; however, the Company generally purchases raw materials, incurs manufacturing costs and sells finished goods in the same currency, which reduces foreign currency transaction-related impacts to net income.

The 2025 effective tax rate from continuing operations is expected to be in the range of 23% to 25%, varying by quarter. This range is the Company's best estimate and represents an increase compared to the 2024 adjusted effective tax rate driven by higher rates in certain countries, including the impact of recent global minimum tax standards, and the geographic mix of earnings.

Over the past four years, the Company used nearly \$1.3 billion of cash to repurchase approximately nine million shares of PPG stock, including using \$752 million to repurchase shares of PPG stock during 2024. The Company ended the year with approximately \$2.8 billion remaining under its current share repurchase authorization. During 2024, the Company deployed \$721 million for capital expenditures, \$622 million for dividends and \$31 million for acquisitions. In 2024, PPG marked the 53rd annual per share dividend increase and the 125th successive year of annual dividend payments.

PPG ended 2024 with approximately \$1.4 billion in cash and short-term investments. The Company expects strong cash generation in 2025.

Regulation G Reconciliations - Results from Operations

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

Income before income taxes from continuing operations is reconciled to adjusted income before income taxes from continuing operations, the effective tax rate from continuing operations is reconciled to the adjusted effective tax rate from continuing operations and net income from continuing operations (attributable to PPG) and earnings per share – assuming dilution (attributable to PPG) are reconciled to adjusted net income from continuing operations (attributable to PPG) and adjusted earnings per share – assuming dilution below.

(\$ in millions, except percentages and per share amounts)	Income Before Income Taxes	Income Tax Expense	Effective Tax Rate	Net Income (attributable to PPG)	Earnings per Diluted Share ⁽¹⁾
Year-ended December 31, 2024					
As reported, continuing operations	\$1,852	\$475	25.6%	\$1,344	\$5.72
Includes:					
Acquisition-related amortization expense	132	32	24.2%	100	0.42
Business restructuring-related costs, net ⁽²⁾	377	53	14.1%	324	1.39
Portfolio optimization ⁽³⁾	59	(6)	(10.2%)	65	0.28
Legacy environmental remediation charges ⁽⁴⁾	24	6	25.0%	18	0.07
Insurance recoveries ⁽⁷⁾	(4)	(1)	25.0%	(3)	(0.01)
Adjusted, continuing operations, excluding certain items	\$2,440	\$559	22.9 %	\$1,848	\$7.87

(\$ in millions, except percentages and per share amounts)	Income Before Income Taxes	Income Tax Expense	Effective Tax Rate	Net Income (attributable to PPG)	Earnings per Diluted Share ⁽¹⁾
Year-ended December 31, 2023					
As reported, continuing operations	\$1,690	\$428	25.3%	\$1,223	\$5.16
Includes:					
Acquisition-related amortization expense	154	39	25.3%	115	0.48
Business restructuring-related costs, net ⁽²⁾	41	8	19.5%	33	0.14
Portfolio optimization ⁽³⁾	53	(7)	(13.2%)	58	0.24
Legacy environmental remediation charges ⁽⁴⁾	24	7	29.2%	17	0.07
Impairment and other related charges, net ⁽⁵⁾	160	—	—%	160	0.67
Argentina currency devaluation losses ⁽⁶⁾	20	(4)	(20.0%)	24	0.10
Insurance recoveries ⁽⁷⁾	(16)	(4)	25.0%	(12)	(0.05)
Pension settlement charge ⁽⁸⁾	190	46	24.2%	144	0.61
Adjusted, continuing operations, excluding certain items	\$2,316	\$513	22.2%	\$1,762	\$7.42

(\$ in millions, except percentages and per share amounts)	Income Before Income Taxes	Income Tax Expense	Effective Tax Rate	Net Income (attributable to PPG)	Earnings per Diluted Share ⁽¹⁾
Year-ended December 31, 2022					
As reported, continuing operations	\$1,355	\$320	23.6%	\$1,007	\$4.24
Includes:					
Acquisition-related amortization expense	145	35	24.1%	110	0.46
Business restructuring-related costs, net ⁽²⁾	72	18	25.3%	54	0.23
Portfolio optimization ⁽³⁾	10	(2)	(20.0%)	12	0.05
Impairment and other related charges, net ⁽⁵⁾	231	29	12.7%	202	0.86
Adjusted, continuing operations, excluding certain items	\$1,813	\$400	22.1%	\$1,385	\$5.84

- (1) Earnings per diluted share is calculated based on unrounded numbers. Figures in the table may not recalculate due to rounding.
- (2) Business restructuring-related costs, net include business restructuring charges, offset by releases related to previously approved programs, which are included in Business restructuring, net on the consolidated statement of income, accelerated depreciation of certain assets, which is included in Depreciation on the consolidated statement of income, and other restructuring-related costs, which are included in Cost of sales, exclusive of depreciation and amortization and Selling, general and administrative on the consolidated statement of income. Business restructuring-related costs, net also includes the fourth quarter 2024 recognition of accumulated foreign currency translation losses of \$110 million related to the Company's exit of its Argentina operations in connection with a restructuring program, which are included in Other (income)/charges, net in the consolidated statement of income. No tax benefit was recorded on the fourth quarter 2024 recognition of the accumulated foreign currency translation losses.
- (3) Portfolio optimization includes gains and losses related to the sale of certain assets, which are included in Other (income)/charges, net on the consolidated statement of income, including the gain of \$129 million on the sale of the Company's silicas products business in the fourth quarter 2024, and the losses on the sales of the Company's traffic solutions business in Argentina in the second quarter 2024, the Company's European and Australian Traffic Solutions businesses in the fourth quarter 2023 and the Company's legacy industrial Russian operations in the third quarter 2023. Portfolio optimization includes advisory, legal, accounting, valuation, other professional or consulting fees and certain internal costs directly incurred to effect acquisitions, as well as similar fees and other costs to effect divestitures and other portfolio optimization exit actions. These costs are included in Selling, general and administrative expense on the consolidated statement of income. Portfolio optimization also includes an impairment charge of \$146 million recognized during the fourth quarter 2024 when the Company's remaining operations in Russia were classified as held for sale, which is included in Impairment and other related charges, net on the consolidated statement of income. No tax benefit was recorded on the fourth quarter 2024 impairment charge.
- (4) Legacy environmental remediation charges represent environmental remediation costs at certain non-operating PPG manufacturing sites. These charges are included in Other (income)/charges, net in the consolidated statement of income.
- (5) In the fourth quarter 2023, the Company recorded impairment and other related charges due to a non-cash goodwill impairment recognized for the Traffic Solutions reporting unit as a result of its annual goodwill impairment test. The fair value of the Traffic Solutions reporting unit decreased primarily due to increases in the cost of capital (discount rate assumption) and declines in the reporting unit's long-term forecast driven by challenges at its operations in Argentina due to the highly inflationary environment and changes to the reporting unit's global footprint, including the fourth quarter 2023 divestiture of its European and Australian businesses. In 2022, the Company recorded impairment and other related charges due to the wind down of the Company's operations in Russia.
- (6) In December 2023, the central bank of Argentina adjusted the official foreign currency exchange rate for the Argentine peso, significantly devaluing the currency relative to the United States dollar. Argentina currency devaluation losses represent foreign currency translation losses recognized during December 2023 related to the devaluation of the Argentine peso, which is included in Other charges/(income), net on the consolidated statement of income.
- (7) In the fourth quarter 2024 and the fourth quarter 2023, the Company received reimbursement for previously approved insurance claims under policies covering legacy asbestos-related matters. In the first quarter 2023, the Company received reimbursement under its insurance policies for damages incurred at a southern U.S. factory from a winter storm in 2020. These insurance recoveries are included in Other charges/(income), net on the consolidated statement of income.
- (8) In the first quarter 2023, PPG purchased group annuity contracts that transferred pension benefit obligations for certain of the Company's retirees in the U.S. to third-party insurance companies, resulting in a non-cash pension settlement charge.

Performance of Reportable Business Segments

Global Architectural Coatings

	\$ Change			% Change		
(\$ in millions, except percentages)	2024	2023	2022	2024 vs. 2023	2023 vs. 2022	2024 vs. 2023
Net sales	\$3,921	\$4,021	\$3,852	(\$100)	\$169	(2.5)%
Segment income	\$678	\$673	\$558	\$5	\$115	0.7%
Depreciation and amortization expense	\$104	\$101	\$102	\$3	(\$1)	3.0%
Segment income before interest, taxes, depreciation and amortization (EBITDA)	\$782	\$774	\$660	\$8	\$114	1.0%

2024 vs. 2023

Global Architectural Coatings net sales decreased due to the following:

- Lower sales volumes (-2%)
- Foreign currency translation (-1%)

Partially offset by:

- Higher selling prices (+1%)

The Global Architectural Coatings segment, which was previously reported as part of the Performance Coatings segment, is comprised of architectural coatings Europe, Middle East and Africa (EMEA) and architectural coatings Latin America and Asia Pacific. Net sales decreased during 2024, primarily driven by lower sales volumes.

Architectural coatings EMEA organic sales decreased by a low single-digit percentage year over year due to lower sales volumes partially offset by higher selling prices. Consumer confidence remained weak, and regional demand was uneven by country. Demand declined in all sub-regions in the fourth quarter; however, sales were higher for the full year in eastern and central Europe.

Architectural coatings Latin America and Asia Pacific organic sales were flat during the year primarily due to lower sales volumes offset by higher selling prices. In Mexico, architectural coatings organic sales increased compared to the prior year, as concessionaire network demand continued to be strong throughout 2024.

Segment income increased \$5 million year over year primarily due to higher selling prices and moderating raw material costs, partially offset by wage and other cost inflation and lower sales volumes.

2023 vs. 2022

Global Architectural Coatings net sales increased due to the following:

- Higher selling prices (+6%)
- Foreign currency translation (+4%)

Partially offset by:

- Lower sales volumes (-5%)
- Divestitures (-1%)

In 2023, the Global Architectural Coatings business achieved organic sales growth of 1% as higher prices in all regions offset lower sales volumes.

Architectural coatings EMEA organic sales were flat year over year, with higher selling prices offset by lower sales volumes. Regional demand remained uneven by country, and positive sales trends occurred in some countries, including the United Kingdom, Poland and the Netherlands.

Architectural coatings Latin America and Asia Pacific organic sales increased during the year due to selling price increases. In Mexico, the concessionaire network demand was strong throughout 2023.

Segment income increased \$115 million year over year primarily due to higher selling prices and moderating raw material costs, partially offset by wage and other cost inflation and lower sales volumes.

Looking Ahead

In the first quarter 2025, demand in Mexico is expected to continue to be robust, and consumer sentiment in Europe is expected to be tepid. Aggregate organic sales for the segment are expected to be in the range of flat to an increase of a low single-digit percentage compared to the first quarter 2024.

Performance Coatings

	\$ Change			% Change		
(\$ in millions, except percentages)	2024	2023	2022	2024 vs. 2023	2023 vs. 2022	2024 vs. 2023
Net sales	\$5,237	\$5,132	\$4,792	\$105	\$340	2.0%
Segment income	\$1,142	\$1,019	\$847	\$123	\$172	12.1%
Depreciation and amortization expense	\$132	\$139	\$142	(\$7)	(\$3)	(5.0)%
Segment EBITDA	\$1,274	\$1,158	\$989	\$116	\$169	10.0%

2024 vs. 2023

Performance Coatings net sales increased due to the following:

- *Higher selling prices (+3%)*
- *Higher sales volumes (+1%)*

Partially offset by:

- *Divestiture-related sales and other (-2%)*

Net sales for the Performance Coatings segment, which is now comprised of aerospace coatings, automotive refinish coatings, protective and marine coatings, and traffic solutions, increased 2% during 2024. This increase was driven by higher selling prices and sales volumes, partially offset by the divestitures of the non-North American portion of the traffic solutions business.

Organic sales in automotive refinish coatings were flat year-over-year with sales volume declines offset by higher selling prices. In the U.S., sales volumes declined with benefits from share gains more than offset by lower industry collision claims. In Europe, organic sales increased modestly year over year driven by price. In China, demand for refinish products is recovering and is expected to improve.

Aerospace coatings organic sales increased by a double-digit percentage driven by increases in both price and sales volume in all regions. Demand remained strong and customer order backlogs are at similar levels to the prior year. Global air travel has improved year over year, but domestic flights remain about 3% below pre-pandemic levels. The Company remains focused on debottlenecking and expanding manufacturing capabilities to drive volume and earnings growth.

Protective and marine coatings organic sales increased by a low single-digit percentage compared to the prior year driven by higher sales volumes in Europe and Asia.

Traffic solutions organic sales increased by a low single-digit percentage year over year due to higher sales volumes, which benefited from market share gains across North America.

Segment income increased \$123 million year over year primarily due to higher selling prices and moderating raw material costs, partially offset by wage and other cost inflation.

2023 vs. 2022

Performance Coatings net sales increased due to the following:

- *Higher selling prices (+7%)*

In 2023, all businesses within the Performance Coatings reportable business segment achieved higher selling prices.

Automotive refinish coatings organic sales increased a low single-digit percentage year over year. Price gains in all regions and sales volume growth in the Latin America and Asia Pacific regions were partially offset by lower sales volumes in all other regions.

Aerospace coatings organic sales were higher by 20% driven by increases in both price and volume. This strong organic sales growth was achieved despite global air travel remaining below pre-pandemic levels.

Protective and marine coatings organic sales increased by a mid-single-digit percentage driven by solid selling price realization and higher sales volumes.

Traffic solutions organic sales decreased by a mid-single-digit percentage year over year, with sales volume declines in all regions.

Segment income increased \$172 million year over year primarily due to higher selling prices and moderating raw material costs, partially offset by wage and other cost inflation and lower sales volumes.

Looking Ahead

In the first quarter 2025, continued strength in aerospace coatings and protective and marine coatings is expected, as well as growth in automotive refinish coatings above industry rates. Traffic solutions is expected to follow typical seasonal trends and is well positioned to continue to benefit in the coming years from increased U.S. infrastructure spending. First quarter aggregate organic sales for the Performance Coatings segment are anticipated to increase by a low single-digit percentage to a mid-single-digit percentage compared to the first quarter 2024.

Industrial Coatings

(\$ in millions, except percentages)				\$ Change		% Change	
	2024	2023	2022	2024 vs. 2023	2023 vs. 2022	2024 vs. 2023	2023 vs. 2022
Net sales	\$6,687	\$7,089	\$6,970	(\$402)	\$119	(5.7)%	1.7%
Segment income	\$893	\$968	\$646	(\$75)	\$322	(7.7)%	49.8%
Depreciation and amortization expense	\$206	\$213	\$207	(\$7)	\$6	(3.3)%	2.9%
Segment EBITDA	\$1,099	\$1,181	\$853	(\$82)	\$328	(6.9)%	38.5%

2024 vs. 2023

Industrial Coatings segment net sales decreased due to the following:

- Lower selling prices (-3%)
- Lower sales volumes (-2%)
- Unfavorable foreign currency translation and the silicas products business divestiture (-1%)

In 2024, Industrial Coatings segment Net sales decreased due to lower selling prices and lower sales volume driven by lower industry demand.

Automotive OEM coatings organic sales decreased by a high single-digit percentage year over year driven by lower sales volumes and lower indexed-based selling prices for certain customer contracts. Sales volume increases in the Latin America and Asia Pacific regions were more than offset by declines in the U.S. and Europe.

For the industrial coatings business, organic sales decreased by a mid-single-digit percentage due to lower selling prices and lower sales volumes driven by softening global industrial demand.

Packaging coatings organic sales increased by a low single-digit percentage year over year due to higher sales volumes in all regions, partially offset by lower selling prices in all regions.

Specialty products organic sales increased by a mid-single-digit percentage primarily due to higher sales volumes, partially offset by lower selling prices.

Segment income decreased \$75 million year over year primarily due to lower selling prices, lower sales volumes and wage and other cost inflation, partially offset by moderating raw material costs and lower overhead costs, including restructuring savings.

2023 vs. 2022

Industrial Coatings net sales increased due to the following:

- Higher selling prices (+4%)

Partially offset by:

- Lower sales volumes (-2%)

In 2023, all businesses within the Industrial Coatings reportable business segment achieved higher selling prices, which helped to offset a decrease in sales volumes driven by lower global industrial production.

Automotive OEM coatings organic sales increased by a high single-digit percentage year over year driven by higher selling prices and strong sales volume growth in most regions. Sales volume growth was led by the EMEA and Asia Pacific regions.

For the industrial coatings business, organic sales decreased by a mid-single-digit percentage year over year as higher selling prices were more than offset by lower sales volumes in all regions due to softening global industrial demand.

Packaging coatings organic sales decreased by a mid-single-digit percentage year over year due to lower sales volumes in all regions due to broad demand weakness. These sales volume decreases were partially offset by higher selling prices in most regions.

Specialty coatings and materials organic sales decreased by a mid-single-digit percentage primarily due to lower sales volumes, partially offset by higher selling prices.

Segment income increased \$322 million year over year primarily due to higher selling prices and moderating raw material costs, partially offset by wage and other cost of sales inflation and lower sales volumes.

Looking Ahead

In the first quarter 2025, global industrial production is expected to remain at a relatively low level with improvement in the Asia Pacific and Latin America regions offset by sluggishness in Europe and in the U.S. Demand growth for PPG's industrial coatings in China is expected to continue for the next several quarters. Automotive OEM industry build rates are expected to decline in the first quarter, but are expected to outpace market growth in Latin America and the Asia Pacific region. Aggregate organic sales for the segment are anticipated to decrease by a mid-single-digit percentage to a low single-digit percentage compared to the first quarter 2024.

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. Refer to Item 3. "Legal Proceedings" and Note 15, "Commitments and Contingent Liabilities" in Item 8 of this Form 10-K for a description of certain of these lawsuits.

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, 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.

As also discussed in Note 15, PPG has significant reserves for environmental contingencies. Refer to the Environmental Matters section of Note 15 for details of these reserves. It is PPG's policy to accrue expenses for 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.

Accounting Standards Adopted in 2024

Note 1, "Summary of Significant Accounting Policies" in Item 8 of this Form 10-K describes the Company's recently adopted accounting pronouncements.

Accounting Standards to be Adopted in Future Years

Note 1, "Summary of Significant Accounting Policies" in Item 8 of this Form 10-K describes accounting pronouncements that have been promulgated prior to December 31, 2024 but are not effective until a future date.

Liquidity and Capital Resources

During the past two years, PPG had sufficient financial resources to meet its operating requirements, to fund capital spending, including acquisitions, share repurchases and pension plans, and to pay increasing dividends to shareholders.

Cash and cash equivalents and short-term investments

(\$ in millions)	2024	2023
Cash and cash equivalents	\$1,270	\$1,493
Short-term investments	88	75
Total	\$1,358	\$1,568

Cash from operating activities - continuing operations

(\$ in millions, except percentages)	% Change				
	2024	2023	2022	2024 vs. 2023	2023 vs. 2022
Cash from operating activities - continuing operations	\$1,391	\$2,294	\$1,000	(39.4)%	129.4%

2024 vs. 2023

The \$903 million decrease in Cash from operating activities - continuing operations was primarily due to unfavorable changes in working capital compared to the prior year. Accrued incentive compensation was lower at December 31, 2024 versus December 31, 2023, driving operating cash outflows during 2024 compared to 2023. The Company paid an additional \$80 million in cash taxes during 2024 related to divestitures, primarily due to the taxable gain recognized on the sale of the silicas products business. The Company also recorded operating cash outflows of \$55 million related to net

payables paid on behalf of the divested United States and Canada architectural coatings business during 2024 that were reimbursed in 2025.

2023 vs. 2022

The \$1,294 million increase in Cash from operating activities - continuing operations was primarily due to higher net income driven by higher selling prices and moderating raw material costs and favorable changes in working capital compared to the prior year.

Operating working capital

Operating working capital is a subset of total working capital and represents (1) receivables from customers, net of allowance for doubtful accounts, (2) inventories, and (3) trade liabilities. Refer to Note 3, "Working Capital Detail" in 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.

A key metric we use to measure our working capital management is operating working capital as a percentage of sales (fourth quarter sales annualized).

(\$ in millions, except percentages)	2024	2023
Trade receivables, net	\$2,477	\$2,622
Inventories, FIFO	2,015	2,117
Trade creditors' liabilities	2,161	2,438
Operating working capital	\$2,331	\$2,301
Operating working capital as a % of fourth quarter sales, annualized	15.6%	14.7%
Trade receivables, net as a % of fourth quarter sales, annualized	16.6%	16.8%
Days sales outstanding	51	55
Inventories, FIFO as a % of fourth quarter sales, annualized	13.5%	13.5%
Inventory turnover	4.5	4.2

Environmental expenditures

(\$ in millions)	2024	2023	2022
Cash outlays related to environmental remediation activities	\$28	\$31	\$73

We expect cash outlays for environmental remediation activities to be between \$20 million to \$60 million annually from 2025 through 2029.

Cash used for investing activities - continuing operations

	% Change				
(\$ in millions, except percentages)	2024	2023	2022	2024 vs. 2023	2023 vs. 2022
Cash used for investing activities - continuing operations	\$399	\$525	\$430	(24.0)%	22.1%

2024 vs. 2023

The \$126 million decrease in cash used for investing activities - continuing operations was primarily due to proceeds from the sale of our silicas products business, partially offset by higher capital expenditures.

2023 vs. 2022

The \$95 million increase in cash used for investing activities was primarily due to higher capital expenditures and lower proceeds from asset sales.

Capital expenditures, including business acquisitions

	% Change				
(\$ in millions, except percentages)	2024	2023	2022	2024 vs. 2023	2023 vs. 2022
Capital expenditures ⁽¹⁾	\$721	\$516	\$486	39.7%	6.2%
Business acquisitions, net of cash balances acquired	\$31	\$109	\$114	(71.6)%	(4.4)%
Total capital expenditures, including acquisitions	\$752	\$625	\$600	20.3%	4.2%
Capital expenditures, excluding acquisitions, as a % of sales	4.6%	3.2%	3.1%	43.8%	3.2%

(1) Includes modernization and productivity improvements, expansion of existing businesses and environmental control projects.

During 2025, capital expenditures, which are expected to be approximately \$725 million to \$775 million, will support future organic growth opportunities. The Company will continue to deploy cash focused on shareholder value creation.

Cash used for financing activities

	% Change				
(\$ in millions, except percentages)	2024	2023	2022	2024 vs. 2023	2023 vs. 2022
Cash used for financing activities	\$1,425	\$1,550	\$409	(8.1)%	279.0%

2024 vs. 2023

The \$125 million decrease in cash used for financing activities was primarily due to lower repayments of long-term debt, partially offset by higher share repurchases.

2023 vs. 2022

The \$1,141 million increase in cash used for financing activities was primarily due to repayment of long-term debt and lower proceeds from the issuance of debt, partially offset by the absence of net payments on commercial paper.

Share repurchase activity

(\$ in millions, except number of shares)	2024	2023	2022
Number of shares repurchased (millions)	5.8	0.6	1.5
Cash paid for shares repurchased	\$752	\$86	\$190

The Company has approximately \$2.8 billion remaining under the current authorization from the Board of Directors. The Board of Directors authorized \$2.5 billion of share repurchases in December 2017 and authorized an additional \$2.5 billion of share repurchases in April 2024. The repurchase programs do not have an expiration date.

Dividends paid to shareholders

(\$ in millions)	2024	2023	2022
Dividends paid to shareholders	\$622	\$598	\$570

PPG has paid uninterrupted annual dividends since 1899, and 2024 marked the 53rd successive year of increased annual per-share dividend payments to shareholders. The Company raised its per-share quarterly dividend by approximately 5% to \$0.68 per share in July 2024.

Debt issued and repaid

Debt Issued (net of premium/discount and issuance costs)	Year	\$ in millions
Term Loan Credit Agreement, due 2026	2024	\$274
Term Loan Credit Agreement, due 2026	2023	\$550
1.875% notes (€300) due 2025	2022	\$319
2.750% notes (€700) due 2029	2022	\$742
1.95% note (€50) due 2037	2022	\$55
Debt Repaid	Year	\$ in millions
2.4% notes (\$300)	2024	\$300
3.2% notes (\$300)	2023	\$300
Term Loan Credit Agreement, due 2024	2023	\$1,100
Term Loan Credit Agreement, due 2024	2022	\$300
Acquired debt	2022	\$2

The Company's commercial paper borrowings are classified as long-term debt based on PPG's intent and ability to refinance these borrowings on a long-term basis. Net payments on commercial paper were zero for both the years ended December 31, 2024 and December 31, 2023 and \$440 million for the year ended December 31, 2022.

Credit agreements and lines of credit

In April 2023, PPG entered into a €500 million term loan credit agreement (the "Term Loan"). The Term Loan contains covenants that are consistent with those in the Credit Agreement discussed below and that are 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 Term Loan terminates and all amounts outstanding are payable in April 2026. In April 2023, PPG borrowed €500 million under the Term Loan. In December 2023, PPG obtained lender commitments sufficient to increase the size of the Term Loan by €250 million. In January 2024, PPG borrowed the additional €250 million. In December 2024, PPG obtained lender commitments sufficient to increase the size of the Term Loan by €300 million. In January 2025, PPG borrowed the additional €300 million.

In February 2021, PPG entered into a \$2.0 billion term loan credit agreement (the "Term Loan Credit Agreement") to finance the Company's acquisition of Tikkurila, and to pay fees, costs and expenses related thereto. The Term Loan Credit Agreement provided the Company with the ability to borrow up to an aggregate principal amount of \$2.0 billion on an unsecured basis. The Term Loan Credit Agreement contained covenants that are consistent with those in the Credit Agreement discussed below and that are usual and customary restrictive covenants for facilities of its type, which included, 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 Term Loan Credit Agreement was scheduled to mature and all outstanding borrowings were due and payable on the third anniversary of the date of the initial borrowing under the Agreement. In June 2021, PPG borrowed \$700 million under the Term Loan Credit Agreement to finance the Company's acquisition of Tikkurila, and to pay fees, costs and expenses related thereto. In December 2021, PPG borrowed an additional \$700 million under the Term Loan Credit Agreement to be used for working capital and general corporate purposes. In 2022 and 2023, PPG repaid \$300 million and \$1.1 billion, respectively, of the Term Loan Credit Agreement using cash on hand. The Term Loan Credit Agreement was fully repaid as of December 31, 2023.

In March 2023, PPG amended its five-year credit agreement (the "Credit Agreement") dated as of August 30, 2019. The amendments to the Credit Agreement replaced the LIBOR-based reference interest rate option with a reference interest rate option based upon Term SOFR. The other terms of the Credit Agreement remained unchanged. In July 2023, PPG amended and restated the Credit Agreement, extending the term through July 27, 2028. The amended and restated Credit Agreement provides for a \$2.3 billion unsecured revolving credit facility. The Company has the ability to increase the size of the Credit Agreement by up to an additional \$750 million, subject to the receipt of lender commitments and other conditions precedent. The Company has the right, subject to certain conditions set forth in the Credit Agreement, to designate certain subsidiaries of the Company as borrowers under the Credit Agreement. In connection with any such designation, the Company is required to guarantee the obligations of any such subsidiaries under the Credit Agreement. There were no amounts outstanding under the Credit Agreement as of December 31, 2024, December 31, 2023 and December 31, 2022.

The Term Loan and the Credit Agreement require the Company to maintain a ratio of Total Indebtedness to Total Capitalization, as defined in the Term Loan and the Credit Agreement, of 60% or less; provided, that for any fiscal quarter in which the Company has made an acquisition for consideration in excess of \$1 billion and for the next five fiscal quarters thereafter, the ratio of Total Indebtedness to Total Capitalization may not exceed 65% at any time. As of December 31, 2024, Total Indebtedness to Total Capitalization as defined under the Credit Agreement and the Term Loan was 45%.

In addition to the amounts available under lines of credit, the Company maintains access to the capital markets and may issue debt or equity securities from time to time, which may provide an additional source of liquidity.

Refer to Note 10, "Borrowings and Lines of Credit" in Item 8 of this Form 10-K for information regarding notes entered into and repaid as well as details regarding the use and availability of committed and uncommitted lines of credit, letters of credit and debt covenants.

Cash requirements

We continue to believe that our cash on hand and short-term investments, cash from operations and the Company's access to capital markets will continue to be sufficient to fund our operating activities, capital spending, acquisitions, dividend payments, debt service, share repurchases, contributions to pension plans, and PPG's significant cash requirements. The Company's significant cash requirements include the following contractual obligations and commitments.

(\$ in millions)	Total	Obligations Due In:			
		2025	2026-2027	2028-2029	Thereafter
Long-term debt	\$5,808	\$933	\$2,095	\$1,888	\$892
Interest payments ⁽¹⁾	\$832	\$127	\$220	\$153	\$332
Operating leases ⁽²⁾	\$653	\$144	\$208	\$127	\$174
Unconditional purchase commitments ⁽³⁾	\$218	\$108	\$82	\$23	\$5

(1) Interest on all outstanding debt.

(2) Includes interest payments.

(3) The unconditional purchase commitments are principally take-or-pay obligations related to the purchase of certain materials, utilities and services consistent with customary industry practice.

The Company's off-balance sheet arrangements include unconditional purchase commitments disclosed in the "Liquidity and Capital Resources" section in the cash requirements table as well as letters of credit as discussed in Note 10, "Borrowings and Lines of Credit" in Item 8 of this Form 10-K.

Other liquidity matters

At December 31, 2024, the total amount of unrecognized tax benefits for uncertain tax positions, including an accrual of related interest and penalties along with positions only impacting the timing of tax benefits, was \$152 million. The timing of payments will depend on the progress of examinations by tax authorities. PPG does not expect a significant tax payment related to these obligations within the next year. The Company is unable to make a reasonably reliable estimate as to if, or when, any significant cash settlements with tax authorities may occur.

Critical Accounting Estimates

Management has evaluated the accounting policies used in the preparation of the financial statements and related notes presented in 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, business combinations, 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

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 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 15, "Commitments and Contingent Liabilities" and Note 13, "Income Taxes" in Item 8 of this Form 10-K.

Defined Benefit Pension and Other Postretirement Benefit Plans

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, we make extensive use 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. Refer to Note 14, "Employee Benefit Plans" in Item 8 of this Form 10-K for information on these plans and the assumptions used.

Business Combinations

The Company uses the acquisition method of accounting to allocate costs of acquired businesses to the assets acquired and liabilities assumed based on their estimated fair values at the dates of acquisition. The excess costs of acquired businesses over the fair values of the assets acquired and liabilities assumed is recognized as goodwill. The valuations of the acquired assets and liabilities impacts the determination of future operating results. In addition to using management estimates and negotiated amounts, the Company uses a variety of information sources to determine the estimated fair values of acquired assets and liabilities including: third-party appraisals for the estimated value and lives of identifiable

intangible assets and property, plant and equipment; third-party actuaries for the estimated obligations of defined benefit pension plans and similar benefit obligations; and legal counsel or other experts to assess the obligations associated with legal, environmental and other contingent liabilities.

The business and technical judgment of management is used in determining which acquired intangible assets have indefinite lives and in determining the useful lives of acquired finite-lived intangible assets in accordance with the accounting guidance for goodwill and other intangible assets.

Goodwill and Intangible Assets

The Company tests indefinite-lived intangible assets and goodwill for impairment by either performing a qualitative evaluation or a quantitative test at least annually, or more frequently if an indication of impairment arises. The qualitative evaluation is an assessment of factors to determine whether it is more likely than not that the fair value of a reporting unit or asset is less than its carrying amount. In the quantitative test, fair values are estimated using a discounted cash flow model. Key assumptions and estimates used in the discounted cash flow model include projected future revenues, discount rates, operating cash flows, capital expenditures and tax rates. For more information on these matters, see Note 1, "Summary of Significant Accounting Policies" in Item 8 of this Form 10-K.

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

Currency

Comparing spot exchange rates at December 31, 2024 and at December 31, 2023, the U.S. dollar strengthened against the currencies of many countries within the regions PPG operates, most notably the Mexican peso. As a result, consolidated net assets at December 31, 2024 decreased by \$905 million from December 31, 2023. Comparing spot exchange rates at December 31, 2023 and at December 31, 2022, the U.S. dollar weakened against the currencies of many countries within the regions PPG operates, most notably the Mexican peso. As a result, consolidated net assets at December 31, 2023 increased by \$508 million from December 31, 2022.

Comparing average exchange rates during 2024 to those of 2023, the U.S. dollar strengthened against the currencies of certain countries where PPG operates, including the Mexican peso and the Chinese yuan. This had an unfavorable impact of approximately \$20 million on full year 2024 Income before income taxes from the translation of this foreign income into U.S. dollars. Comparing average exchange rates during 2023 to those of 2022, the U.S. dollar weakened against the currencies of certain countries where PPG operates, including the Mexican peso and the euro, partially offset by strengthening against the Chinese yuan and Argentine peso. This had a favorable impact of approximately \$25 million on full year 2023 Income before income taxes from the translation of this foreign income 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. You are advised, however, to consult any further disclosures we make on related subjects in our reports to the SEC. 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 statements related to global economic conditions, geopolitical issues, increasing price and product competition by our competitors, fluctuations in cost and availability of raw materials, energy, labor and logistics, the ability to achieve selling price increases, the ability to recover margins, customer inventory levels, PPG inventory levels, our ability to maintain favorable supplier relationships and arrangements, the timing of and the realization of anticipated cost savings from restructuring initiatives, the ability to identify additional cost savings opportunities, the timing and expected benefits of our acquisitions, difficulties in integrating acquired businesses and achieving expected synergies therefrom, the amount of future share repurchases, economic and political conditions in the markets we serve, the imposition of tariffs, 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, cybersecurity events, global human health issues, the unpredictability of existing and possible future

litigation, including asbestos litigation, and government investigations. However, it is not possible to predict or identify all such factors.

Consequently, while the list of factors presented here and in 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, lower sales or income, 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. PPG undertakes no obligation to update any forward-looking statement, except as otherwise required by applicable law.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

PPG is exposed to market risks related to changes in foreign currency exchange rates and interest rates. 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, "Financial Instruments, Hedging Activities and Fair Value Measurements" in 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 could impact PPG's consolidated results of operations, cash flows and financial position.

Foreign Currency Risk

We conduct operations in many countries around the world. Our results of operations are subject to both currency transaction and currency translation risk. Certain foreign currency forward contracts outstanding during 2024 and 2023 served as a hedge of a portion of PPG's exposure to foreign currency transaction risk. The fair value of these contracts were net liabilities of \$53 million and net assets of \$23 million as of December 31, 2024 and December 31, 2023, respectively. The potential reduction in PPG's Income before income taxes resulting from the impact of adverse changes in exchange rates on the fair value of its outstanding foreign currency hedge contracts of 10% for European and Canadian currencies and 20% for Asian and Latin American currencies for the years ended December 31, 2024 and 2023 would have been \$429 million and \$402 million, respectively.

PPG had U.S. dollar to euro cross currency swap contracts with a total notional amount of \$375 million and \$475 million as of December 31, 2024 and December 31, 2023, respectively. The fair value of these contracts were net assets of \$50 million and \$33 million as of December 31, 2024 and 2023, respectively. A 10% 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 by reducing the value of these instruments by \$31 million and \$46 million at December 31, 2024 and 2023, respectively.

As of both December 31, 2024 and 2023, PPG had non-U.S. dollar denominated debt outstanding of \$3.3 billion. A weakening of the U.S. dollar by 10% against European currencies and by 20% against Asian and South American currencies would have resulted in unrealized translation losses of \$369 million and \$363 million as of December 31, 2024 and 2023, respectively.

Interest Rate Risk

The Company manages its interest rate risk by balancing its exposure to fixed and variable rates while attempting to minimize its interest costs. PPG has interest rate swaps which converted \$375 million of fixed rate debt to variable rate debt as of both December 31, 2024 and December 31, 2023, respectively. The fair values of these contracts were liabilities of \$16 million and \$14 million as of December 31, 2024 and 2023, respectively. An increase in variable interest rates of 10% would have lowered the fair values of these swaps and increased interest expense by \$5 million for both the periods ended December 31, 2024 and 2023. Considering the debt balance outstanding as of December 31, 2024 and 2023, a 10% increase in interest rates in the U.S., Canada, Mexico and Europe and a 20% increase in interest rates in Asia and South America would have increased annual interest expense associated with PPG's variable rate debt obligations by \$3 million and by \$2 million, respectively. Further, a 10% reduction in interest rates would have increased the fair value of the Company's fixed rate debt by approximately \$77 million and \$96 million as of December 31, 2024 and 2023, respectively; however, such changes would not have had an effect on PPG's annual Income before income taxes or cash flows.

Item 8. Financial Statements and Supplementary Data

Report of Independent Registered Public Accounting Firm

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

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheet of PPG Industries, Inc. and its subsidiaries (the "Company") as of December 31, 2024 and 2023, and the related consolidated statements of income, of comprehensive income, of shareholders' equity and of cash flows for each of the three years in the period ended December 31, 2024, including the related notes and schedule of valuation and qualifying accounts for each of the three years in the period ended December 31, 2024 appearing under Item 15(a)(2) (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2024, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2024 and 2023, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2024 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2024, based on criteria established in Internal Control - Integrated Framework (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, 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's Annual Report on Internal Control Over Financial Reporting. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed 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 (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) 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 (iii) 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 its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become

inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

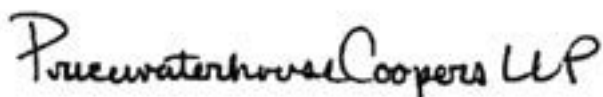
The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Loss from Discontinued Operations, Net of Tax Associated with the Sale of the U.S. and Canada Architectural Coatings Business

As described in Note 2 to the consolidated financial statements, on December 2, 2024, the Company completed the sale of 100% of its architectural coatings business in the U.S. and Canada. The Company received \$516 million in proceeds and recorded a loss on the sale of \$285 million, which is recorded in "Income from discontinued operations, net of tax" for the year ended December 31, 2024. The sale represents a strategic shift in the Company's business portfolio that has a major effect on the Company's operations and financial results. Accordingly, the Company's consolidated results of operations and cash flows have been recast to present the results of the architectural coatings business in the U.S. and Canada as discontinued operations.

The principal considerations for our determination that performing procedures relating to the loss from discontinued operations, net of tax associated with the sale of the U.S. and Canada architectural coatings business is a critical audit matter are the high degree of auditor effort in performing procedures and evaluating audit evidence related to management's calculation of the loss from discontinued operations, net of tax.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's calculation of the loss from discontinued operations, net of tax, associated with the sale of the U.S. and Canada architectural coatings business. These procedures also included, among others, reading the purchase agreement and testing management's calculation of the loss from discontinued operations, net of tax.



Pittsburgh, Pennsylvania

February 20, 2025

We have served as the Company's auditor since 2013.

Management Report

Management's Annual Report on Internal Control Over Financial Reporting

We are 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. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

We conducted an evaluation of the effectiveness of the Company's internal control over financial reporting as of December 31, 2024. 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 (2013)*. Based on this evaluation we have concluded that, as of December 31, 2024, the Company's internal control over financial reporting was effective.

PricewaterhouseCoopers LLP, an independent registered public accounting firm, has issued their report, included on pages 36-37 of this Form 10-K, regarding the Company's internal control over financial reporting.



Timothy M. Knavish
Chairman and Chief Executive Officer
February 20, 2025



Vincent J. Morales
Senior Vice President and Chief Financial Officer
February 20, 2025

Consolidated Statement of Income

	For the Year		
(\$ in millions, except per share amounts)	2024	2023	2022
Net sales	\$15,845	\$16,242	\$15,614
Cost of sales, exclusive of depreciation and amortization	9,252	9,678	9,975
Selling, general and administrative	3,391	3,401	3,037
Depreciation	360	360	357
Amortization	132	154	145
Research and development, net	423	424	434
Interest expense	241	247	167
Interest income	(177)	(140)	(54)
Business restructuring, net	233	(2)	33
Impairment and other-related charges, net	146	160	231
Pension settlement charge	—	190	—
Other (income)/charges, net	(8)	80	(66)
Income before income taxes	\$1,852	\$1,690	\$1,355
Income tax expense	475	428	320
Income from continuing operations	\$1,377	\$1,262	\$1,035
(Loss)/income from discontinued operations, net of tax	(228)	47	19
Net income attributable to the controlling and noncontrolling interests	\$1,149	\$1,309	\$1,054
Less: Net income attributable to noncontrolling interests	33	39	28
Net income (attributable to PPG)	\$1,116	\$1,270	\$1,026
Amounts attributable to PPG			
Income from continuing operations, net of tax	\$1,344	\$1,223	\$1,007
(Loss)/income from discontinued operations, net of tax	(228)	47	19
Net income (attributable to PPG)	\$1,116	\$1,270	\$1,026
Earnings per common share			
Income from continuing operations, net of tax	\$5.75	\$5.18	\$4.26
(Loss)/income from discontinued operations, net of tax	(0.98)	0.20	0.08
Net income (attributable to PPG)	\$4.77	\$5.38	\$4.34
Earnings per common share - assuming dilution			
Income from continuing operations, net of tax	\$5.72	\$5.16	\$4.24
(Loss)/income from discontinued operations, net of tax	(0.97)	0.19	0.08
Net income (attributable to PPG)	\$4.75	\$5.35	\$4.32

Consolidated Statement of Comprehensive Income

	For the Year		
(\$ in millions)	2024	2023	2022
Net income attributable to the controlling and noncontrolling interests	\$1,149	\$1,309	\$1,054
Other comprehensive (loss)/income, net of tax			
Defined benefit pension and other postretirement benefits	36	63	206
Unrealized foreign currency translation adjustments	(916)	509	(279)
Other comprehensive (loss)/income, net of tax	(880)	572	(73)
Total comprehensive income	\$269	\$1,881	\$981
Less: amounts attributable to noncontrolling interests:			
Net income	(33)	(39)	(28)
Unrealized foreign currency translation adjustments	11	(1)	13
Comprehensive income attributable to PPG	\$247	\$1,841	\$966

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

Consolidated Balance Sheet

	December 31	
(\$ in millions)	2024	2023
Assets		
Current assets		
Cash and cash equivalents	\$1,270	\$1,493
Short-term investments	88	75
Receivables	2,985	3,007
Inventories	1,846	1,934
Other current assets	368	922
Total current assets	\$6,557	\$7,431
Property, plant and equipment, net	3,464	3,450
Goodwill	5,690	6,115
Identifiable intangible assets, net	1,922	2,261
Deferred income taxes	303	272
Investments	331	254
Operating lease right-of-use assets	597	571
Other assets	569	1,293
Total	\$19,433	\$21,647
Liabilities and Shareholders' Equity		
Current liabilities		
Accounts payable and accrued liabilities	\$3,731	\$4,161
Restructuring reserves	128	84
Short-term debt and current portion of long-term debt	939	306
Current portion of operating lease liabilities	126	128
Other	90	375
Total current liabilities	\$5,014	\$5,054
Long-term debt	4,876	5,748
Operating lease liabilities	454	417
Accrued pensions	558	588
Other postretirement benefits	410	450
Deferred income taxes	405	500
Other liabilities	754	867
Total liabilities	\$12,471	\$13,624
Commitments and contingent liabilities (See Note 15)		
Shareholders' equity		
Common stock	\$969	\$969
Additional paid-in capital	1,272	1,202
Retained earnings	21,994	21,500
Treasury stock, at cost	(14,342)	(13,600)
Accumulated other comprehensive loss	(3,108)	(2,239)
Total PPG shareholders' equity	\$6,785	\$7,832
Noncontrolling interests	177	191
Total shareholders' equity	\$6,962	\$8,023
Total	\$19,433	\$21,647

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

Consolidated Statement of Shareholders' Equity

(\$ in millions)	Common Stock	Additional Paid-In Capital	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Loss	Total PPG	Non- controlling Interests	Total
January 1, 2022	\$969	\$1,081	\$20,372	(\$13,386)	(\$2,750)	\$6,286	\$125	\$6,411
Net income attributable to controlling and noncontrolling interests	—	—	1,026	—	—	1,026	28	1,054
Other comprehensive loss, net of tax	—	—	—	—	(60)	(60)	(13)	(73)
Cash dividends	—	—	(570)	—	—	(570)	—	(570)
Purchase of treasury stock	—	—	—	(150)	—	(150)	—	(150)
Issuance of treasury stock	—	36	—	11	—	47	—	47
Stock-based compensation activity	—	10	—	—	—	10	—	10
Dividends paid on subsidiary common stock to noncontrolling interests	—	—	—	—	—	—	(13)	(13)
Reductions in noncontrolling interests	—	—	—	—	—	—	(10)	(10)
December 31, 2022	\$969	\$1,130	\$20,828	(\$13,525)	(\$2,810)	\$6,592	\$117	\$6,709
Net income attributable to controlling and noncontrolling interests	—	—	1,270	—	—	1,270	39	1,309
Other comprehensive loss, net of tax	—	—	—	—	571	571	1	572
Cash dividends	—	—	(598)	—	—	(598)	—	(598)
Purchase of treasury stock	—	—	—	(100)	—	(100)	—	(100)
Issuance of treasury stock	—	58	—	25	—	83	—	83
Stock-based compensation activity	—	14	—	—	—	14	—	14
Dividends paid on subsidiary common stock to noncontrolling interests	—	—	—	—	—	—	(21)	(21)
Reductions in noncontrolling interests	—	—	—	—	—	—	55	55
Other	—	—	—	—	—	—	—	—
December 31, 2023	\$969	\$1,202	\$21,500	(\$13,600)	(\$2,239)	\$7,832	\$191	\$8,023
Net income attributable to controlling and noncontrolling interests	—	—	1,116	—	—	1,116	33	1,149
Other comprehensive income, net of tax	—	—	—	—	(869)	(869)	(11)	(880)
Cash dividends	—	—	(622)	—	—	(622)	—	(622)
Purchase of treasury stock	—	—	—	(759)	—	(759)	—	(759)
Issuance of treasury stock	—	50	—	17	—	67	—	67
Stock-based compensation activity	—	20	—	—	—	20	—	20
Dividends paid on subsidiary common stock to noncontrolling interests	—	—	—	—	—	—	(25)	(25)
Acquisition of noncontrolling interests	—	—	—	—	—	—	(11)	(11)
December 31, 2024	\$969	\$1,272	\$21,994	(\$14,342)	(\$3,108)	\$6,785	\$177	\$6,962

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

Consolidated Statement of Cash Flows

	For the Year		
(\$ in millions)	2024	2023	2022
Operating activities			
Net income attributable to controlling and noncontrolling interests	\$1,149	\$1,309	\$1,054
Less: (Loss)/income from discontinued operations	(\$228)	\$47	\$19
Income from continuing operations	\$1,377	\$1,262	\$1,035
Adjustments to reconcile net income to cash from operations:			
Depreciation and amortization	492	514	502
Pension settlement charge	—	190	—
Impairment and other related charges, net	146	160	231
Stock-based compensation expense	42	56	34
Deferred income taxes	(97)	(187)	(151)
Business restructuring, net	233	(2)	33
Cash contributions to pension plans	(26)	(46)	(11)
Cash used for restructuring actions	(52)	(56)	(85)
Change in certain asset and liability accounts (net of acquisitions):			
Receivables	(181)	12	(248)
Inventories	(27)	145	(177)
Other current assets	(30)	(41)	(59)
Accounts payable and accrued liabilities	(259)	151	21
Noncurrent assets and liabilities, net	(73)	(50)	(112)
Taxes and interest payable	(31)	71	143
Other	(123)	115	(156)
Cash from operating activities - continuing operations	\$1,391	\$2,294	\$1,000
Cash from/(used for) operating activities - discontinued operations	29	117	(37)
Cash from operating activities	\$1,420	\$2,411	\$963
Investing activities			
Capital expenditures	(\$721)	(\$516)	(\$486)
Business acquisitions, net of cash balances acquired	(31)	(109)	(114)
Proceeds from divestiture of businesses	325	36	117
Other	28	64	53
Cash used for investing activities - continuing operations	(\$399)	(\$525)	(\$430)
Cash from/(used for) investing activities - discontinued operations	506	(31)	(31)
Cash from/(used for) investing activities	\$107	(\$556)	(\$461)
Financing activities			
Proceeds from Term Loan Credit Agreement, net of fees	\$274	\$550	\$—
Repayment of Term Loan Credit Agreement	—	(1,100)	(300)
Net payments on commercial paper and short-term debt	—	—	(439)
Proceeds from the issuance of debt, net of discounts and fees	—	—	1,116
Repayment of long-term debt	(300)	(300)	—
Purchase of treasury stock	(752)	(86)	(190)
Dividends paid on PPG common stock	(622)	(598)	(570)
Other	(25)	(16)	(26)
Cash used for financing activities - continuing operations	(\$1,425)	(\$1,550)	(\$409)
Cash used for financing activities - discontinued operations	—	—	—
Cash used for financing activities	(\$1,425)	(\$1,550)	(\$409)
Effect of currency exchange rate changes on cash and cash equivalents	(325)	110	1
Cash reclassified to assets held for sale	—	(5)	(3)
Net (decrease)/increase in cash and cash equivalents	(\$223)	\$410	\$91
Cash and cash equivalents, beginning of year	\$1,493	\$1,083	\$992
Cash and cash equivalents, end of year	\$1,270	\$1,493	\$1,083

Supplemental disclosures of cash flow information:			
Interest paid, net of amount capitalized	\$247	\$213	\$156
Taxes paid, net of refunds	\$653	\$488	\$436
Supplemental disclosure of noncash investing and financing activities:			
Capital expenditures accrued within Accounts payable and accrued liabilities at year-end	\$160	\$170	\$71
Purchases of treasury stock transacted but not yet settled	\$12	\$14	\$—

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

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 most of the subsidiaries that it controls. For those consolidated subsidiaries in which the Company's ownership is less than 100%, 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 income or losses from such equity affiliates is included in the consolidated statement of income and PPG's share of these companies' shareholders' equity is included in Investments on the 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. Such estimates also include the fair value of assets acquired and liabilities assumed resulting from the allocation of the purchase price related to business combinations consummated. Actual outcomes could differ from those estimates.

Revenue Recognition

Revenue is recognized as performance obligations with the customer are satisfied, at an amount that is determined to be collectible. For the sale of products, this generally occurs at the point in time when control of the Company's products transfers to the customer based on the agreed upon shipping terms.

Shipping and Handling Costs

Amounts billed to customers for shipping and handling are reported in Net sales in the 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 consolidated statement of income.

Selling, General and Administrative Costs

Amounts presented in Selling, general and administrative in the 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 areas such 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 and other distribution facilities.

Advertising Costs

Advertising costs are charged to expense as incurred and totaled \$203 million, \$193 million and \$159 million in 2024, 2023 and 2022, respectively.

Research and Development

Research and development costs, which consist primarily of employee-related costs, are charged to expense as incurred.

(\$ in millions)	2024	2023	2022
Research and development – total	\$447	\$446	\$457
Less: depreciation on research facilities	24	22	23
Research and development, net	\$423	\$424	\$434

Legal Costs

Legal costs, which primarily include costs associated with acquisition and divestiture transactions, general litigation, environmental regulation compliance, patent and trademark protection and other general corporate purposes, are charged to expense as incurred.

Income Taxes

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to operating losses and tax credit carryforwards as well as differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in Income tax expense in the consolidated statement of income in the period that includes the enactment date.

A valuation allowance is provided against deferred tax assets in situations where PPG determines it is more likely than not such assets will not ultimately be realized.

PPG does not recognize a tax benefit unless it concludes that it is more likely than not that the benefit will be sustained on audit by the taxing authority based solely on the technical merits of the associated tax position. If the recognition threshold is met, PPG recognizes a tax benefit measured at the largest amount of the tax benefit that, in PPG's judgment, is greater than 50 percent likely to be realized. PPG records interest and penalties related to uncertain tax positions in Income tax expense in the consolidated statement of income.

Foreign Currency Translation

The functional currency of most significant non-U.S. operations 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 foreign currency translation gains and losses are deferred in Accumulated other comprehensive loss on the consolidated balance sheet.

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 less than one year. The purchases and sales of these investments are classified as Investing activities in the consolidated statement of cash flows.

Marketable Equity Securities

The Company's investment in marketable equity securities is recorded at fair market value and reported as Other current assets and Investments on the consolidated balance sheet with changes in fair market value recorded in income.

Inventories

Inventories are stated at the lower of cost or net realizable value. Most U.S. inventories are stated at cost, using the last-in, first-out ("LIFO") method of accounting, which does not exceed net realizable value. All other inventories are stated at cost, using the first-in, first-out ("FIFO") method of accounting, which does not exceed net realizable value. PPG determines cost using either average or standard factory costs, which approximate actual costs, excluding certain fixed costs such as depreciation and property taxes. Refer to Note 3, "Working Capital Detail" for further information related to the Company's inventories.

Derivative Financial Instruments

The Company recognizes all derivative financial instruments (a "derivative") as either assets or liabilities at fair value on the consolidated balance sheet. The accounting for changes in the fair value of a derivative depends on the use of the instrument.

For derivative instruments that are designated and qualify as cash flow hedges, the unrealized gains or losses on the derivatives are recorded in the consolidated statement of comprehensive income. Amounts in Accumulated other comprehensive loss on the consolidated balance sheet are reclassified into Income before income taxes in the consolidated statement of income in the same period or periods during which the hedged transactions are recorded in Income before income taxes in the consolidated statement of income.

For derivative instruments that are designated and qualify as fair value hedges, the change in the fair value of the derivatives are reported in Income before income taxes in the consolidated statement of income, offsetting the gain or loss recognized for the change in fair value of the asset, liability, or firm commitment that is being hedged.

For derivatives, debt or other financial instruments that are designated and qualify as net investment hedges, the gains or losses associated with the financial instruments are reported as translation gains or losses in Accumulated other comprehensive loss on the consolidated balance sheet. Gains and losses in Accumulated other comprehensive loss related to hedges of the Company's net investments in foreign operations are reclassified out of Accumulated other comprehensive loss and recognized in Income before income taxes in the consolidated statement of income upon a substantial liquidation, sale or partial sale of such investments or upon impairment of all or a portion of such investments. The cash flow impact of these instruments is classified as Investing activities in the consolidated statement of cash flows.

Changes in the fair value of derivative instruments not designated as hedges for hedge accounting purposes are recognized in Income before income taxes in the consolidated statement of income in the period of change.

Property, Plant and Equipment

Property, plant and equipment is recorded at cost. Depreciation is computed on a straight-line method based on the estimated useful lives of related assets. Accelerated depreciation expense is recorded when facilities or equipment are subject to abnormal economic conditions, restructuring actions or obsolescence.

The cost of 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 a capitalized asset 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 recorded in Income before income taxes in the consolidated statement of income. The amortization cost of finance lease assets is recorded in Depreciation expense in the consolidated statement of income. Property and other long-lived assets are reviewed for impairment whenever events or circumstances indicate that their carrying amounts may not be recoverable. Refer to Note 4, "Property, Plant and Equipment" for further details.

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.

PPG is a multinational manufacturer with 10 operating segments (which the Company refers to as "strategic business units") that are organized based on the Company's major product lines. These operating segments are also the Company's reporting units for purposes of testing goodwill for impairment, which is tested at least annually in connection with PPG's strategic planning process or more frequently if an indication of impairment exists. The Company tests goodwill for impairment by either performing a qualitative evaluation or a quantitative test. The qualitative evaluation is an assessment of factors, including reporting unit specific operating results as well as industry, market and general economic conditions, to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount, including goodwill. The Company may elect to bypass this qualitative assessment for some or all of its reporting units and perform a quantitative test. Quantitative goodwill impairment testing, if deemed necessary, is performed during the fourth quarter of each year by comparing the estimated fair value of an associated reporting unit as of September 30 to its carrying value. Fair value is estimated using a discounted cash flow model. Key assumptions and estimates used in the discounted cash flow model include projected future revenues, discount rates, operating cash flows, capital expenditures and tax rates.

The annual indefinite-lived intangible asset impairment assessment takes place in the fourth quarter of each year either by completing a qualitative assessment or quantitatively by comparing the estimated fair value of each trademark as of September 30 to its carrying value. Fair value is estimated using the relief from royalty method (a discounted cash flow methodology). The qualitative assessment includes consideration of factors, including revenue relative to the asset being assessed, the operating results of the related business and industry, market and general economic conditions, to determine whether it is more likely than not that the fair value of the asset is less than its carrying amount.

Identifiable intangible assets with finite lives are amortized on a straight-line basis over their estimated useful lives (1 to 30 years) and are reviewed for impairment whenever events or circumstances indicate that their carrying amount may not be recoverable.

Receivables and Allowances

All trade receivables are reported on the consolidated balance sheet at the outstanding principal adjusted for any allowance for doubtful accounts and any charge offs. 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 regional economic and market conditions, the aging of accounts receivable, assessments of current creditworthiness of customers, and forward-looking information. Refer to Note 20, "Revenue Recognition" for further details.

Leases

The Company determines if a contract is a lease at the inception of the arrangement. The Company reviews all options to extend, terminate, or purchase its right of use assets at the inception of the lease and accounts for these options when they are reasonably certain of being exercised. Certain real estate leases contain lease and non-lease components, which are accounted for separately. For certain equipment leases, lease and non-lease components are accounted for as a single lease component.

Leases with an initial term of 12 months or less are not recorded on the consolidated balance sheet. Lease expense for these leases is recognized on a straight-line basis over the lease term.

Variable lease expense is based on contractual arrangements with PPG's lessors determined based on external indices or other relevant market factors. In addition, PPG's variable lease expense also includes elements of a contract that do not represent a good or service but for which the lessee is responsible for paying.

Nearly all of PPG's lease contracts do not provide a readily determinable implicit rate. For these contracts, PPG's estimated incremental borrowing rate is based on information available at the inception of the lease.

Product Warranties

The Company accrues for product warranties at the time the associated products are sold based on historical claims experience. The reserve, pretax charges against income and cash outlays for product warranties were not significant to the consolidated financial statements of the Company for any year presented.

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 the retirement or closure of certain assets used in PPG's manufacturing process. The accrued asset retirement obligation is recorded in Accounts payable and accrued liabilities and Other liabilities on the consolidated balance sheet and was \$11 million and \$15 million as of December 31, 2024 and December 31, 2023, 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. Because 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.

Environmental Contingencies

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.

Assets and Liabilities Held for Sale

The Company classifies assets and liabilities as held for sale (a "disposal group") when management commits to a plan to sell the disposal group, the sale is probable within one year and the disposal group is available for immediate sale in its present condition. The Company considers various factors, particularly whether actions required to complete the plan indicate it is unlikely that significant changes to the plan will be made or the plan will be withdrawn. Assets held for sale are measured at the lower of carrying value or fair value less costs to sell. Any loss resulting from the measurement is recognized in the period the held-for-sale criteria are met. Conversely, gains are not recognized until the date of the sale. When the disposal group is classified as held for sale, depreciation and amortization ceases and the Company tests the assets for impairment.

Reclassifications

Certain reclassifications of prior years' data have been made to conform to the current year presentation. These reclassifications had no impact on our previously reported Net income, cash flows or shareholders' equity.

Segment Reporting

Effective December 31, 2024, the Company revised the aggregation of its ten operating segments to present three reportable business segments: Global Architectural Coatings, Performance Coatings and Industrial Coatings. Prior year amounts have been recast to conform to current year presentation. Refer to Note 21, "Reportable Business Segment Information" for further details.

Accounting Standards Adopted in 2024

Effective January 1, 2024, PPG adopted Accounting Standards Update ("ASU") No. 2023-02, "Investment - Equity Method and Joint Ventures (Topic 323): Accounting for Investments in Tax Credit Structures Using the Proportional Amortization Method." This ASU permits reporting entities to elect to account for tax equity investments under the proportional amortization method, regardless of the tax credit program from which the income tax credits are received, if certain

conditions are met. Adoption of this ASU did not have a material impact on PPG's consolidated financial position, results of operations or cash flows.

Effective for the annual period ended December 31, 2024, PPG adopted Financial Accounting Standards Board ("FASB") Accounting Standards Update ("ASU") No. 2023-07 "Improvements to Reportable Segment Disclosures (Topic 280)". This ASU updated the reportable segment disclosure requirements to require disclosures of significant reportable segment expenses that are regularly provided to the Chief Operating Decision Maker ("CODM") and included within each reported measure of a segment's profit or loss. This ASU also requires disclosure of the title and position of the individual identified as the CODM and an explanation of how the CODM uses the reported measures of a segment's profit or loss in assessing segment performance and deciding how to allocate resources. Adoption of this ASU resulted in additional disclosure, but did not impact PPG's consolidated financial position, results of operations or cash flows.

Accounting Standards to be Adopted in Future Years

In December 2023, the FASB issued ASU No. 2023-09 "Improvements to Income Tax Disclosures (Topic 740)". This ASU updates current income tax disclosure requirements to require disclosures of specific categories of information within the effective tax rate reconciliation, as well as disclosure of income taxes paid disaggregated by jurisdiction. This ASU will be effective for the annual period ending December 31, 2025. Adoption of this ASU will result in additional disclosure, but will not impact PPG's consolidated financial position, results of operations or cash flows.

In November 2024, the FASB issued ASU 2024-03, "Income Statement – Reporting Comprehensive Income-Expense Disaggregation (Subtopic 220-40): Disaggregation of Income Statement Expenses". The ASU requires the disclosure of additional information related to certain costs and expenses, including amounts of inventory purchases, employee compensation, and depreciation and amortization included in each income statement line item. The ASU also requires disclosure of the total amount of selling expenses and our definition of selling expenses. This ASU will be effective for the annual period ending December 31, 2027. Adoption of this ASU will result in additional disclosure, but will not impact PPG's consolidated financial position, results of operations or cash flows.

2. Divestitures

U.S. and Canada Architectural Coatings Business

On December 2, 2024, PPG completed the sale of 100% of its architectural coatings business in the U.S. and Canada to American Industrial Partners (AIP), an industrials investor. PPG received \$516 million in proceeds and recorded a loss on the sale of \$285 million during the fourth quarter 2024. No tax benefit was recorded on the loss. The loss on the sale is recorded in "Income from discontinued operations, net of tax" in the consolidated statement of income. The proceeds from the sale are recorded in "Cash from/(used for) investing activities - discontinued operations" in the consolidated statement of cash flows.

The sale represents a strategic shift in PPG's business portfolio that has a major effect on the Company's operations and financial results. Accordingly, the Company's consolidated results of operations and cash flows have been recast to present the results of the architectural coatings business in the U.S. and Canada as discontinued operations for all periods presented. The results of the U.S. and Canada architectural coatings business were previously included in the Performance Coatings segment.

The operating results of discontinued operations related to the U.S. and Canada architectural coatings business for the three years ended December 31, 2024, 2023, and 2022 were as follows:

(\$ in millions)	2024	2023	2022
Net sales	\$1,878	\$2,004	\$2,038
Cost of sales, exclusive of depreciation and amortization	976	1,067	1,121
Selling, general, and administrative	787	821	805
Depreciation	28	31	31
Amortization	6	13	21
Research and development, net	9	9	14
Impairment and other-related charges, net	—	—	14
Other charges, net	1	5	6
Loss on sale of discontinued operations	285	—	—
(Loss)/income before income taxes	(\$214)	\$58	\$26
Income tax expense	14	11	5
(Loss)/income from discontinued operations, net of tax	(\$228)	\$47	\$21

The Company's December 31, 2023 balance sheet has been recast to present the assets and liabilities of the U.S. and Canada architectural coatings business as held for sale. The major classes of assets and liabilities of the U.S. and Canada architectural coatings business included in the PPG consolidated balance sheet at December 31, 2023 were as follows:

(\$ in millions)	December 31, 2023
Cash and cash equivalents	\$21
Receivables	272
Inventories	193
Other current assets	41
Total current assets held for sale (included in Other current assets on the consolidated balance sheet)	\$527
Property, plant and equipment, net	\$194
Goodwill	85
Identifiable intangible assets, net	163
Deferred income taxes	1
Investments	5
Operating lease right-of-use assets	261
Other assets	38
Total noncurrent assets held for sale (included in Other assets on the consolidated balance sheet)	\$747
Accounts payable and accrued liabilities	\$306
Restructuring reserves	3
Current portion of operating lease liabilities	66
Total current liabilities held for sale (included in Current liabilities - other on the consolidated balance sheet)	\$375
Operating lease liabilities	\$205
Deferred income taxes	8
Other liabilities	14
Total noncurrent liabilities held for sale (included in Other liabilities on the consolidated balance sheet)	\$227

The following table presents the significant non-cash items and capital expenditures for the discontinued operations related to the U.S. and Canada architectural coatings business that are included in the Consolidated Statement of Cash Flows for the three years ended December 31, 2024, 2023, and 2022:

(\$ in millions)	2024	2023	2022
Depreciation and amortization	\$34	\$44	\$52
Capital expenditures	10	33	32

In conjunction with the divestiture of U.S. and Canada architectural coatings business, PPG entered into a supply agreement with the divested business to sell certain products, which will be recognized as Net sales in the refinish coatings, industrial coatings and protective and marine coatings businesses going forward. Additionally, PPG has entered into transition services agreements to provide administrative services subsequent to the sale. The fees for services rendered under the transition services agreements are expected to offset the cost of providing those services.

Silicas Products Business

On November 25, 2024, PPG completed the sale of its silicas products business for \$325 million in proceeds and recorded a pre-tax gain on the sale of \$129 million in the fourth quarter 2024. The gain on the sale is recorded in "Other (income)/charges, net" in the consolidated statement of income. The Company determined that the divestiture did not meet the criteria of a discontinued operation as it did not represent a strategic shift for the Company, and therefore, its historical results are included in the Company's continuing operations within the Industrial Coatings reportable business segment.

3. Working Capital Detail

(\$ in millions)	2024	2023
Receivables		
Trade - net	\$2,477	\$2,622
Other - net	508	385
Total	\$2,985	\$3,007
Inventories⁽¹⁾		
Finished products	\$993	\$1,032
Work in process	213	233
Raw materials	591	615
Supplies	49	54
Total	\$1,846	\$1,934
Accounts payable and accrued liabilities		
Trade	\$2,161	\$2,438
Accrued payroll	490	630
Customer rebates	364	353
Other postretirement and pension benefits	76	96
Income taxes	130	128
Other	510	516
Total	\$3,731	\$4,161

(1) Inventories valued using the LIFO method of inventory valuation comprised 9% and 11% of total gross inventory values as of December 31, 2024 and 2023, respectively. If the FIFO method of inventory valuation had been used, inventories would have been \$169 million and \$183 million higher as of December 31, 2024 and 2023, respectively.

4. Property, Plant and Equipment

(\$ in millions)	Useful Lives (years)	2024	2023
Land and land improvements	1-30	\$525	\$541
Buildings	20-40	1,769	1,761
Machinery and equipment	5-25	3,545	3,862
Other	3-20	1,107	1,122
Construction in progress		735	669
Total		\$7,681	\$7,955
Less: accumulated depreciation		4,217	4,505
Net		\$3,464	\$3,450

5. Investments

(\$ in millions)	2024	2023
Investments in equity affiliates	\$141	\$141
Marketable equity securities (See Note 11)	85	74
Other	105	39
Total	\$331	\$254

Investments in equity affiliates represent PPG's ownership interests in entities between 20% and 50% that manufacture and sell coatings and certain chemicals.

PPG's share of undistributed net earnings of equity affiliates was \$20 million, \$21 million and \$25 million in 2024, 2023 and 2022, respectively. Dividends received from equity affiliates were \$14 million, \$17 million and \$17 million in 2024, 2023 and 2022, respectively.

6. Goodwill and Other Identifiable Intangible Assets

Goodwill

(\$ in millions)	Global Architectural Coatings	Performance Coatings	Industrial Coatings	Total
January 1, 2023	\$2,860	\$1,936	\$1,197	\$5,993
Acquisitions, including purchase accounting adjustments	—	126	13	139
Divestitures	—	(5)	—	(5)
Foreign currency impact and other	136	14	(4)	146
Goodwill impairment	—	(158)	—	(158)
December 31, 2023	\$2,996	\$1,913	\$1,206	\$6,115
Acquisitions, including purchase accounting adjustments	—	2	—	2
Divestitures	—	—	(2)	(2)
Foreign currency impact and other	(308)	(61)	(56)	(425)
December 31, 2024	\$2,688	\$1,854	\$1,148	\$5,690

In the fourth quarter, the Company tests the carrying value of goodwill for impairment, as discussed in Note 1. "Summary of Significant Accounting Policies." In 2024, the annual impairment testing of goodwill did not result in impairment of any of the Company's reporting units. In conjunction with the 2023 assessment, the Company determined that the estimated fair value of the traffic solutions reporting unit was less than its carrying value, resulting in recognition of a goodwill impairment charge of \$158 million in Impairment and other related charges, net in the accompanying consolidated statements of income. The fair value of the traffic solutions reporting unit was estimated using a discounted cash flow model. Key assumptions and estimates used in the discounted cash flow model included projected future revenues, a discount rate, operating cash flows, capital expenditures, and a tax rate. The decline in the fair value of the traffic solutions reporting unit compared to prior periods was primarily due to an increase in the weighted average cost of capital (discount rate assumption) reflecting the current interest rate environment. In addition, the fair value was impacted by a decline in the reporting unit's long-term cash generation forecast due to the highly inflationary environment in Argentina and the fourth quarter 2023 divestitures of its European and Australian businesses. In 2022, the annual impairment testing of goodwill did not result in impairment of any of the Company's reporting units.

As of December 31, 2024, accumulated goodwill impairment losses totaled \$158 million, all of which relates to the Performance Coatings reportable segment.

Identifiable Intangible Assets

(\$ in millions)	December 31, 2024			December 31, 2023		
	Gross Carrying Amount	Accumulated Amortization	Net	Gross Carrying Amount	Accumulated Amortization	Net
Indefinite-Lived Intangible Assets						
Trademarks	\$1,123	\$—	\$1,123	\$1,297	\$—	\$1,297
Definite-Lived Intangible Assets						
Acquired technology	\$800	(\$666)	\$134	\$817	(\$651)	\$166
Customer-related	1,656	(1,106)	550	1,759	(1,098)	661
Trade names	276	(162)	114	299	(164)	135
Other	43	(42)	1	46	(44)	2
Total Definite Lived Intangible Assets	\$2,775	(\$1,976)	\$799	\$2,921	(\$1,957)	\$964
Total Identifiable Intangible Assets	\$3,898	(\$1,976)	\$1,922	\$4,218	(\$1,957)	\$2,261

In the fourth quarter, the Company tests the carrying value of indefinite-lived trademarks for impairment, as discussed in Note 1, "Summary of Significant Accounting Policies." In 2024, the annual impairment testing review of indefinite-lived intangibles did not result in an impairment. In conjunction with both the 2023 and 2022 annual impairment tests, the Company determined that the estimated fair value of certain trademarks in the Global Architectural Coatings segment was less than the carrying value, resulting in recognition of impairment charges of \$2 million and \$4 million, respectively, in Impairment and other related charges, net in the accompanying consolidated statement of income.

In the first quarter 2022, due to the adverse economic impacts of the Russian invasion in Ukraine, the Company recognized \$147 million of Impairment and other related charges, net in the consolidated statement of income related to certain definite-lived and indefinite-lived intangible assets in the Performance Coatings segment. Refer to Note 7, "Impairment and Other Related Charges, Net" for further details.

Aggregate amortization expense was \$132 million, \$154 million and \$145 million in 2024, 2023 and 2022, respectively. In the fourth quarter 2023, the Company recognized accelerated amortization expense of \$6 million related to the exit of a non-core business.

(\$ in millions)	2025	2026	2027	2028	2029	Thereafter
Estimated future amortization expense	\$126	\$97	\$89	\$81	\$75	\$331

7. Impairment and Other Related Charges, Net

In 2023, the Company recorded a goodwill impairment charge for the traffic solutions reporting unit and indefinite-lived intangible asset impairment charges related to certain trademarks. In 2022, the Company recorded indefinite-lived intangible asset impairment charges for certain trademarks. Refer to Note 6, "Goodwill and Intangible Assets" for further detail related to these charges, which are included in Impairment and other related charges, net in the accompanying consolidated statement of income.

Wind Down of Russia Operations

During 2022, the Company commenced actions to wind down its operations in Russia in response to the Russian invasion of Ukraine. As a result, the Company recognized \$227 million of Impairment and other related charges, net, in the consolidated statement of income during 2022, comprised of \$201 million of long-lived asset impairment charges and \$26 million of other related charges. During 2023, the Company divested its legacy industrial Russian operations.

In the fourth quarter 2024, the Company received written approval from Russian regulatory authorities of a definitive agreement to sell the Company's remaining Russian business. The sale closed in the first quarter 2025. As a result, the Company classified the business as held for sale as of December 31, 2024 and recognized an impairment charge of \$146 million during the fourth quarter 2024, primarily related to accumulated foreign currency translation losses, which is included in Impairment and other related charges, net on the consolidated statement of income. No tax benefit was recorded on the impairment charge. The remaining liabilities of the business are reported as held for sale in Other current liabilities on the consolidated balance sheet as of December 31, 2024. The results of the business are reported within the Global Architectural Coatings reportable business segment.

8. Business Restructuring

The Company records restructuring liabilities that represent charges incurred in connection with consolidations of certain operations, including operations from acquisitions, as well as headcount reduction programs. These charges consist primarily of severance costs and certain other cash costs. As a result of these programs, the Company will also incur incremental non-cash accelerated depreciation expense for certain assets due to their reduced expected asset life. These charges are not allocated to the Company's reportable business segments. Refer to Note 21, "Reportable Business Segment Information" for additional information.

In October 2024, the Company approved a comprehensive cost reduction program with anticipated annualized pre-tax savings of approximately \$175 million once fully implemented, including savings of \$60 million in 2025. The multi-year program is focused on reducing structural costs primarily in Europe and in certain other global businesses, along with other corporate costs following the divestitures of PPG's silicas products business and the architectural coatings business in the U.S. and Canada. The program includes various facility closures and other targeted fixed cost reductions. In the fourth quarter of 2024, the Company recorded a pretax restructuring charge of \$239 million, representing employee severance and other cash costs. As a result of this program, the Company also recognized a \$110 million non-cash charge in the fourth quarter of 2024 due to the recognition of accumulated currency losses related to the exit of its Argentina operations. Additionally, the Company expects to incur approximately \$100 million of incremental noncash accelerated depreciation expense over the life of the program for certain assets due to their reduced expected asset life in addition to other cash costs of approximately \$70 million over the duration of this program, consisting of incremental restructuring-related cash costs for certain items that are required to be recognized as period expense as incurred. The restructuring actions will result in the net reduction of approximately 1,800 positions, primarily in Europe and the U.S. The majority of these restructuring actions are expected to be completed in 2025 and 2026.

In 2023, the Company approved business restructuring actions to reduce costs and improve the profitability of the overall business portfolio. The majority of these restructuring actions are expected to be completed by the end of 2025.

In 2022, the Company approved a business restructuring plan which included actions to reduce its global cost structure in response to economic conditions, including softening demand in Europe and lower than expected demand recovery in China. The Company performed a comprehensive evaluation to identify opportunities to reduce costs and improve the profitability of the overall business portfolio. The program includes actions to right-size employee headcount, reductions in functional and administrative costs and other cost savings actions. The majority of these restructuring actions are expected to be completed by the end of 2025.

The following table summarizes restructuring reserve activity for the years ended December 31, 2024 and 2023:

(\$ in millions)	Total Reserve	
	2024	2023
January 1	\$110	\$165
Approved restructuring actions	239	33
Release of prior reserves and other adjustments ^(a)	(6)	(35)
Cash payments	(52)	(56)
Foreign currency impact	(15)	3
December 31	\$276	\$110

(a) Certain releases were recorded to reflect the current estimate of costs to complete planned business restructuring actions.

9. Leases

PPG leases certain retail paint stores, warehouses, distribution facilities, office space, fleet vehicles and equipment.

The components of lease expense for the years ended December 31, 2024, 2023 and 2022 were as follows:

(\$ in millions)	Classification in the Consolidated Statement of Income	2024	2023	2022
Operating lease cost	Cost of sales, exclusive of depreciation and amortization	\$47	\$45	\$42
Operating lease cost	Selling, general and administrative	141	138	136
Total operating lease cost		\$188	\$183	\$178
Finance lease cost:				
Amortization of right-of-use assets	Depreciation	\$1	\$1	\$2
Interest on lease liabilities	Interest expense	1	1	1
Total finance lease cost		\$2	\$2	\$3
Total lease cost		\$190	\$185	\$181

Total operating lease cost for the years ended December 31, 2024, 2023 and 2022 is inclusive of the following:

(\$ in millions)	2024	2023	2022
Variable lease costs	\$9	\$9	\$6
Short-term lease costs	\$20	\$19	\$21

The lease amounts included in the consolidated balance sheet as of December 31, 2024 and 2023 were as follows:

(\$ in millions)	Classification on the Consolidated Balance Sheet	2024	2023
Assets:			
Operating	Operating lease right-of-use assets	\$597	\$571
Finance ⁽¹⁾	Property, plant, and equipment, net	12	12
Total leased assets		\$609	\$583
Liabilities:			
Current			
Operating	Current portion of operating lease liabilities	\$126	\$128
Finance	Short-term debt and current portion of long-term debt	2	2
Noncurrent			
Operating	Operating lease liabilities	454	417
Finance	Long-term debt	5	6
Total lease liabilities		\$587	\$553

(1) Net of accumulated depreciation of \$14 million as of both December 31, 2024 and 2023.

Supplemental cash flow information related to leases for the years ended December 31, 2024, 2023 and 2022 was as follows:

(\$ in millions)	2024	2023	2022
Cash paid for amounts included in the measurement of lease liabilities:			
Operating cash flows paid for operating leases	\$157	\$155	\$151
Operating cash flows paid for finance leases	\$1	\$1	\$1
Financing cash flows paid for finance leases	\$2	\$2	\$2
Right-of-use assets obtained in exchange for lease obligations:			
Operating leases	\$184	\$119	\$90
Finance leases	\$1	\$1	\$3

Lease terms and discount rates as of December 31, 2024, 2023 and 2022 were as follows:

	2024	2023	2022
Weighted-average remaining lease term (in years)			
Operating leases	6.9	6.8	7.3
Finance leases	8.1	9.3	8.6
Weighted-average discount rate			
Operating leases	3.6%	3.0%	2.4%
Finance leases	6.8%	6.0%	5.9%

As of December 31, 2024, maturities of lease liabilities were as follows:

(\$ in millions)	Operating Leases	Finance Leases
2025	\$144	\$2
2026	119	2
2027	89	2
2028	72	1
2029	55	1
Thereafter	174	—
Total lease payments	\$653	\$8
Less: Interest	73	1
Total lease obligations	\$580	\$7

10. Borrowings and Lines of Credit

Long-term Debt Obligations

(\$ in millions)	Maturity Date	2024	2023
2.4% notes (\$300)	2024	—	299
0.875% notes (€600)	2025	620	660
1.875% notes (€300)	2025	310	330
1.2% notes (\$700)	2026	698	696
Term Loan Credit Agreement, due 2026 (€750)	2026	776	552
1.4% notes (€600)	2027	619	659
3.75% notes (\$800) ⁽¹⁾	2028	806	808
2.5% notes (€80)	2029	83	87
2.8% notes (\$300)	2029	298	298
2.75% notes (€700)	2029	718	768
2.55% notes (\$300)	2030	297	297
1.95% note (€50)	2037	51	54
7.7% notes (\$176)	2038	175	174
5.5% notes (\$250)	2040	248	247
3.0% notes (€120)	2044	118	126
Various other non-U.S. debt	Various	—	1
Finance lease obligations	Various	7	8
Impact of derivatives on debt ⁽²⁾	N/A	(16)	(14)
Total		\$5,808	\$6,050
Less payments due within one year	N/A	932	302
Long-term debt		\$4,876	\$5,748

- (1) In February 2018, PPG entered into interest rate swaps which converted \$375 million of the notes from a fixed interest rate to a floating interest rate based on the three month LIBOR. The impact of the derivative on the notes represents the fair value adjustment of the debt. The average effective interest rate for the portion of the notes impacted by the swaps was 6.4% and 6.2% for the years ended December 31, 2024 and 2023, respectively. Refer to Note 11, "Financial Instruments, Hedging Activities and Fair Value Measurements" for additional information.
- (2) Fair value adjustment of the 3.75% \$800 million notes as a result of fair value hedge accounting treatment related to the outstanding interest rate swaps as of December 31, 2024 and 2023. Refer to Note 11, "Financial Instruments, Hedging Activities and Fair Value Measurements" for additional information.

Credit Agreements

In April 2023, PPG entered into a €500 million term loan credit agreement (the "Term Loan"). The Term Loan contains covenants that are consistent with those in the Credit Agreement discussed below and that are 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 Term Loan terminates and all amounts outstanding are payable in April 2026. In April 2023, PPG borrowed €500 million under the Term Loan. In December 2023, PPG obtained lender commitments sufficient to increase the size of the Term Loan by €250 million. In January 2024, PPG borrowed the additional €250 million. In December 2024, PPG obtained lender commitments sufficient to increase the size of the Term Loan by €300 million. In January 2025, PPG borrowed the additional €300 million. The Term Loan is denominated in euro and has been designated as a hedge of the net investment in the Company's European operations. For more information, refer to Note 11 "Financial Instruments, Hedging Activities and Fair Value Measurements."

In March 2023, PPG amended its five-year credit agreement (the "Credit Agreement") dated as of August 30, 2019. The amendments to the Credit Agreement replaced the LIBOR-based reference interest rate option with a reference interest rate option based upon Term SOFR. The other terms of the Credit Agreement remained unchanged. In July 2023, PPG amended and restated the Credit Agreement, extending the term through July 27, 2028. The amended and restated Credit Agreement provides for a \$2.3 billion unsecured revolving credit facility. The Company has the ability to increase the size of the Credit Agreement by up to an additional \$750 million, subject to the receipt of lender commitments and other conditions precedent. The Company has the right, subject to certain conditions set forth in the Credit Agreement, to designate certain subsidiaries of the Company as borrowers under the Credit Agreement. In connection with any such designation, the Company is required to guarantee the obligations of any such subsidiaries under the Credit Agreement. There were no amounts outstanding under the Credit Agreement as of December 31, 2024 and December 31, 2023.

Borrowings under the Credit Agreement may be made in U.S. Dollars or in euros. 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, as defined in the Credit Agreement, on the amount of unused commitments under the Credit Agreement ranging from 0.060% to 0.125% per annum.

The Credit Agreement also supports the Company's commercial paper borrowings which are classified as long-term based on PPG's intent and ability to refinance these borrowings on a long-term basis. There were no commercial paper borrowings outstanding as of both December 31, 2024 and December 31, 2023.

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% or less; provided, that for any fiscal quarter in which the Company has made an acquisition for consideration in excess of \$1 billion and for the next five fiscal quarters thereafter, the ratio of Total Indebtedness to Total Capitalization may not exceed 65% at any time. As of December 31, 2024, Total Indebtedness to Total Capitalization as defined under the Credit Agreement was 45%.

The Credit Agreement contains, among other things, customary events of default that would permit the lenders to accelerate the 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.

Other Long-term Debt Activities

In August 2024, PPG's \$300 million 2.4% notes matured, and the Company repaid this obligation using cash on hand.

In March 2023, PPG's \$300 million 3.2% notes matured, and the Company repaid this obligation using cash on hand.

In May 2022, PPG completed a public offering of €300 million 1.875% Notes due 2025 and €700 million 2.750% Notes due 2029. These notes were issued pursuant to PPG's existing shelf registration statement and pursuant to an indenture between the Company and The Bank of New York Mellon Trust Company, N.A., as trustee, as supplemented (the "2022 Indenture"). The 2022 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 2022 Indenture) at a price equal to 101% of their principal amount plus accrued and unpaid interest. The Company may issue additional debt from time to time pursuant to the Indenture. The aggregate cash proceeds from the notes, net of discounts and fees, was \$1,061 million. The notes are denominated in euro and have been designated as hedges of net investments in the Company's European operations. Refer to Note 11 "Financial Instruments, Hedging Activities and Fair Value Measurements." for additional information.

In March 2022, PPG privately placed a 15-year €50 million 1.95% fixed interest note. This note contains covenants materially consistent with the 1.875% and 2.750% notes discussed above. This debt arrangement is denominated in euros and has been designated as a net investment hedge of the Company's European operations. Refer to Note 11 "Financial Instruments, Hedging Activities and Fair Value Measurements" for additional information.

In February 2021, PPG entered into a \$2.0 billion term loan credit agreement (the "Term Loan Credit Agreement") to finance the Company's acquisition of Tikkurila, and to pay fees, costs and expenses related thereto. The Term Loan Credit Agreement provided the Company with the ability to borrow up to an aggregate principal amount of \$2.0 billion on an unsecured basis. The Term Loan Credit Agreement contained covenants that are consistent with those in the Credit Agreement discussed below and that are 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 Term Loan Credit Agreement was scheduled to mature and all outstanding borrowings were due and payable on the third anniversary of the date of the initial borrowing under the Agreement. In June 2021, PPG borrowed \$700 million under the Term Loan Credit Agreement to finance the Company's acquisition of Tikkurila, and to pay fees, costs and expenses related thereto. In December 2021, PPG borrowed an additional \$700 million under the Term Loan Credit Agreement to be used for working capital and general corporate purposes. In 2022 and 2023, PPG repaid \$300 million and \$1.1 billion, respectively, of the Term Loan Credit Agreement using cash on hand. The Term Loan Credit Agreement was fully repaid as of December 31, 2023.

Restrictive Covenants and Cross-Default Provisions

As of December 31, 2024, PPG was in full compliance with the restrictive covenants under its various credit agreements, loan agreements and indentures.

Additionally, the Company's Credit Agreement contains customary cross-default provisions. These provisions provide that a default on a debt service payment of \$100 million or more for longer than the grace period provided under another agreement may result in an event of default under this agreement. None of the Company's primary debt obligations are secured or guaranteed by the Company's affiliates.

Long-term Debt Maturities

(\$ in millions)	Maturity per year
2025	\$933
2026	\$1,474
2027	\$621
2028	\$782
2029	\$1,106
Thereafter	\$892

Short-term Debt Obligations

(\$ in millions)	2024	2023
Various, weighted average 1.9% and 2.4% as of December 31, 2024 and 2023, respectively.	\$7	\$4

Lines of Credit, Letters of Credit and Surety Bonds

PPG's non-U.S. operations have uncommitted lines of credit totaling \$480 million of which none was used as of December 31, 2024. These uncommitted lines of credit are subject to cancellation at any time and are generally not subject to any commitment fees.

The Company had outstanding letters of credit and surety bonds of \$302 million and \$232 million as of December 31, 2024 and 2023, respectively. 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. The Company does not believe any loss related to these letters of credit or surety bonds is likely.

11. Financial Instruments, Hedging Activities and Fair Value Measurements

Financial instruments include cash and cash equivalents, short-term investments, cash held in escrow, marketable equity securities, accounts receivable, company-owned life insurance, accounts payable, short-term and long-term debt instruments, and derivatives. The fair values of these financial instruments approximated their carrying values at December 31, 2024 and 2023, in the aggregate, except for long-term debt instruments.

Hedging Activities

The Company has exposure to market risk from changes in foreign currency exchange rates and interest rates. As a result, financial instruments, including derivatives, have been used to hedge a portion of these underlying economic exposures. Certain of these instruments qualify as fair value, cash flow, and net investment hedges upon meeting the requisite criteria, including effectiveness of offsetting hedged or underlying exposures. Changes in the fair value of derivatives that do not qualify for hedge accounting are recognized in Income before income taxes in the period incurred.

PPG's policies do not permit speculative use of derivative financial instruments. 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, 2024.

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

In 2024 and 2023, there were no derivative instruments de-designated or discontinued as a hedging instrument. There were no gains or losses deferred in Accumulated other comprehensive loss on the consolidated balance sheet that were reclassified to Income before income taxes in the consolidated statement of income during the three-year period ended December 31, 2024 related to hedges of anticipated transactions that were no longer expected to occur.

Fair Value Hedges

The Company uses interest rate swaps from time to time to manage its exposure to changing interest rates. When outstanding, the interest rate swaps are typically designated as fair value hedges of certain outstanding debt obligations of the Company and are recorded at fair value.

PPG has interest rate swaps which converted to \$375 million of fixed rate debt to variable rate debt as of both December 31, 2024 and December 31, 2023, respectively. These swaps are designated as fair value hedges and are carried at fair value. Changes in the fair value of these swaps and changes in the fair value of the related debt are recorded in Interest expense in the accompanying consolidated statement of income. The fair value of these interest rate swaps were liabilities of \$16 million and \$14 million at December 31, 2024 and 2023, respectively.

Cash Flow Hedges

At times, PPG designates certain foreign currency forward contracts as cash flow hedges of the Company's exposure to variability in exchange rates on third party transactions denominated in foreign currencies. There were no outstanding cash flow hedges at December 31, 2024 and December 31, 2023, respectively.

Net Investment Hedges

PPG uses cross currency swaps and foreign currency euro-denominated debt to hedge a significant portion of its net investment in its European operations, as follows:

PPG had U.S. dollar to euro cross currency swap contracts with total notional amounts of \$375 million and \$475 million as of December 31, 2024 and December 31, 2023, respectively, and designated these contracts as hedges of the Company's net investment in its European operations. During the term of these contracts, PPG will receive payment in U.S. dollars and make payments in euros to the counterparties. As of December 31, 2024 and 2023, the fair value of these contracts were net assets of \$50 million and \$33 million, respectively.

At December 31, 2024 and 2023, PPG had designated €3.2 billion and €3.0 billion, respectively, of euro-denominated borrowings as hedges of a portion of its net investment in the Company's European operations. The carrying value of these instruments was \$3.3 billion at both December 31, 2024 and 2023.

There were no foreign currency forward contracts designated as net investment hedges used or outstanding as of and for the periods ended December 31, 2024, 2023 and 2022.

Other Financial Instruments

PPG uses foreign currency forward contracts to manage net transaction exposures that do not qualify for hedge accounting; therefore, the change in the fair value of these instruments is recorded in Other (income)/charges, net in the consolidated statement of income in the period of change. Underlying notional amounts related to these foreign currency forward contracts were \$2.8 billion and \$2.5 billion at December 31, 2024 and 2023, respectively. The fair values of these contracts were net liabilities of \$53 million as of December 31, 2024 and net assets of \$23 million as of December 31, 2023 respectively.

Gains/Losses Deferred in Accumulated Other Comprehensive Loss

As of December 31, 2024 and 2023, the Company had accumulated pretax unrealized translation gains in Accumulated other comprehensive loss on the consolidated balance sheet related to the euro-denominated borrowings, foreign currency forward contracts, and the cross currency swaps of \$460 million and \$223 million, respectively.

The following table summarizes the amount of gains/(losses) deferred in Other comprehensive (loss)/income ("OCI") and the amount and location of gains recognized within the consolidated statement of income related to derivative and debt financial instruments for the years ended December 31, 2024, 2023 and 2022. All dollar amounts are shown on a pretax basis.

	2024		2023		2022		
(\$ in millions)	Gain Deferred in OCI	(Loss)/Gain Recognized	Loss Deferred in OCI	(Loss)/Gain Recognized	Gain Deferred in OCI	Gain Recognized	Caption in Consolidated Statement of Income
Fair Value							
Interest rate swaps		(\$10)		(\$10)		\$8	Interest expense
Total Fair Value		(\$10)		(\$10)		\$8	
Net Investment							
Cross currency swaps	\$20	\$9	(\$15)	\$12	\$38	\$16	Interest expense
Foreign denominated debt	217	—	(89)	—	85	—	
Total Net Investment	\$237	\$9	(\$104)	\$12	\$123	\$16	
Economic							
Foreign currency forward contracts		\$43		\$49		\$43	Other charges/ (income), net

Fair Value Measurements

The Company follows a fair value measurement hierarchy to measure its assets and liabilities. As of December 31, 2024 and 2023, respectively, the assets and liabilities measured at fair value on a recurring basis were cash equivalents, equity securities and derivatives. In addition, the Company measures its pension plan assets at fair value (see Note 14, "Employee Benefit Plans" for further details). The Company's financial assets and liabilities are measured using inputs from the following three levels:

Level 1 inputs are quoted prices in active markets for identical assets and liabilities that the Company has the ability to access at the measurement date. Level 1 inputs are considered to be the most reliable evidence of fair value as they are based on unadjusted quoted market prices from various financial information service providers and securities exchanges.

Level 2 inputs are directly or indirectly observable prices that are not quoted on active exchanges, which include quoted prices for similar assets and liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, inputs other than quoted prices that are observable for the asset or liability and inputs that are derived principally from or corroborated by observable market data by correlation or other means. The fair values of the derivative instruments reflect the instruments' contractual terms, including the period to maturity, and uses observable market-based inputs, including forward curves.

Level 3 inputs are unobservable inputs employed for measuring the fair value of assets or liabilities. The Company does not have any recurring financial assets or liabilities that are recorded in its consolidated balance sheets as of December 31, 2024 and 2023 that are classified as Level 3 inputs.

Assets and liabilities reported at fair value on a recurring basis

	December 31, 2024			December 31, 2023		
(\$ in millions)	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3
Assets:						
Other current assets:						
Marketable equity securities	\$9	\$—	\$—	\$9	\$—	\$—
Foreign currency forward contracts ^(a)	—	5	—	—	28	—
Cross currency swaps ^(b)	—	—	—	—	2	—
Investments:						
Marketable equity securities	\$85	\$—	\$—	\$74	\$—	\$—
Other assets:						
Cross currency swaps ^(b)	\$—	\$50	\$—	\$—	\$31	\$—
Liabilities:						
Accounts payable and accrued liabilities:						
Foreign currency forward contracts ^(a)	\$—	\$58	\$—	\$—	\$5	\$—
Other liabilities:						
Interest rate swaps ^(c)	\$—	\$16	\$—	\$—	\$14	\$—

(a) Derivatives not designated as hedging instruments

(b) Net investment hedges

(c) Fair value hedges

Long-Term Debt

(\$ in millions)	December 31, 2024 ^(a)	December 31, 2023 ^(b)
Long-term debt - carrying value	\$5,801	\$6,042
Long-term debt - fair value	\$5,634	\$5,781

(a) Excluding finance lease obligations of \$7 million and short term borrowings of \$7 million as of December 31, 2024.

(b) Excluding finance lease obligations of \$8 million and short term borrowings of \$4 million as of December 31, 2023.

The fair values of the debt instruments were measured using Level 2 inputs, including discounted cash flows and interest rates then currently available to the Company for instruments of the same remaining maturities.

12. Earnings Per Common Share

(\$ in millions, except per share amounts)	2024	2023	2022
Earnings per common share (attributable to PPG)			
Income from continuing operations, net of tax	\$1,344	\$1,223	\$1,007
(Loss)/income from discontinued operations, net of tax	(228)	47	19
Net income (attributable to PPG)	\$1,116	\$1,270	\$1,026
Weighted average common shares outstanding	233.8	236.0	236.1
Effect of dilutive securities:			
Stock options	0.4	0.5	0.5
Other stock compensation plans	0.7	0.7	0.7
Potentially dilutive common shares	1.1	1.2	1.2
Adjusted weighted average common shares outstanding	234.9	237.2	237.3
Earnings per common share (attributable to PPG)			
Income from continuing operations, net of tax	\$5.75	\$5.18	\$4.26
(Loss)/income from discontinued operations, net of tax	(0.98)	0.20	0.08
Net income (attributable to PPG)	\$4.77	\$5.38	\$4.34
Earnings per common share - assuming dilution (attributable to PPG)			
Income from continuing operations, net of tax	\$5.72	\$5.16	\$4.24
(Loss)/income from discontinued operations, net of tax	(0.97)	0.19	0.08
Net income (attributable to PPG)	\$4.75	\$5.35	\$4.32
Antidilutive securities ^(a) :			
Stock options	1.3	0.9	0.9

(a) Excluded from the computation of earnings per diluted share due to their antidilutive effect.

13. Income Taxes

The provision for income taxes by taxing jurisdiction and by significant components consisted of the following:

(\$ in millions)	2024	2023	2022
Current			
U.S. federal	\$67	\$95	\$136
U.S. state and local	15	14	20
Foreign	490	506	315
Total current income tax expense	\$572	\$615	\$471
Deferred			
U.S. federal	(\$2)	(\$156)	(\$77)
U.S. state and local	(8)	(15)	(7)
Foreign	(87)	(16)	(67)
Total deferred income tax benefit	(\$97)	(\$187)	(\$151)
Total income tax expense	\$475	\$428	\$320

A reconciliation of the statutory U.S. corporate federal income tax rate to the Company's effective tax rate follows:

	2024	2023	2022
U.S. federal income tax rate	21.0%	21.0%	21.0%
Changes in rate due to:			
Taxes on non-U.S. earnings	4.8	4.3	3.6
Change in valuation allowance reserves	3.5	3.6	0.6
Other foreign tax effects	(4.7)	(2.8)	(1.7)
Pillar 2 global minimum tax	0.8	—	—
Impairment and other related charges, net	(0.2)	2.0	1.4
Uncertain tax positions	1.2	(1.8)	(0.3)
U.S. tax cost/(benefit) on foreign operations	0.9	(0.9)	(0.2)
U.S. tax incentives	(0.8)	(0.8)	(1.1)
Tax benefits from equity awards	—	(0.2)	(0.3)
U.S. state and local taxes	0.3	—	0.7
Other	(1.2)	0.9	(0.1)
Effective income tax rate	25.6%	25.3%	23.6%

Income/(loss) before income taxes of the Company's U.S. operations for 2024, 2023 and 2022 was \$210 million, \$(129) million and \$290 million, respectively. Income before income taxes of the Company's foreign operations for 2024, 2023 and 2022 was \$1,642 million, \$1,819 million and \$1,065 million, respectively.

Deferred income taxes

Deferred income taxes are provided for the effect of temporary differences that arise because there are certain items treated differently for financial accounting than for income tax reporting purposes. The deferred tax assets and liabilities are determined by applying the enacted tax rate in the year in which the temporary difference is expected to reverse.

(\$ in millions)	2024	2023
Deferred income tax assets related to		
Employee benefits	\$215	\$266
Contingent and accrued liabilities	105	61
Operating loss and other carry-forwards	389	270
Operating lease liabilities	144	187
Research and development amortization	259	213
Other	280	198
Valuation allowance	(327)	(240)
Total	\$1,065	\$955
Deferred income tax liabilities related to		
Property	\$268	\$220
Intangibles	607	679
Employee benefits	39	47
Operating lease right-of-use assets	148	194
Other	105	43
Total	\$1,167	\$1,183
Deferred income tax liabilities – net	(\$102)	(\$228)

Net operating loss and credit carryforwards

(\$ in millions)	2024	2023	Expiration
<i>Available net operating loss carryforwards, tax effected:</i>			
Indefinite expiration	\$85	\$86	NA
Definite expiration	150	72	2025-2044
<i>Total</i>	<i>\$235</i>	<i>\$158</i>	
<i>Income tax credit carryforwards</i>	<i>\$112</i>	<i>\$108</i>	<i>2025-2034</i>

A valuation allowance of \$327 million and \$240 million has been established as of December 31, 2024 and 2023, respectively, for carryforwards and certain other items when the ability to utilize them is not likely.

Undistributed foreign earnings

The Company had \$6.1 billion of undistributed earnings of non-U.S. subsidiaries as of December 31, 2024. This amount relates to approximately 245 subsidiaries in approximately 65 taxable jurisdictions. The Company estimates repatriation of undistributed earnings of non-U.S. subsidiaries as of December 31, 2024 would result in a tax cost of \$142 million.

As of December 31, 2024, the Company had not changed its intention to reinvest foreign earnings indefinitely or repatriate when it is tax effective to do so, and as such, has not established a liability for foreign withholding taxes or other costs that would be incurred if the earnings were repatriated.

Unrecognized tax benefits

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 2008. Additionally, the Company is no longer subject to examination by the Internal Revenue Service for U.S. federal income tax returns filed for years through 2018. The examinations of the Company's U.S. federal income tax returns for 2019 and 2020 are currently underway.

A reconciliation of the total amounts of unrecognized tax benefits (excluding interest and penalties) as of December 31 follows:

(\$ in millions)	2024	2023	2022
January 1	\$121	\$145	\$158
Current year tax positions - additions	8	16	19
Prior year tax positions - additions	43	33	2
Prior year tax positions - reductions	(1)	(14)	(2)
Statute of limitations expirations	(20)	(9)	(23)
Settlements	(6)	(51)	(3)
Foreign currency translation	(4)	1	(6)
December 31	\$141	\$121	\$145

The Company expects that any reasonably possible change in the amount of unrecognized tax benefits in the next 12 months would not be significant. The total amount of unrecognized tax benefits that, if recognized, would affect the effective tax rate was \$138 million as of December 31, 2024.

Interest and penalties

(\$ in millions)	2024	2023	2022
Accrued interest and penalties related to unrecognized tax benefits	\$11	\$14	\$17
(Income)/loss recognized in income tax expense related to interest and penalties	(\$2)	(\$2)	\$1

The Company recognizes accrued interest and penalties related to unrecognized tax benefits in income tax expense.

14. Employee Benefit Plans

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, Germany, the Netherlands and the U.K. These plans in the aggregate represent approximately 92% of PPG's total projected benefit obligation at December 31, 2024, of which the U.S. defined benefit pension plans represent the largest component.

As of January 1, 2006, the Company's U.S. salaried defined benefit plans were closed to new entrants. In 2011 and 2012, the Company approved amendments related to its U.S. and Canadian defined benefit plans pursuant to which employees

stopped accruing benefits at certain dates based on the affected employee's combined age and years of service to PPG. As of December 31, 2020, the Company's U.S. and Canadian defined benefit plans were frozen for all participants. The Company plans to continue reviewing and potentially amending PPG defined benefit plans in the future.

U.S. pension annuity contracts

In March 2023, the Company purchased group annuity contracts that transferred to third-party insurance companies pension benefit obligations for certain of the Company's retirees in the U.S. who were receiving their monthly retirement benefit payments from a U.S. pension plan. The amount of each affected retiree's annuity payment is equal to the amount of such individual's pension benefit. The purchase of group annuity contracts was funded directly by the assets of the U.S. plans. By transferring the obligations and assets to the insurance companies, the Company reduced its overall pension projected benefit obligation by \$309 million and recognized a non-cash Pension settlement charge of \$190 million in the consolidated statement of income for the year ended December 31, 2023.

Postretirement medical

PPG sponsors welfare benefit plans that provide postretirement medical and life insurance benefits for certain U.S. and Canadian employees and their dependents of which the U.S. welfare benefit plans represent approximately 86% of PPG's total projected benefit obligation at December 31, 2024. Salaried and certain hourly employees in the U.S. hired on or after October 1, 2004, or rehired on or after October 1, 2012 are not eligible for postretirement medical benefits. These plans in the U.S. and Canada 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, amend or terminate certain of these benefit plans in the future.

Effective January 1, 2017, the Company-sponsored Medicare-eligible plans were replaced by a Medicare private exchange. The announcement of this plan design change triggered a remeasurement of PPG's retiree medical benefit obligation using prevailing interest rates. The plan design change resulted in a \$306 million reduction in the Company's postretirement benefit obligation. PPG accounted for the plan design change prospectively, and the impact was amortized to periodic postretirement benefit cost over a 5.6 year period through mid-2022.

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

(\$ in millions)	<i>Defined Benefit Pension Plans</i>					
	<i>United States</i>		<i>International</i>		<i>Total PPG</i>	
	<i>2024</i>	<i>2023</i>	<i>2024</i>	<i>2023</i>	<i>2024</i>	<i>2023</i>
Projected benefit obligation, January 1	\$1,143	\$1,425	\$1,068	\$956	\$2,211	\$2,381
Service cost	—	—	8	7	8	7
Interest cost	55	62	48	49	103	111
Plan amendments	—	—	1	—	1	—
Actuarial (gains)/losses	(57)	44	(33)	75	(90)	119
Benefits paid	(67)	(79)	(53)	(50)	(120)	(129)
Foreign currency translation adjustments	—	—	(54)	47	(54)	47
Settlements	(19)	(309)	(13)	(11)	(32)	(320)
Other	—	—	—	(5)	—	(5)
Projected benefit obligation, December 31	\$1,055	\$1,143	\$972	\$1,068	\$2,027	\$2,211
Market value of plan assets, January 1	\$731	\$1,028	\$989	\$937	\$1,720	\$1,965
Actual return on plan assets	7	45	(15)	43	(8)	88
Company contributions	24	28	2	18	26	46
Benefits paid	(49)	(61)	(44)	(40)	(93)	(101)
Plan settlements	(19)	(309)	(6)	(11)	(25)	(320)
Foreign currency translation adjustments	—	—	(37)	45	(37)	45
Other	—	—	(3)	(3)	(3)	(3)
Market value of plan assets, December 31	\$694	\$731	\$886	\$989	\$1,580	\$1,720
Funded Status	(\$361)	(\$412)	(\$86)	(\$79)	(\$447)	(\$491)
Amounts recognized in the Consolidated Balance Sheet:						
Other assets (long-term)	—	—	144	148	144	148
Accounts payable and accrued liabilities	(18)	(38)	(15)	(13)	(33)	(51)
Accrued pensions	(343)	(374)	(215)	(214)	(558)	(588)
Net liability recognized	(\$361)	(\$412)	(\$86)	(\$79)	(\$447)	(\$491)

(\$ in millions)	Other Postretirement Benefit Plans					
	United States		International		Total PPG	
	2024	2023	2024	2023	2024	2023
Projected benefit obligation, January 1	\$424	\$458	\$71	\$66	\$495	\$524
Service cost	3	4	—	—	3	4
Interest cost	20	23	3	4	23	27
Plan amendments	—	(17)	—	—	—	(17)
Actuarial (gains)/losses	(22)	(3)	(2)	3	(24)	—
Benefits paid	(35)	(39)	(4)	(3)	(39)	(42)
Foreign currency translation adjustments	—	—	(5)	1	(5)	1
Curtailments	—	(2)	—	—	—	(2)
Projected benefit obligation, December 31	\$390	\$424	\$63	\$71	\$453	\$495
Amounts recognized in the Consolidated Balance Sheet:						
Accounts payable and accrued liabilities	(39)	(41)	(4)	(4)	(43)	(45)
Other postretirement benefits	(351)	(383)	(59)	(67)	(410)	(450)
Net liability recognized	(\$390)	(\$424)	(\$63)	(\$71)	(\$453)	(\$495)

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, 2024 and 2023 was \$2.0 billion and \$2.2 billion, respectively.

The following table details the pension plans where the benefit liability exceeds the fair value of the plan assets:

(\$ in millions)	Pensions	
	2024	2023
Plans with PBO in Excess of Plan Assets:		
Projected benefit obligation	\$1,307	\$1,426
Fair value of plan assets	\$717	\$771
Plans with ABO in Excess of Plan Assets:		
Accumulated benefit obligation	\$1,274	\$1,366
Fair value of plan assets	\$712	\$737

Net actuarial losses/(gains) and prior service credit deferred in accumulated other comprehensive loss

(\$ in millions)	Pensions		Other Postretirement Benefits	
	2024	2023	2024	2023
Accumulated net actuarial losses/(gains)	\$670	\$682	(\$37)	(\$15)
Accumulated prior service credit	—	—	(16)	(20)
Total	\$670	\$682	(\$53)	(\$35)

The accumulated net actuarial losses (gains) for pensions and other postretirement benefits relate primarily to historical changes in the discount rates. The accumulated net actuarial losses exceeded 10% of the higher of the market value of plan assets or the PBO at the beginning of each of the last three years; therefore, amortization of such excess has been included in net periodic benefit costs for pension and other postretirement benefits in these periods. The amortization period is the average remaining service period of active employees expected to receive benefits unless a plan is mostly inactive in which case the amortization period is the average remaining life expectancy of the plan participants. Accumulated prior service 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 net decrease in Accumulated other comprehensive loss (pretax) related to defined benefit pension and other postretirement benefit plans during the year ended December 31, 2024 was due to the following:

(\$ in millions)	Pensions	Other Postretirement Benefits
Net actuarial loss/(gain) arising during the year	\$28	(\$24)
Plan amendment	1	—
Amortization of actuarial (loss)/gain	(22)	1
Amortization of prior service credit	(1)	4
Foreign currency translation adjustments	(7)	1
Impact of settlements	(11)	—
Net decrease	(\$12)	(\$18)

The 2024 net actuarial loss related to the Company's pension and other postretirement benefit plans was primarily due to a decrease in the weighted average discount rate used to determine the benefit obligation at December 31, 2024.

Net periodic benefit cost/(income)

	Pensions			Other Postretirement Benefits		
(\$ in millions)	2024	2023	2022	2024	2023	2022
Service cost	\$8	\$7	\$9	\$3	\$4	\$8
Interest cost	103	111	73	23	27	16
Expected return on plan assets	(109)	(110)	(140)	—	—	—
Amortization of prior service cost	1	—	—	(4)	(7)	(11)
Amortization of actuarial losses/(gains)	22	21	34	(1)	(1)	12
Settlements, curtailments, and special termination benefits	11	192	6	—	(2)	—
Net periodic benefit cost/(income)	\$36	\$221	(\$18)	\$21	\$21	\$25

Service cost for net periodic pension and other postretirement benefit costs is included in Cost of sales, exclusive of depreciation and amortization, Selling, general and administrative, and Research and development, net in the accompanying consolidated statement of income. Except for the U.S. pension settlement charge in 2023, which is recorded in Pension settlement charge, all other non-service cost components of net periodic benefit cost are recorded in Other (income)/charges, net in the accompanying consolidated statement of income.

Key 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, 2024 and 2023:

	United States		International		Total PPG	
	2024	2023	2024	2023	2024	2023
Discount rate	5.7%	5.2%	4.8%	4.5%	5.3%	4.9%
Rate of compensation increase	2.5%	2.5%	3.3%	3.2%	2.9%	2.8%

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, 2024:

	2024	2023	2022
Discount rate	4.9%	5.2%	2.5%
Expected return on assets	6.6%	6.5%	5.0%
Rate of compensation increase	2.8%	2.7%	2.6%

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. For 2024, the return on plan assets assumption for PPG's U.S. defined benefit pension plans was 7.7%. A change in the rate of return of 75 basis points, with other assumptions held constant, would impact 2025 net periodic pension expense by \$5 million. The global expected return on plan assets assumption to be used in determining 2025 net periodic pension expense will be 6.7% (7.7% for the U.S. plans only).

The discount rates used in accounting for pension and other postretirement benefits are determined using a yield curve constructed of high-quality fixed-income securities as of the measurement date and using the plans' projected benefit payments. The Company has elected to use a full yield curve approach in the estimation of the service and interest cost components of net periodic pension benefit cost/(income) for countries with significant pension plans. The full yield curve approach (also known as the split-rate or spot-rate method) allows the Company to align the applicable discount rates with the cost of additional service being earned and the interest being accrued on these obligations. A change in the discount rate of 75 basis points, with all other assumptions held constant, would impact 2025 net periodic benefit expense for our defined benefit pension and other postretirement benefit plans by \$3 million and \$1 million, respectively.

The weighted-average health care cost trend rate (inflation) used for 2024 was 5.5% declining to a projected 3.9% in the year 2047. For 2025, the assumed weighted-average health care cost trend rate used will be 6.6% declining to a projected 3.9% between 2024 and 2048 for medical and prescription drug costs. 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.

Contributions to defined benefit pension plans

(\$ in millions)	2024	2023	2022
U.S. defined benefit pension plans	\$24	\$28	\$—
Non-U.S. defined benefit pension plans	\$2	\$18	\$11

PPG expects to make mandatory contributions to its defined benefit pension plans in the range of \$20 million to \$30 million during 2025. In addition to any mandatory contributions, PPG may elect to make voluntary contributions to its defined benefit pension plans in 2025 and beyond.

Benefit payments

The estimated benefits expected to be paid under the Company's defined benefit pension and other postretirement benefit plans are:

(\$ in millions)	Pensions	Other Postretirement Benefits
2025	\$139	\$43
2026	\$139	\$41
2027	\$143	\$39
2028	\$143	\$38
2029	\$146	\$37
2030 to 2034	\$778	\$172

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 retirees.

The following summarizes the weighted average target pension plan asset allocation as of December 31, 2024 and 2023 for all PPG defined benefit plans:

Asset Category	2024	2023
Equity securities	15-45%	15-45%
Debt securities	30-65%	30-65%
Real estate	0-10%	0-10%
Other	20-40%	20-40%

The fair values of the Company's pension plan assets at December 31, 2024 and 2023, by asset category, are as follows:

(\$ in millions)	December 31, 2024				December 31, 2023			
	Level 1 ⁽¹⁾	Level 2 ⁽¹⁾	Level 3 ⁽¹⁾	Total	Level 1 ⁽¹⁾	Level 2 ⁽¹⁾	Level 3 ⁽¹⁾	Total
Asset Category								
Equity securities:								
U.S. Large cap	\$80	\$54	\$—	\$134	\$65	\$55	\$—	\$120
U.S. Small cap	18	—	—	18	16	—	—	16
Non-U.S. ⁽²⁾	68	34	—	102	96	43	—	139
Debt securities:								
Cash and cash equivalents	11	33	—	44	22	41	—	63
Diversified ⁽³⁾	—	45	—	45	—	—	—	—
Other ⁽⁴⁾	—	2	239	241	—	2	258	260
Real estate, hedge funds, and other	—	203	332	535	—	306	341	647
Total assets in the fair value hierarchy	\$177	\$371	\$571	\$1,119	\$199	\$447	\$599	\$1,245
Common-collective trusts ⁽⁵⁾	—	—	—	461	—	—	—	475
Total Investments	\$177	\$371	\$571	\$1,580	\$199	\$447	\$599	\$1,720

(1) These levels refer to the accounting guidance on fair value measurement described in Note 11, "Financial Instruments, Hedging Activities and Fair Value Measurements."

(2) This category 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) This category primarily represents insurance contracts.

(5) Certain investments that are measured at net asset value per share (or its equivalent) are not required to be classified in the fair value hierarchy.

The change in the fair value of the Company's Level 3 pension assets for the years ended December 31, 2024 and 2023 was as follows:

(\$ in millions)	Real Estate	Other Debt Securities	Hedge Funds and Other Assets	Total
January 1, 2023	\$149	\$235	\$293	\$677
Realized gains/(losses)	4	25	(29)	—
Unrealized (losses)/gains	(19)	—	21	2
Transfers out, net	(17)	(9)	(89)	(115)
Foreign currency gains	2	7	26	35
December 31, 2023	\$119	\$258	\$222	\$599
Realized gains	2	9	2	13
Unrealized (losses)/gains	(5)	—	5	—
Transfers (in)/out, net	(28)	(12)	19	(21)
Foreign currency losses	(1)	(16)	(3)	(20)
December 31, 2024	\$87	\$239	\$245	\$571

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 primarily consist of insurance contracts, which are valued externally 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 funds and debt obligations of non-investment grade borrowers.

Other Plans

Employee savings plans

PPG's Employee Savings Plans ("Savings Plans") cover substantially all employees in the U.S., Puerto Rico and Canada. The Company makes matching contributions to the Savings Plans, at management's discretion, based upon participants' savings, subject to certain limitations. For most participants, Company-matching contributions are established each year at the discretion of the Company and are applied to participant accounts up to a maximum of 6% of eligible participant compensation. The Company-matching contribution remained at 100% for 2024.

Compensation expense and cash contributions related to the Company match of participant contributions to the Savings Plans for 2024, 2023, and 2022 totaled \$52 million, \$49 million and \$44 million, respectively. A portion of the Savings Plans qualifies under the Internal Revenue Code as an Employee Stock Ownership Plan. Accordingly, dividends received on PPG shares held in that portion of the Savings Plans totaling \$11 million in each of the years ended December 31, 2024, 2023 and 2022, respectively, are deductible for PPG's U.S. Federal tax purposes.

Defined contribution plans

Additionally, the Company has defined contribution plans for certain employees in the U.S., China, United Kingdom, Australia, Italy and other countries. The U.S. defined contribution plan is part of the Employee Savings Plan, and eligible employees receive a contribution equal to between 2% and 5% of annual compensation, based on age and years of service. For the years ended December 31, 2024, 2023 and 2022, the Company recognized expense for its defined contribution retirement plans of \$97 million, \$83 million and \$85 million, respectively. The Company's annual cash contributions to its defined contribution retirement plans approximated the expense recognized in each year.

Deferred compensation plan

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 by PPG at fair market value, and the changes in market value of these securities are also included in Income before income taxes in the consolidated statement of income. Trading occurs 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 \$25 million, \$23 million and \$23 million in 2024, 2023 and 2022, respectively. These amounts are included in Selling, general and administrative in the consolidated statements of income. The change in market value of the investment portfolio was income of \$23 million, \$21 million, and \$24 million in 2024, 2023 and 2022, respectively, and is also included in Selling, general and administrative in the consolidated statements of income.

The Company's obligations under this plan, which are included in Accounts payable and accrued liabilities and Other liabilities on the consolidated balance sheet, totaled \$125 million and \$113 million as of December 31, 2024 and 2023, respectively, and the investments in marketable securities, which are included in Investments and Other current assets on the accompanying consolidated balance sheet, were \$94 million and \$83 million as of December 31, 2024 and 2023, 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 may relate to contract, patent, environmental, product liability, antitrust, employment 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, property damage and certain other claims, 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 may contest coverage with respect to some claims in the future. 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 current or future litigation and claims are inherently unpredictable. However, management believes that, in the aggregate, the outcome of all lawsuits and claims involving PPG 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.

Asbestos Matters

As of December 31, 2024, the Company was aware of certain asbestos-related claims pending against the Company and certain of its subsidiaries. The Company is defending these asbestos-related claims vigorously. The asbestos-related claims consist of claims against the Company alleging:

- exposure to asbestos or asbestos-containing products manufactured, sold or distributed by the Company or its subsidiaries (“Products Claims”);
- personal injury caused by asbestos on premises presently or formerly owned, leased or occupied by the Company (“Premises Claims”); and
- asbestos-related claims against a subsidiary the Company acquired in 2013 (“Subsidiary Claims”).

The Company monitors and reviews the activity associated with its asbestos claims and evaluates, on a periodic basis, its estimated liability for such claims and all underlying assumptions to determine whether any adjustment to the reserves for these claims is required. Additionally, as a supplement to its periodic monitoring and review, the Company conducts discussions with counsel and engages valuation consultants to analyze its claims history and estimate the amount of the Company’s potential liability for asbestos-related claims.

As of December 31, 2024 and 2023, the Company’s asbestos-related reserves totaled \$45 million and \$48 million, respectively.

The Company believes that, based on presently available information, the total reserves for asbestos-related claims will be sufficient to encompass all of the Company’s current and estimable potential future asbestos liabilities. These reserves, which are included within Other liabilities on the accompanying consolidated balance sheets, involve significant management judgment and represent the Company’s current best estimate of its liability for these claims.

The amount reserved for asbestos-related claims by its nature is subject to many uncertainties that may change over time, including (i) the ultimate number of claims filed; (ii) whether closed, dismissed or dormant claims are reinstituted, reinstated or revived; (iii) the amounts required to resolve both currently known and future unknown claims; (iv) the amount of insurance, if any, available to cover such claims; (v) the unpredictable aspects of the tort system, including a changing trial docket and the jurisdictions in which trials are scheduled; (vi) the outcome of any trials, including potential judgments or jury verdicts; (vii) the lack of specific information in many cases concerning exposure for which the Company is allegedly responsible, and the claimants’ alleged diseases resulting from such exposure; and (viii) potential changes in applicable federal and/or state tort liability law. All of these factors may have a material effect upon future asbestos-related liability estimates. While the ultimate outcome of the Company’s asbestos litigation cannot be predicted with certainty, the Company believes that any financial exposure resulting from its asbestos-related claims will not have a material adverse effect on the Company’s consolidated financial position, liquidity or results of operations.

Environmental Matters

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 remediation at certain environmental sites progresses, PPG continues to refine its assumptions underlying the estimates of the expected future costs of its remediation programs. PPG’s ongoing evaluation may result in additional charges against income to adjust the reserves for these sites. In 2024, 2023 and 2022, certain charges have been recorded based on updated estimates to increase existing reserves for these sites. Certain other charges related to environmental remediation actions are recorded to expense as incurred.

As of December 31, 2024 and 2023, PPG had reserves for environmental contingencies associated with PPG’s former chromium manufacturing plant in Jersey City, New Jersey (“New Jersey Chrome”), glass and chemical manufacturing sites, and for other environmental contingencies, including current manufacturing locations and National Priority List sites. These reserves are reported as Accounts payable and accrued liabilities and Other liabilities in the accompanying consolidated balance sheet.

<i>Environmental Reserves</i>		
<i>(\$ in millions)</i>	<i>2024</i>	<i>2023</i>
New Jersey Chrome	\$58	\$53
Glass and chemical	51	54
Other	113	120
Total environmental reserves	\$222	\$227
<i>Current Portion</i>	<i>\$39</i>	<i>\$52</i>

Pretax charges against income for environmental remediation costs are included in Other charges/(income), net in the accompanying consolidated statement of income. The pretax charges and cash outlays related to such environmental remediation in 2024, 2023 and 2022, were as follows:

(\$ in millions)	2024	2023	2022
New Jersey Chrome	\$16	\$7	\$—
Glass and chemical	5	5	3
Other	9	23	10
Total pretax environmental charges	\$30	\$35	\$13
Cash outlays for environmental spending	\$28	\$31	\$73

The Company continues to analyze, assess and remediate the environmental issues associated with New Jersey Chrome as further discussed below. Excluding the charges related to New Jersey Chrome, pretax charges against income for environmental remediation have ranged between approximately \$5 million and \$40 million per year for the past 10 years.

Management expects cash outlays for environmental remediation costs to range from \$20 million to \$60 million annually from 2025 through 2029.

Actual future cash outlays may vary from expected future cash outlays and actual future costs may vary from accrued estimates due to the inherent uncertainties involved in estimating future environmental remediation costs, including possible technological, regulatory and enforcement developments, the results of environmental studies and other factors. 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

In June 2009, PPG entered into a settlement agreement with the New Jersey Department of Environmental Protection ("NJDEP") and Jersey City, New Jersey (which had asserted claims against PPG for lost tax revenue) which was in the form of a Partial Consent Judgement (the "Consent"). Under the Consent, PPG accepted sole responsibility for the remediation activities at its former chromium manufacturing location in Jersey City and a number of additional surrounding sites. Remediation of the New Jersey Chrome sites requires PPG to remediate soil and groundwater contaminated by hexavalent chromium, as well as perform certain other environmental remediation activities. The most significant assumptions underlying the estimate of remediation costs for all New Jersey Chrome sites relate to the extent and concentration of chromium in the soil.

PPG regularly evaluates the assessments of costs incurred to date versus current progress and the potential cost impacts of the most recent information, including the extent of impacted soils and groundwater, engineering, administrative and other associated costs. Based on these assessments, the reserve is adjusted accordingly. As of December 31, 2024 and 2023, PPG's reserve for remediation of all New Jersey Chrome sites was \$58 million and \$53 million, respectively. The major cost components of this liability are related to excavation of impacted soil, as well as groundwater remediation. These components each account for approximately 60% and 25% of the amount accrued at December 31, 2024, respectively.

There are multiple, future events yet to occur, including further remedy selection and design, remedy implementation and execution and applicable governmental agency or community organization approvals. Considerable uncertainty exists regarding the timing of these future events for the New Jersey Chrome sites. Further resolution of these events is expected to occur over the next several years. 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 matter will continue to be adjusted.

Remediation: Glass, Chemicals and Other Sites

Among other sites at which PPG is managing environmental liabilities, remedial actions are occurring at a chemical manufacturing site in Barberton, Ohio where PPG has completed a Facility Investigation and Corrective Measure Study under the United States Environmental Protection Agency's Resource Conservation and Recovery Act Corrective Action Program. PPG has also been addressing the impacts from a legacy plate glass manufacturing site in Kokomo, Indiana under the Voluntary Remediation Program of the Indiana Department of Environmental Management and a site associated with a legacy plate glass manufacturing site near Ford City, Pennsylvania under the Pennsylvania Land Recycling Program under the oversight of the Pennsylvania Department of Environmental Protection. PPG is currently performing additional investigation and remedial activities at these locations.

With respect to certain other waste sites, the financial condition of 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.

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 \$100 million to \$200 million. Such unreserved losses are reasonably possible but are not currently considered to be probable of occurrence. These reasonably possible unreserved losses relate to environmental matters at a number of sites, none of which are individually significant. 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 impact of evolving programs, such as natural resource damage claims, industrial site re-use initiatives and domestic and international 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.

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 ²/₃ per share; 1.2 billion shares are authorized.

	Common Stock	Treasury Stock	Shares Outstanding
January 1, 2022	581,146,136	(345,239,110)	235,907,026
Purchases	—	(1,269,830)	(1,269,830)
Issuances	—	436,730	436,730
December 31, 2022	581,146,136	(346,072,210)	235,073,926
Purchases	—	(673,638)	(673,638)
Issuances	—	810,566	810,566
December 31, 2023	581,146,136	(345,935,282)	235,210,854
Purchases	—	(5,838,606)	(5,838,606)
Issuances	—	555,635	555,635
December 31, 2024	581,146,136	(351,218,253)	229,927,883

Per share cash dividends paid were \$2.66, \$2.54 and \$2.42 in 2024, 2023 and 2022, respectively.

17. Accumulated Other Comprehensive Loss (AOCL)

(\$ in millions)	Foreign Currency Translation Adjustments ⁽¹⁾	Pension and Other Postretirement Benefit Adjustments, net of tax ⁽²⁾	Unrealized Gain on Derivatives, net of tax	Accumulated Other Comprehensive Loss
January 1, 2022	(\$1,988)	(\$763)	\$1	(\$2,750)
Current year deferrals to AOCL	(301)	175	—	(126)
Reclassifications from AOCL to net income	35	31	—	66
December 31, 2022	(\$2,254)	(\$557)	\$1	(\$2,810)
Current year deferrals to AOCL	475	(93)	—	382
Reclassifications from AOCL to net income	33	156	—	189
December 31, 2023	(\$1,746)	(\$494)	\$1	(\$2,239)
Current year deferrals to AOCL	(1,122)	15	—	(1,107)
Reclassifications from AOCL to net income	217	21	—	238
December 31, 2024	(\$2,651)	(\$458)	\$1	(\$3,108)

(1) The tax cost related to unrealized foreign currency translation adjustments on net investment hedges as of December 31, 2024, 2023 and 2022 was \$105 million, \$47 million and \$73 million, respectively.

(2) The tax (benefit)/cost related to the adjustment for pension and other postretirement benefits as of December 31, 2024, 2023 and 2022 was \$(12) million, \$20 million and \$83 million, respectively. Reclassifications from AOCL are included in the computation of net periodic benefit costs (see Note 14, "Employee Benefit Plans").

18. Other (Income)/Charges, Net

(\$ in millions)	2024	2023	2022
Environmental charges ⁽¹⁾	\$30	\$35	\$13
Pension and other postretirement benefit plans, non-service cost components	43	39	(10)
Share of net earnings of equity affiliates (See Note 5)	(20)	(21)	(25)
(Gain)/loss on sale of businesses ⁽²⁾	(129)	23	(4)
Argentina currency translation charge ⁽³⁾	110	—	—
Insurance recoveries ⁽⁴⁾	(4)	(16)	—
Royalty income	(10)	(10)	(8)
Other, net	(28)	30	(32)
Total Other (income)/charges, net	(\$8)	\$80	(\$66)

- (1) In both 2024 and 2023, PPG recognized charges of \$24 million related to environmental remediation costs at certain non-operating PPG manufacturing sites.
- (2) In the fourth quarter 2024, PPG recognized a \$129 million gain on the divestiture of the silicas products business. In 2023, PPG recognized a \$22 million loss on the divestitures of the European and Australian traffic solutions businesses.
- (3) In the fourth quarter 2024, PPG recognized accumulated foreign currency translation losses of \$110 million related to the Company's exit of its Argentina operations in connection with a restructuring program.
- (4) In the fourth quarter 2024 and the fourth quarter 2023, the Company received reimbursement for previously approved insurance claims under policies covering legacy asbestos-related matters. In the first quarter 2023, the Company received reimbursement under its insurance policies for damages incurred at a southern U.S. factory from a winter storm in 2020.

19. 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, 2016.

(\$ in millions)	2024	2023	2022
Total stock-based compensation	\$42	\$56	\$34
Income tax benefit recognized	\$9	\$11	\$8

Stock Options

PPG has outstanding stock option awards that have been granted under the PPG Amended Omnibus Plan. Under the PPG Amended Omnibus 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 36 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 fair value of stock options issued to employees is measured on the date of grant and is recognized as expense, net of estimated forfeitures, 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. 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. PPG applies an estimated forfeiture rate that is calculated based on historical activity.

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

	2024	2023	2022
Weighted average exercise price	\$142.65	\$130.17	\$151.87
Risk-free interest rate	4.3%	3.9%	2.0%
Expected life of option in years	6.5	6.5	6.5
Expected dividend yield	1.7%	1.7%	1.6%
Expected volatility	28.4%	27.8%	25.7%

The weighted average fair value of options granted was \$43.83 per share, \$38.55 per share and \$36.52 per share for the years ended December 31, 2024, 2023, and 2022, respectively.

<i>Stock Options Outstanding and Exercisable</i>	<i>Number of Shares</i>	<i>Weighted Average Exercise Price</i>	<i>Weighted Average Remaining Contractual Life (in years)</i>	<i>Intrinsic Value (in millions)</i>
Outstanding, January 1, 2024	3,318,763	\$122.00	5.7	
Granted	426,389	\$142.65		
Exercised	(202,146)	\$106.53		
Forfeited/Expired	(53,950)	\$139.19		
Outstanding, December 31, 2024	3,489,056	\$125.15	5.3	\$15
Vested or expected to vest, December 31, 2024	3,440,538	\$124.95	5.3	\$15
Exercisable, December 31, 2024	2,295,923	\$116.50	3.9	\$15

At December 31, 2024, unrecognized compensation cost related to outstanding stock options that have not yet vested totaled \$10 million. This cost is expected to be recognized as expense over a weighted average period of 0.4 years.

The following table presents stock option activity for the years ended December 31, 2024, 2023 and 2022:

<i>(\$ in millions)</i>	2024	2023	2022
Total intrinsic value of stock options exercised	\$6	\$24	\$12
Cash received from stock option exercises	\$24	\$55	\$12
Income tax benefit from the exercise of stock options	\$1	\$6	\$3
Total fair value of stock options vested	\$15	\$10	\$16

Restricted Stock Units ("RSUs")

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 common stock on the date of grant. Time-based RSUs generally 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 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 at the end of the three-year performance period if PPG meets the performance targets.

The amount paid upon vesting of performance-based RSUs may range from 0% to 200% of the original grant, based upon the level of earnings per share growth achieved and frequency with which the annual cash flow return on capital performance target is met over the three calendar year periods comprising the vesting period. Performance against the earnings per share growth and the cash flow return on capital goal is calculated annually, and the annual payout for each goal will be weighted equally over the three-year period.

<i>RSU Activity</i>	<i>Number of Shares</i>	<i>Weighted Average Grant Date Fair Value</i>
Outstanding, January 1, 2024	605,941	\$137.96
Granted	245,499	\$140.81
Vested	(179,621)	\$138.63
Forfeited	(27,563)	\$139.62
Outstanding, December 31, 2024	644,256	\$139.14
Vested or expected to vest, December 31, 2024	638,566	\$139.15

There was \$21 million of total unrecognized compensation cost related to unvested RSUs outstanding as of December 31, 2024. This cost is expected to be recognized as expense over a weighted average period of 1.5 years.

Contingent Share Grants

The Company also provides grants of contingent shares to selected key executives that may be earned based on PPG's total shareholder return ("TSR") 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. This comparison group represents the entire S&P 500 Index as it existed at the beginning of the performance period, excluding any companies that have been removed from the index because they ceased to be publicly traded. The payout is based on performance achieved during the three-year period calculated in accordance with the scale set forth in the plan agreement and may range from 0% to 200% of the initial grant. A payout of 100% is earned if the target performance is achieved. Contingent share awards earn dividend equivalents for the award period, which will be paid to participants or credited to the participants' deferred compensation plan accounts with the award payout at the end of the period based on the actual number of contingent shares 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 are classified 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.

The performance period for the TSR shares granted in 2022 ended on December 31, 2024, and PPG's total shareholder return was measured against that of the S&P 500 over the three-year period. PPG's ranking on this performance measure was at the 19th percentile, resulting in payouts at 0.0% of target. Total unrecognized compensation cost related to the outstanding TSR awards is \$0.

20. Revenue Recognition

The Company recognizes revenue when control of the promised goods or services is transferred to the customer and in amounts that the Company expects to collect. The timing of revenue recognition takes into consideration the various shipping terms applicable to the Company's sales. For most transactions, control passes in accordance with agreed upon delivery terms.

The Company delivers products to company-owned stores, home centers and other regional or national consumer retail outlets, paint dealers, concessionaires and independent distributors, company-owned distribution networks, and directly to manufacturing companies and retail customers. Each product delivered to a third party customer is considered to satisfy a performance obligation. Performance obligations generally occur at a point in time and are satisfied when control of the goods passes to the customer. The Company is entitled to collection of the sales price under normal credit terms in the regions in which it operates. Accounts receivable are recognized when there is an unconditional right to consideration. Payment terms vary from customer to customer, depending on creditworthiness, prior payment history and other considerations.

The Company also provides services by applying coatings to customers' manufactured parts and assembled products and by providing technical support to certain customers. Performance obligations are satisfied over time as critical milestones are met and as services are provided. PPG is entitled to payment as the services are rendered. For the years ended December 31, 2024, 2023 and 2022, service revenue constituted less than 5% of total revenue.

Net sales by segment and region for the years ended December 31, 2024, 2023 and 2022 were as follows:

(\$ in millions)	2024	2023	2022
Global Architectural Coatings			
United States and Canada	\$—	\$—	\$—
EMEA	2,357	2,408	2,436
Asia Pacific	232	237	244
Latin America	1,332	1,376	1,172
Total	\$3,921	\$4,021	\$3,852
Performance Coatings			
United States and Canada	\$2,981	\$2,902	\$2,668
EMEA	1,262	1,220	1,114
Asia Pacific	883	866	875
Latin America	111	144	135
Total	\$5,237	\$5,132	\$4,792
Industrial Coatings			
United States and Canada	\$2,371	\$2,583	\$2,678
EMEA	1,767	1,989	1,908
Asia Pacific	1,797	1,770	1,705
Latin America	752	747	679
Total	\$6,687	\$7,089	\$6,970
Total Net Sales⁽¹⁾			
United States and Canada ⁽²⁾	\$5,352	\$5,485	\$5,346
EMEA	5,386	5,617	5,458
Asia Pacific	2,912	2,873	2,824
Latin America	2,195	2,267	1,986
Total PPG	\$15,845	\$16,242	\$15,614

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

(2) Net sales recognized in the United States represented 32% of the Company's total Net sales for each of the years ended December 31, 2024, 2023 and 2022, respectively.

Allowance for Doubtful Accounts

All trade receivables are reported on the consolidated balance sheet at the outstanding principal amount adjusted for any allowance for doubtful accounts and any charge-offs. PPG provides an allowance for doubtful accounts to reduce trade receivables to their estimated net realizable value equal to the amount that is expected to be collected. This allowance is estimated based on historical collection experience, current regional economic and market conditions, the aging of accounts receivable, assessments of current creditworthiness of customers and forward-looking information. The use of forward-looking information is based on certain macroeconomic and microeconomic indicators including, but not limited to, regional business environment risk, political risk, and commercial and financing risks.

PPG reviews its allowance for doubtful accounts on a quarterly basis to ensure the estimate reflects regional risk trends as well as current and future global operating conditions.

The following table summarizes allowance for doubtful accounts activity for the years ended December 31, 2024 and 2023:

	Trade Receivables Allowance for Doubtful Accounts	
(\$ in millions)	2024	2023
January 1	\$23	\$29
Bad debt expense	17	15
Write-offs and recoveries of previously reserved trade receivables	(15)	(19)
Other	(2)	(2)
December 31	\$23	\$23

21. Reportable Business Segment Information

PPG is a multinational manufacturer with 10 operating segments (which the Company refers to as “strategic business units”) that are organized based on the Company’s major products lines. The operating segments are aggregated into reportable business segments based on their similar economic characteristics, including similar nature of products, production processes, end-use markets and methods of distribution.

Effective December 31, 2024, the Company revised the aggregation of its ten operating segments to present three reportable business segments: Global Architectural Coatings, Performance Coatings and Industrial Coatings. This expanded segmentation will provide investors with enhanced visibility as the Company drives growth and performance. Prior year amounts have been recast to conform to current year presentation. Additionally, as a result of the divestiture of the architectural coatings business in the United States and Canada during the fourth quarter 2024, the architectural coatings Americas and Asia Pacific operating segment was renamed to the architectural coatings Latin America and Asia Pacific operating segment.

The Global Architectural Coatings reportable business segment is comprised of the architectural coatings EMEA and architectural coatings Latin America and Asia Pacific operating segments. This reportable business segment primarily supplies paints, wood stains, adhesives, sealants and purchased sundries.

The Performance Coatings reportable business segment is comprised of the automotive refinish coatings, aerospace coatings, protective and marine coatings and traffic solutions operating segments. This reportable business segment primarily supplies a variety of coatings, solvents, adhesives, sealants, foams and finishes, along with pavement marking products, transparencies and paint films.

The Industrial Coatings reportable business segment is comprised of the automotive OEM coatings, industrial coatings, packaging coatings, and the specialty products operating segments. This reportable business segment primarily supplies a variety of protective and decorative coatings and finishes along with adhesives, sealants, metal pretreatment products, optical monomers and coatings, low-friction coatings, paint films and other specialty products.

Production facilities and sales for PPG’s reportable business segments are global and each segment continues to pursue opportunities to further develop their global reach. Each of the reportable business segments in which PPG is engaged is highly competitive. The diversification of product lines and the worldwide sales tend to minimize the impact on PPG’s business of changes in demand in a particular industry or in a particular geographic area.

PPG’s chief operating decision maker is its Executive Committee, which is comprised of the Chief Executive Officer, the Chief Financial Officer and General Counsel. The Executive Committee regularly reviews the discrete financial information of the Global Architectural Coatings, Performance Coatings and Industrial Coatings reportable business segments to assess performance and make decisions about the allocation of resources. The primary measure of profit or loss considered by the Executive Committee when evaluating reportable business segment performance is segment income, which is income before interest expense, interest income, 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 management and selling price and sales volume performance.

The accounting policies of the operating segments are the same as those described in the summary of significant accounting policies (see Note 1, “Summary of Significant Accounting Policies”). Corporate unallocated costs include the costs of corporate staff functions not directly associated with the operating segments, certain legal matters, net of related insurance recoveries, the cost of certain insurance and stock-based compensation programs and certain other unusual or non-recurring items. The service cost component of net periodic benefit cost related to current employees of each reportable business segment is allocated to that reportable business segment and the remaining portion of net periodic pension expense is included in Corporate unallocated costs.

Product movement between PPG’s reportable business segments 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 net sales or segment income of the reportable business segments.

(\$ in millions)	2024	2023	2022
Global Architectural Coatings			
Net sales to external customers	\$3,921	\$4,021	\$3,852
Cost of sales, exclusive of depreciation and amortization	1,904	2,022	2,096
Selling, general and administrative	1,186	1,170	1,058
Depreciation and amortization	104	101	102
Other ⁽¹⁾	49	55	38
Global Architectural Coatings segment income	\$678	\$673	\$558
Performance Coatings			
Net sales to external customers	\$5,237	\$5,132	\$4,792
Cost of sales, exclusive of depreciation and amortization	2,851	2,893	2,813
Selling, general and administrative	1,017	966	879
Depreciation and amortization	132	139	142
Other ⁽¹⁾	95	115	111
Performance Coatings segment income	\$1,142	\$1,019	\$847
Industrial Coatings			
Net sales to external customers	\$6,687	\$7,089	\$6,970
Cost of sales, exclusive of depreciation and amortization	4,498	4,759	5,062
Selling, general and administrative	838	870	786
Depreciation and amortization	206	213	207
Other ⁽¹⁾	252	279	269
Industrial Coatings segment income	\$893	\$968	\$646
Total Net Sales	\$15,845	\$16,242	\$15,614
Total Segment income	\$2,713	\$2,660	\$2,051
Corporate / Non-Segment Items			
Corporate / non-segment unallocated, exclusive of depreciation and amortization	(291)	(330)	(219)
Corporate / non-segment depreciation and amortization	(50)	(61)	(51)
Interest expense, net of interest income	(64)	(107)	(113)
Business restructuring-related costs, net ⁽²⁾	(377)	(41)	(72)
Portfolio optimization ⁽³⁾	(59)	(53)	(10)
Legacy environmental remediation charges, net ⁽⁴⁾	(24)	(24)	—
Insurance recoveries ⁽⁵⁾	4	16	—
Impairment and other related charges, net ⁽⁶⁾	—	(160)	(231)
Argentina currency devaluation losses ⁽⁷⁾	—	(20)	—
Pension settlement charge ⁽⁸⁾	—	(190)	—
Total Income from continuing operations before income taxes	\$1,852	\$1,690	\$1,355

(\$ in millions)	2024	2023	2022
Segment assets⁽⁹⁾			
Global Architectural Coatings	\$5,887	\$6,595	\$6,149
Performance Coatings	5,601	5,586	5,612
Industrial Coatings	5,230	5,643	5,802
Corporate / Non-Segment Items	2,715	3,823	3,181
Total	\$19,433	\$21,647	\$20,744
Expenditures for property (including business acquisitions)			
Global Architectural Coatings	\$160	\$93	\$86
Performance Coatings	166	217	136
Industrial Coatings	247	184	313
Corporate / Non-Segment Items	179	131	65
Total	\$752	\$625	\$600
Investment in equity affiliates			
Global Architectural Coatings	\$20	\$25	\$22
Performance Coatings	26	23	20
Industrial Coatings	20	18	15
Corporate / Non-Segment Items	75	75	77
Total	\$141	\$141	\$134
Share of net earnings of equity affiliates			
Global Architectural Coatings	\$3	\$1	\$3
Performance Coatings	5	6	4
Industrial Coatings	2	1	—
Corporate / Non-Segment Items	10	13	18
Total	\$20	\$21	\$25
(\$ in millions)	2024	2023	2022
Geographic Information			
Segment income			
United States and Canada	\$1,039	\$1,033	\$828
EMEA	617	679	505
Asia Pacific	476	430	332
Latin America	581	518	386
Total	\$2,713	\$2,660	\$2,051
Property, plant and equipment — net			
United States and Canada	\$1,502	\$1,365	\$1,200
EMEA	945	1,010	943
Asia Pacific	693	718	685
Latin America	324	357	306
Total	\$3,464	\$3,450	\$3,134

- (1) Other segment items for each reportable business segment includes research and development, net and other segment (income)/expense, net.
- (2) Business restructuring-related costs, net include business restructuring charges, offset by releases related to previously approved programs, which are included in Business restructuring, net on the consolidated statement of income, accelerated depreciation of certain assets, which is included in Depreciation on the consolidated statement of income, and other restructuring-related costs, which are included in Cost of sales, exclusive of depreciation and amortization and Selling, general and administrative on the consolidated statement of income. Business restructuring-related costs, net also includes the fourth quarter 2024 recognition of accumulated foreign currency translation losses of \$110 million related to the Company's exit of its Argentina operations in connection with a restructuring program, which are included in Other (income)/charges, net in the consolidated statement of income. No tax benefit was recorded on the fourth quarter 2024 recognition of the accumulated foreign currency translation losses.
- (3) Portfolio optimization includes gains and losses related to the sale of certain assets, which are included in Other (income)/charges, net on the consolidated statement of income, including the gain of \$129 million on the sale of the Company's silicas products business in the fourth quarter 2024, and the losses on the sales of the Company's traffic solutions business in Argentina in the second quarter 2024, the Company's European and Australian Traffic Solutions businesses in the fourth quarter 2023 and the Company's legacy industrial Russian operations in the third quarter 2023. Portfolio optimization includes advisory, legal, accounting, valuation, other professional or consulting fees and certain internal costs directly incurred to effect acquisitions, as well as similar fees and other costs to effect divestitures and other portfolio optimization exit actions. These costs are included in Selling, general and administrative expense on the consolidated statement of income. Portfolio optimization also includes an impairment charge of \$146 million recognized during the fourth quarter 2024 when the Company's remaining operations in Russia were classified as held for sale, which is included in Impairment and other related charges, net on the consolidated statement of income. No tax benefit was recorded on the fourth quarter 2024 impairment charge.
- (4) Legacy environmental remediation charges represent environmental remediation costs at certain non-operating PPG manufacturing sites. These charges are included in Other (income)/charges, net in the consolidated statement of income.

- (5) In the fourth quarter 2024 and the fourth quarter 2023, the Company received reimbursement for previously approved insurance claims under policies covering legacy asbestos-related matters. In the first quarter 2023, the Company received reimbursement under its insurance policies for damages incurred at a southern U.S. factory from a winter storm in 2020. These insurance recoveries are included in Other charges/(income), net on the consolidated statement of income.
- (6) In the fourth quarter 2023, the Company recorded impairment and other related charges due to a non-cash goodwill impairment recognized for the Traffic Solutions reporting unit as a result of its annual goodwill impairment test. The fair value of the Traffic Solutions reporting unit decreased primarily due to increases in the cost of capital (discount rate assumption) and declines in the reporting unit's long-term forecast driven by challenges at its operations in Argentina due to the highly inflationary environment and changes to the reporting unit's global footprint, including the fourth quarter 2023 divestiture of its European and Australian businesses. In 2022, the Company recorded impairment and other related charges due to the wind down of the Company's operations in Russia.
- (7) In December 2023, the central bank of Argentina adjusted the official foreign currency exchange rate for the Argentine peso, significantly devaluing the currency relative to the United States dollar. Argentina currency devaluation losses represent foreign currency translation losses recognized during December 2023 related to the devaluation of the Argentine peso, which is included in Other charges/(income), net on the consolidated statement of income.
- (8) In the first quarter 2023, PPG purchased group annuity contracts that transferred pension benefit obligations for certain of the Company's retirees in the U.S. to third-party insurance companies, resulting in a non-cash pension settlement charge.
- (9) Segment assets are the total assets used in the operation of each segment. Corporate assets principally include amounts recorded in Cash and cash equivalents, Deferred income taxes, and Property, plant and equipment, net on the consolidated balance sheet.

22. Supplier Finance Programs

PPG has certain voluntary supply chain finance programs with financial intermediaries which provide participating suppliers the option to be paid by the intermediary earlier than the original invoice due date. PPG's responsibility is limited to making payments on the terms originally negotiated with the suppliers, regardless of whether the intermediary pays the supplier in advance of the original due date. The range of payment terms PPG negotiates with suppliers are consistent, regardless of whether a supplier participates in a supply chain finance program. These amounts are included within Accounts payable and accrued liabilities on the accompanying consolidated balance sheet.

The rollforward of outstanding obligations confirmed as valid under the supplier finance programs for the twelve months ended December 31, 2024 is as follows:

(\$ in millions)	2024
January 1	\$286
Invoices confirmed	598
Confirmed invoices paid	(673)
Currency impact	40
December 31	\$251

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 over financial reporting.

There were no changes in the Company's internal control over financial reporting that occurred during the Company's quarter ended December 31, 2024 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

(c) Management report on internal control over financial reporting.

Refer to Management Report on page 38 for management's annual report on internal control over financial reporting. Refer to Report of Independent Registered Public Accounting Firm on pages 36-37 for PricewaterhouseCoopers LLP's audit report on the Company's internal control over financial reporting.

Item 9B. Other Information

Rule 10b5-1 Trading Plans

During the quarter ended December 31, 2024, none of the Company's directors or officers, as defined in Section 16 of the Securities Exchange Act of 1934, adopted or terminated a "Rule 10b5-1 trading arrangement" or a "non-Rule 10b5-1 trading arrangement," as each term is defined in Item 408(a) of Regulation S-K of the Securities Exchange Act of 1934.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

Not applicable.

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 2025 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 "Information About Our Executive Officers."

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.

We have adopted insider trading policies and procedures governing the purchase, sale, and other dispositions of securities of PPG by directors, officers, and employees that we believe are reasonably designed to promote compliance with insider trading laws, rules and regulations. Our insider trading policy states, among other things, that our directors, officers, and certain employees are prohibited from trading in such securities while in possession of material, nonpublic information. In addition, PPG's Global Code of Ethics prohibits all employees from trading PPG securities while in possession of material, nonpublic information. The foregoing summary of our insider trading policy and procedures does not purport to be complete and is qualified by reference to our Insider Trading Policy filed as an exhibit to this Annual Report on Form 10-K.

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 – Human Capital Management and 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:

	Page
Report of Independent Registered Public Accounting Firm (PCAOB ID 238)	36
Management Report	38
Consolidated Statement of Income for the Years Ended December 31, 2024, 2023 and 2022	39
Consolidated Statement of Comprehensive Income for the Years Ended December 31, 2024, 2023 and 2022	39
Consolidated Balance Sheet as of December 31, 2024 and 2023	40
Consolidated Statement of Shareholders' Equity for the Years Ended December 31, 2024, 2023 and 2022	41
Consolidated Statement of Cash Flows for the Years Ended December 31, 2024, 2023 and 2022	42
Notes to the Consolidated Financial Statements	44

(a)(2) Consolidated Financial Statement Schedule for the years ended December 31, 2024, 2023 and 2022.

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, 2024, 2023, and 2022

<i>(\$ in millions)</i>	<i>Balance at Beginning of Year</i>	<i>Charged to Costs and Expenses(1)</i>	<i>Deductions(1, 2)</i>	<i>Balance at End of Year</i>
2024	\$23	\$17	(\$17)	\$23
2023	\$29	\$15	(\$21)	\$23
2022	\$29	\$51	(\$51)	\$29

(1) In the first quarter 2022, PPG recorded a bad debt reserve of \$43 million associated with the adverse economic impacts of the Russian invasion of Ukraine. Subsequently, the Company released a portion of this previously established bad debt reserve due to the collection of certain trade receivables.

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

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.

Index to Exhibits

3	Statement with Respect to Shares Eliminating the Series A Junior Participating Preferred Stock, was filed as Exhibit 3.1 to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2014.
3.1	Restated Articles of Incorporation of PPG Industries, Inc., was filed as Exhibit 3.2 to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2014.
3.2	Articles of Amendment to the Restated Articles of Incorporation of PPG Industries, Inc., effective May 13, 2022, was filed as Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on May 13, 2022.
3.3	Articles of Amendment to the Restated Articles of Incorporation of PPG Industries, Inc., effective April 19, 2024, was filed as Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on April 23, 2024.
3.4	Amended and Restated Bylaws of PPG Industries, Inc., as amended on January 18, 2024, was filed as Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on January 22, 2024.
4	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.
4.1	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.
4.2	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.
4.3	Third Supplemental Indenture, dated as of August 3, 2012, was filed as Exhibit 4.4 to the Registrant's Current Report on Form 8-K filed on August 3, 2012.
4.4	Fifth Supplemental Indenture, dated as of March 13, 2015, between PPG Industries, Inc. and The Bank of New York Mellon Trust Company, N.A., as trustee, was filed as Exhibit 4.3 to the Registrant's Current Report on Form 8-K filed on March 13, 2015.
4.5	Sixth Supplemental Indenture, dated as of November 3, 2016, between PPG Industries, Inc. and The Bank of New York Mellon Trust Company, N.A., as trustee, was filed as Exhibit 4.3 to the Registrant's Current Report on Form 8-K filed on November 3, 2016.
4.6	Seventh Supplemental Indenture, dated as of February 27, 2018, between PPG Industries, Inc. and The Bank of New York Mellon Trust Company, N.A., as trustee, was filed as Exhibit 4.3 to the Registrant's Current Report on Form 8-K filed on February 27, 2018.
4.7	Eighth Supplemental Indenture, dated as of August 15, 2019, between PPG Industries, Inc. and The Bank of New York Mellon Trust Company, N.A., was filed as Exhibit 4.3 to the Registrant's Current Report on Form 8-K filed on August 15, 2019.
4.8	Ninth Supplemental Indenture, dated as of May 19, 2020, between PPG Industries, Inc. and The Bank of New York Mellon Trust Company, N.A., as trustee, was filed as Exhibit 4.3 to the Registrant's Current Report on Form 8-K filed on May 19, 2020.
4.9	Tenth Supplemental Indenture, dated as of March 4, 2021, between PPG Industries, Inc. and The Bank of New York Mellon Trust Company, N.A., as trustee, was filed as Exhibit 4.3 to the Registrant's Current Report on Form 8-K filed on March 4, 2021.
4.10	Eleventh Supplemental Indenture, dated as of May 25, 2022, between PPG Industries, Inc. and The Bank of New York Mellon Trust Company, N.A., as trustee, was filed as Exhibit 4.3 to the Registrant's Current Report on Form 8-K filed on May 25, 2022.
† 4.11	PPG Industries, Inc. Description of Securities.
* 10	PPG Industries, Inc. Nonqualified Retirement Plan, as amended and restated September 24, 2008, was filed as Exhibit 10 to the Registrant's Annual Report on Form 10-K for the period ended December 31, 2011.
* 10.1	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.
* 10.2	Form of Change in Control Employment Agreement entered into with executives on or after June 30, 2012 was filed as Exhibit 10.4 to the Registrant's Annual Report on Form 10-K for the period ended December 31, 2012.
* 10.3	Form of Change in Control Employment Agreement entered into with executives on or after January 1, 2014, was filed as Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q for the period ended March 31, 2014.
* 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 and restated effective January 1, 2025.
*	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 effective January 1, 2024.
*	10.8	PPG Industries, Inc. Amended and Restated Omnibus Incentive Plan, was filed as Annex B to the Registrant's Definitive Proxy Statement for its 2016 Annual Meeting of Shareholders filed on March 10, 2016.
†*	10.9	Form of Non-Qualified Stock Option Award Agreement.
†*	10.10	Form of TSR Share Award Agreement.
†*	10.11	Form of Performance-Based Restricted Stock Unit Award Agreement.
†*	10.12	Form of Time-Vested Restricted Stock Unit Award Agreement.
†*	10.13	Form of Time-Vested Restricted Stock Unit Award Agreement for Directors.
	10.14	Term Loan Credit Agreement, dated as of April 12, 2023, among PPG Industries, Inc., the banks, financial institutions and other institutional lenders party thereto and Banco Bilbao Vizcaya Argentaria, S.A. New York Branch, as administrative agent was filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on April 18, 2023.
†	10.15	Amendment No. 1, dated as of December 15, 2023, to Term Loan Credit Agreement, dated as of April 12, 2023, among PPG Industries, Inc., the banks, financial institutions and other institutional lenders party thereto and Banco Bilbao Vizcaya Argentaria, S.A. New York Branch, as administrative agent.
†	10.16	Amendment No. 2, dated as of December 6, 2024, to Term Loan Credit Agreement, dated as of April 12, 2023, among PPG Industries, Inc., the banks, financial institutions and other institutional lenders party thereto and Banco Bilbao Vizcaya Argentaria, S.A. New York Branch, as administrative agent.
	10.17	Five Year Credit Agreement dated as of July 27, 2023 among PPG Industries, Inc.; the several banks and financial institutions party thereto; JPMorgan Chase Bank, N.A., as administrative agent; JPMorgan Chase Bank, N.A., PNC Capital Markets LLC, BNP Paribas Securities Corp, and Citibank, N.A. as joint lead arrangers and joint bookrunners; PNC Bank, National Association, BNP Paribas, and Citibank, N.A., as co-syndication agents; and Banco Bilbao Vizcaya Argentaria, S.A. New York Branch, Banco Santander, S.A., New York Branch, Bank of America, N.A., Goldman Sachs Bank USA, HSBC Bank USA, National Association, Intesa Sanpaolo S.P.A., New York Branch, Societe Generale, Sumitomo Mitsui Banking Corporation, The Toronto-Dominion Bank, New York Branch, Unicredit Bank AG, New York Branch, U.S. Bank National Association, and Wells Fargo Bank, National Association, as co-documentation agents was filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on July 31, 2023.
†*	10.18	PPG Industries, Inc. Incentive Compensation Plan for Key Employees, as amended and restated on December 11, 2024.
†*	10.19	PPG Industries, Inc. Management Award Plan, as amended and restated on December 11, 2024.
†	10.20	Separation Agreement and Release, dated October 14, 2024, between PPG Industries, Inc. and Ramaprasad Vadlamannati.
†	10.21	Employment Agreement between PPG Industries Europe Sàrl and K. Henrik Bergstrom dated June 2, 2022.
†	13.1	Market Information, Dividends, Holders of Common Stock and Stock Performance Graph.
†	19.1	PPG Industries, Inc. Insider Trading Policy.
†	21	Subsidiaries of the Registrant.
†	23	Consent of PricewaterhouseCoopers LLP.
†	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.

- † 97.1 PPG Industries, Inc. Compensation Recovery Policy Adopted by the Board of Directors on July 20, 2023.
- †† 99.1 Recast Financial Tables

- ** 101.INS Inline XBRL Instance Document
- ** 101.SCH Inline XBRL Taxonomy Extension Schema Document
- ** 101.CAL Inline XBRL Taxonomy Extension Calculation Linkbase Document
- ** 101.DEF Inline XBRL Taxonomy Extension Definition Linkbase Document
- ** 101.LAB Inline XBRL Taxonomy Extension Label Linkbase Document
- ** 101.PRE Inline XBRL Taxonomy Extension Presentation Linkbase Document
- 104 Inline XBRL for the cover page of this Annual Report on Form 10-K, included in the Exhibit 101 Inline XBRL Document Set.

- † Filed herewith.
- †† Furnished 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 Inline XBRL (Extensible Business Reporting Language) as of and for the year ended December 31, 2024: (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.

Quarterly Financial Statements

Summarized quarterly financial information for the two most recent fiscal years is included as Exhibit 99.1 to this Form 10-K. This information has been recast to present the results of the architectural coatings business in the United States and Canada as discontinued operations, and to reflect the revised presentation of three reportable business segments.

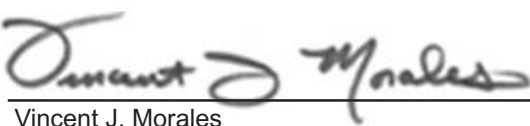
Item 16. Form 10-K Summary

None.

Signatures

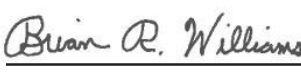
Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized on February 20, 2025.

PPG INDUSTRIES, INC.
(Registrant)

By: 
Vincent J. Morales
Senior Vice President and Chief Financial Officer (Principal Financial Officer and Duly Authorized Officer)

By: 
Brian R. Williams
Vice President and Controller (Principal Accounting Officer and Duly Authorized 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 20, 2025.

Signature	Capacity
 Timothy M. Knavish	Chairman and Chief Executive Officer
 Vincent J. Morales	Senior Vice President and Chief Financial Officer (Principal Financial Officer and Duly Authorized Officer)
 Brian R. Williams	Vice President and Controller (Principal Accounting Officer and Duly Authorized Officer)

K. L. Fortmann	Director
M. L. Healey	Director
G. R. Heminger	Director
M. W. Lamach	Director
K. A. Ligocki	Director
M. T. Nally	Director
G. Novo	Director
M. H. Richenhagen	Director
C. N. Roberts III	Director
C. R. Smith	Director

By: 
Vincent J. Morales, Attorney-in-Fact

Certifications

PRINCIPAL EXECUTIVE OFFICER CERTIFICATION

I, Timothy M. Knavish, 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.



Timothy M. Knavish

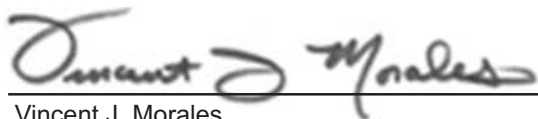
Chairman and Chief Executive Officer

February 20, 2025

PRINCIPAL FINANCIAL OFFICER CERTIFICATION

I, Vincent J. Morales, 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.



Vincent J. Morales

Senior Vice President and Chief Financial Officer

(Principal Financial Officer and Duly Authorized Officer)

February 20, 2025

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, 2024 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Timothy M. Knavish, 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.

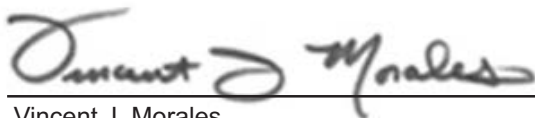


Timothy M. Knavish
Chairman and Chief Executive Officer
February 20, 2025

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, 2024 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Vincent J. Morales, Senior Vice President 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.



Vincent J. Morales
Senior Vice President and Chief Financial Officer
(Principal Financial Officer and Duly Authorized Officer)
February 20, 2025

Trademarks

The *PPG Logo*, *SEM* and *Teslin* are registered trademarks of PPG Industries Ohio, Inc.;

Glidden is a registered trademark of The Pittsburgh Paints Co.;

Taubmans and *White Knight* are registered trademarks of PPG Industries Australia Pty Ltd.;

Comex, *Meridian* and *Polyform* are registered trademarks of Consorcio Comex, S.A. de C.V.;

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

Sigma and *Histor* are registered trademarks of PPG Coatings Nederland B.V.;

Seigneurie, *Guittet*, *Peintures Gauthier* and *Ripolin* are registered trademarks of PPG – AC France;

Trilak is a registered trademark of PPG TRILAK Kft.;

Johnstone's and *Leyland* are registered trademarks of PPG Architectural Coatings UK Limited;

Primalex is a registered trademark of PPG Deco Czech a.s.;

Dekoral is a registered trademark of PPG Deco Polska Spolka z.o.o.;

Gori and *Bondex* are registered trademarks of PPG Coatings Danmark A/S;

Danke! is a registered trademark of PPG România S.A.;

Sprint is a registered trademark of Industria Chimica Reggiana I.C.R. Societa Per Azioni;

Ennis-Flint is a registered trademark of Ennis-Flint, Inc.;

Tikkurila is a registered trademark of Tikkurila Oyj;

All company names and third-party marks appearing in this report are property of their respective owners.

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2024 highlights

Financial



\$15.8 billion net sales from continuing operations

\$7.87 adjusted earnings per diluted share, an increase of 6% year over year

\$1.4 billion in cash and short-term investments

9 consecutive quarters of segment margin and segment EBITDA margin expansion

Sustainability



41% of sales from sustainably-advantaged products, allowing customers to reduce their environmental impact

13% reduction in scope 1 and 2 greenhouse gas emissions*

48% process waste reuse, recycle or recovery

22% reduction in water intensity in water scarce communities*

* From a 2019 baseline

Communities



\$18.4MM PPG and PPG Foundation global giving in 2024

\$11.5MM invested in education globally in 2024

58 COLORFUL COMMUNITIES® projects completed in **27** countries in 2024

31,000+ volunteer hours worldwide in 2024

Board of Directors

Kathy L. Fortmann

Chief Executive Officer, Amyris, Inc.

Melanie L. Healey

Former Group President,
North America,
The Procter & Gamble Company

Gary R. Heminger

Retired Chairman of the Board
and Chief Executive Officer,
Marathon Petroleum Corporation

Timothy M. Knavish

Chairman and Chief Executive Officer,
PPG

Michael W. Lamach

Retired Executive Chair and
Chief Executive Officer,
Trane Technologies plc

Kathleen A. Ligocki

Former Chief Executive Officer,
Agility Fuel Solutions, LLC

Michael T. Nally

CEO, Generate Biomedicines, Inc. and
CEO-Partner, Flagship Pioneering

Guillermo Novo

Chairman and Chief Executive Officer,
Ashland Inc.

Martin H. Richenhagen

Retired Chairman, President and
Chief Executive Officer,
AGCO Corporation

Christopher N. Roberts III

Senior Vice President, Global SH&E,
Ecolab Inc.

Catherine R. Smith

Chief Financial Officer and Treasurer,
Nordstrom, Inc.



As part of PPG's ongoing sustainability efforts, the 2024 Annual Report is printed on recyclable paper. To read the full version of the report with expanded content, please visit annualreport.ppg.com.

