POLYONE CORP
Form 10-K
February 19, 2019

United States
Securities and Exchange Commission

Washington, DC 20549
FORM 10-K
þ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2018
¨ 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 1-16091
PolyOne Corporation
(Exact name of registrant as specified in its charter)

Ohio	34-1730488
(State or other jurisdiction of incorporation or organization)	(IRS Employer Identification No.)
33587 Walker Road, Avon Lake, Ohio	44012 (Zip Code)
(Address of principal executive offices)	

Registrant’s telephone number, including area code (440) 930-1000
Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common Shares, par value $.01 per share	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 þ 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 þ
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 (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes þ No ¨
Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted 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 such files). Yes þ No ¨
Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405) is not contained herein, and will not be contained, to the best of registrant’s knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. þ
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.

Large accelerated filer þ Accelerated filer ¨ Non-accelerated filer ¨ Smaller reporting company ¨
Emerging growth company ¨

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

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ¨ No þ

The aggregate market value of the registrant's outstanding common shares held by non-affiliates on June 29, 2018, determined using a per share closing price on that date of $43.22, as quoted on the New York Stock Exchange, was $3.5 billion.

The number of shares of common shares outstanding as of February 1, 2019 was 77,722,398.

DOCUMENTS INCORPORATED BY REFERENCE

Part III of this Annual Report on Form 10-K incorporates by reference certain information from the registrant's definitive Proxy Statement with respect to the 2019 Annual Meeting of Shareholders.

POLYONE CORPORATION

PART I

CAUTIONARY NOTE ON FORWARD-LOOKING STATEMENTS

In this Annual Report on Form 10-K, statements that are not reported financial results or other historical information are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements give current expectations or forecasts of future events and are not guarantees of future performance. They are based on management's expectations that involve a number of business risks and uncertainties, any of which could cause actual results to differ materially from those expressed in or implied by the forward-looking statements. You can identify these statements by the fact that they do not relate strictly to historic or current facts. They use words such as "will," "anticipate," "estimate," "expect," "project," "intend," "plan," "believe," and other words and t similar meaning in connection with any discussion of future operating or financial condition, performance and/or sales. In particular, these include statements relating to future actions; prospective changes in raw material costs, product pricing or product demand; future performance; estimated capital expenditures; results of current and anticipated market conditions and market strategies; sales efforts; expenses; the outcome of contingencies such as legal proceedings and environmental liabilities; and financial results. Factors that could cause actual results to differ materially from those implied by these forward-looking statements include, but are not limited to:

- disruptions, uncertainty or volatility in the credit markets that could adversely impact the availability of credit already arranged and the availability and cost of credit in the future;
- the effect on foreign operations of currency fluctuations, tariffs and other political, economic and regulatory risks;
- changes in polymer consumption growth rates and laws and regulations regarding plastics in jurisdictions where we conduct business;
- changes in global industry capacity or in the rate at which anticipated changes in industry capacity come online;
- fluctuations in raw material prices, quality and supply, and in energy prices and supply;
- production outages or material costs associated with scheduled or unscheduled maintenance programs;
- unanticipated developments that could occur with respect to contingencies such as litigation and environmental matters;
- an inability to raise or sustain prices for products or services;
- an inability to achieve or delays in achieving or achievement of less than the anticipated financial benefit from initiatives related to acquisition and integration, working capital reductions, cost reductions and employee productivity goals;
- our ability to pay regular quarterly cash dividends and the amounts and timing of any future dividends;
- our ability to identify and evaluate acquisition targets and consummate and integrate acquisitions;
- information systems failures and cyberattacks; and
- other factors described in this Annual Report on Form 10-K under Item 1A, "Risk Factors."

We cannot guarantee that any forward-looking statement will be realized, although we believe we have been prudent in our plans and assumptions. Achievement of future results is subject to risks, uncertainties and assumptions. Should known or unknown risks or uncertainties materialize, or should underlying assumptions prove inaccurate, actual results could vary materially from those anticipated, estimated or projected. Investors should bear this in mind as they consider forward-looking statements. We undertake no obligation to publicly update forward-looking statements, whether as a result of new information, future events or otherwise, except as otherwise required by law. You are advised, however, to consult any further disclosures we make on related subjects in our reports on Forms 10-Q, 8-K and 10-K filed with the SEC. You should understand that it is not possible to predict or identify all risk factors. Consequently, you should not consider any such list to be a complete set of all potential risks or uncertainties.

ITEM 1. BUSINESS

Business Overview

We are a premier provider of specialized polymer materials, services and solutions with operations in specialty engineered materials, advanced composites, color and additive systems and polymer distribution. We are also a highly specialized developer and manufacturer of performance enhancing additives, liquid colorants and fluoropolymer and silicone colorants. Headquartered in Avon Lake, Ohio, we have employees at sales, manufacturing and distribution facilities in North America, South America, Europe and Asia. When used in this Annual Report on Form 10-K, the terms “we,” “us,” “our”, "PolyOne" and the “Company” mean PolyOne Corporation and its consolidated subsidiaries.

PolyOne was formed on August 31, 2000 from the consolidation of The Geon Company (Geon) and M.A. Hanna Company (Hanna). Geon’s roots date back to 1927 when B.F.Goodrich scientist Waldo Semon produced the first usable vinyl polymer. In 1948, B.F.Goodrich created a vinyl plastic division that was subsequently spun off through a public offering in 1993, creating The Geon Company, a separate publicly-held company. Hanna was formed in 1885 as a privately-held company and became publicly-held in 1927. In the mid-1980s, Hanna began to divest its historic mining and shipping businesses to focus on polymers. Hanna purchased its first polymer company in 1986 and completed its 26th polymer company acquisition in 2000.

PolyOne Corporation is incorporated in Ohio and headquartered in Avon Lake, Ohio. We currently employ approximately 6,900 people and have 74 manufacturing sites and eight distribution facilities in North America, South America, Europe and Asia. We offer more than 35,000 polymer solutions to over 10,000 customers across the globe. In 2018, we had sales of $3.5 billion, approximately 43% of which were to customers outside the United States.

We are able to leverage our polymer and formulation expertise with our operational capabilities, creating an essential link between large chemical producers (our raw material suppliers) and designers, assemblers and processors of plastics (our customers). We believe that our role in the value chain continues to become more vital as our customers increasingly need reliable suppliers with global reach and increasingly effective material-based solutions to improve their products' appeal, performance, differentiation, profitability and competitive advantage. Our goal is to provide customers with specialized materials and solutions through our global footprint, broad market knowledge, technical expertise, product breadth, efficient manufacturing operations, a fully integrated information technology network and raw material procurement leverage. Our end markets include healthcare, transportation, packaging, consumer, building and construction, industrial, wire and cable, electrical and electronics and appliance.

Polymer Industry Overview

Polymers are a class of organic materials that are generally produced by converting natural gas or crude oil derivatives into monomers, such as ethylene, propylene, vinyl chloride and styrene. These monomers are then polymerized into chains called polymers, or plastic resin, such as polyethylene and polypropylene, in their most basic forms. Large petrochemical companies, including some in the petroleum industry, produce a majority of the monomers and base resins because they have direct access to the raw materials needed for production. Monomers make up the majority of the variable cost of manufacturing the base resin. As a result, the cost of a base resin tends to move in tandem with the industry market prices for monomers and the cost of raw materials and energy used during production. Resin selling prices can move in tandem with costs, but are largely driven by supply and demand.

Thermoplastic polymers make up a substantial majority of the resin market and are characterized by their ability to be reshaped repeatedly into new forms after heat and pressure are applied. Thermoplastics offer versatility and a wide range of applications. The major types of thermoplastics include polyethylene, polyvinyl chloride, polypropylene, polystyrene, polyester and a range of specialized engineering resins. Each type of thermoplastic has unique qualities and characteristics that make it appropriate for use in a particular application. Thermoplastic composites include these base resins, but are combined with a structural filler such as glass, wood, carbon or polymer fibers to enhance strength, rigidity and structure. Further performance can be delivered through an engineered thermoplastic sheet or thick film, which may incorporate more than one resin formulation or composite in multiple layers to impart additional properties such as gas barrier, structural integrity and lightweighting.

Thermoplastics and polymer composites are found in a variety of end-use products and markets, including packaging, building and construction, wire and cable, transportation, medical, furniture and furnishings, durable goods, outdoor high performance equipment, electrical and electronics, adhesives, inks and coatings. Each type of thermoplastic resin has unique characteristics (such as flexibility, strength or durability) suitable for use in a particular end-use application. The packaging industry requires plastics that help keep food fresh and free of contamination while providing a variety of options for product display, and offering advantages in terms of weight and user-friendliness. In the building and construction industry, plastic provides an economical and energy efficient replacement for other traditional materials in piping applications, siding, flooring, insulation, windows and doors, as well as structural and interior or decorative uses. In the wire and cable industry, thermoplastics and composites serve to protect by providing electrical insulation, flame resistance, durability, water resistance, water swelling and color coding to engineered fibers, yarn products, wire coatings and connectors. In the transportation industry, plastic has proven to be durable, lightweight and corrosion resistant while offering fuel savings, design flexibility and high performance, often replacing traditional materials such as metal and glass. In the medical industry, plastics are used for a vast array of devices and equipment, including blood and intravenous bags, medical tubing, catheters, lead replacement for radiation shielding, clamps and connectors to bed frames, curtains and sheeting, electronic enclosures and equipment housings. In the outdoor high performance industry, plastic applications are used for components and colorants for all terrain vehicles and reinforced polymers are used for various outdoor activities. In the electronics industry, plastic enclosures and connectors not only enhance safety through electrical insulation, but thermally and electrically conductive plastics provide heat transferring, cooling, antistatic, electrostatic discharge, and electromagnetic shielding performance for critical applications including integrated circuit chip packaging.

Various additives can be formulated with a base resin and further engineered into a structure to provide them with greater versatility and performance. Polymer formulations and structures have advantages over metals, wood, rubber, glass and other traditional materials, which have resulted in the replacement of these materials across a wide spectrum of applications that range from automobile parts to construction materials. These specialized polymers offer advantages compared to traditional materials that include design freedom, processability, weight reduction, chemical resistance, flame retardance and lower cost. Plastics are renowned for their durability, aesthetics, ease of handling and recyclability.

PolyOne Segments

We operate in four reportable segments: (1) Color, Additives and Inks; (2) Specialty Engineered Materials; (3) Performance Products and Solutions; and (4) Distribution. Previously, PolyOne had five reportable segments. However, as a result of the divestiture of the Designed Structures & Solutions segment (DSS) on July 19, 2017, we have removed DSS as a separate operating segment and its results are presented as a discontinued operation. Historical information has been retrospectively adjusted to reflect these changes. Please see Note 3, Discontinued Operations, to the accompanying consolidated financial statements for additional information.

Our segments are further detailed in Note 14, Segment Information, to the accompanying consolidated financial statements.

Competition

The production of plastics and the manufacturing of custom and proprietary formulated color and additives systems for the plastics industry are highly competitive. Competition is based on service, performance, product innovation, product recognition, speed, delivery, quality and price. The relative importance of these factors varies among our products and services. We believe that we are the largest independent formulator of plastic materials and producer of custom and proprietary color and additive systems in the United States and Europe, with a growing presence in Asia and South America. Our competitors range from large international companies with broad product offerings to local independent custom producers whose focus is a specific market niche or product offering.

The distribution of polymer resin is also highly competitive. Speed, service, reputation, product line, brand recognition, delivery, quality and price are the principal factors affecting competition. We compete against other national independent resin distributors in North America, along with other regional distributors. Growth in the polymer distribution market is highly correlated with growth in the base polymer resins market. We believe that the strength of our company name and reputation, the broad range of product offerings from our suppliers and our speed and responsiveness, combined with the quality of products and agility of our distribution network, allow us to compete effectively.

Raw Materials

The primary raw materials used by our manufacturing operations are polyolefin and other thermoplastic resins, polyvinyl chloride (PVC) resin, plasticizers, inorganic and organic pigments, all of which we believe are in adequate supply. Oxy Vinyls LP sells PVC to PolyOne under terms of a Resin Purchase Agreement that expires on December 31, 2020. The agreement requires PolyOne to purchase a majority of its annual requirements in North America from Oxy Vinyls LP. This contract provides a year-by-year evergreen renewal provision, unless terminated by either party with a one-year advance notice. We believe this contract assures the availability of adequate amounts of PVC resin. We also believe that the pricing under this contract provides PVC resin to PolyOne at a competitive price. See the discussion of risks associated with raw material supply and costs in Item 1A, “Risk Factors”.

Patents and Trademarks

We own and maintain a number of patents and trademarks in the United States and other key countries that contribute to our competitiveness in the markets we serve because they protect our inventions and product names against infringement by others. Patents exist for 20 years from filing date, and trademarks have an indefinite life based upon continued use. While we view our patents and trademarks to be valuable because of the broad scope of our products and services and brand recognition we enjoy, we do not believe that the loss or expiration of any single patent or trademark would have a material adverse effect on our results of operations, financial position or cash flows. Nevertheless, we have management processes designed to rigorously protect our inventions and trademarks.

Seasonality and Backlog

Sales of our products and services are seasonal as demand is generally slower in the first and fourth calendar quarters of the year. Because of the nature of our business, we do not believe that our backlog is a meaningful indicator of the level of our present or future business.

Working Capital Practices

Our products are generally manufactured with a short turnaround time, and the scheduling of manufacturing activities from customer orders generally includes enough lead time to assure delivery of an adequate supply of raw materials. We offer payment terms to our customers that are competitive. We generally allow our customers to return merchandise if pre-agreed quality standards or specifications are not met; however, we employ quality assurance practices that seek to minimize customer returns. Our customer returns are immaterial.

Significant Customers

No customer accounted for more than 3% of our consolidated revenues in 2018, and we do not believe we would suffer a material adverse effect to our consolidated financial statements if we were to lose any single customer.

Research and Development

We have substantial technology and development capabilities. Our efforts are largely devoted to developing new product formulations to satisfy defined market needs, by providing quality technical services to evaluate alternative raw materials, assuring the continued success of our products for customer applications, providing technology to improve our products, processes and applications and providing support to our manufacturing plants for cost reduction, productivity and quality improvement programs. We operate research and development centers that support our commercial development activities and manufacturing operations. These facilities are equipped with state-of-the-art analytical, synthesis, polymer characterization and testing equipment, along with pilot plants and polymer manufacturing operations that simulate specific production processes that allow us to rapidly translate new technologies into new products. Our investment in product research and development was $56.3 million in 2018, $52.1 million in 2017 and $50.4 million in 2016.

Methods of Distribution

We sell products primarily through direct sales personnel, distributors, including our Distribution segment, and commissioned sales agents. We primarily use truck carriers to transport our products to customers, although some customers pick up product at our manufacturing facilities or warehouses. We also ship some of our manufactured products to customers by rail.

Employees

In September 2018, the Great Place to Work Institute certified PolyOne as a Great Place to Work® in the U.S. based on a comparison of our employees' survey responses to those of employees at hundreds of other certified companies. We believe this reflects our commitment to better serving our associates, customers and communities, as well as further advancing our sustainability initiatives.

As of December 31, 2018, we employed approximately 6,600 people. Approximately 2% of our employees are represented by labor unions under collective bargaining agreements. We believe that relations with our employees are good, and we do not anticipate significant operating issues to occur as a result of current negotiations, or when we renegotiate collective bargaining agreements as they expire.

Environmental, Health and Safety

We are subject to various environmental laws and regulations that apply to the production, use and sale of chemicals, emissions into the air, discharges into waterways and other releases of materials into the environment and the generation, handling, storage, transportation, treatment and disposal of waste material. We endeavor to ensure the safe and lawful operation of our facilities in the manufacture and distribution of products, and we believe we are in material compliance with all applicable laws and regulations.

We maintain a disciplined environmental and occupational safety and health compliance program and conduct periodic internal and external regulatory audits at our facilities to identify and correct potential environmental exposures, including compliance matters and operational risk reduction opportunities. This effort can result in process or operational modifications, the installation of pollution control devices or cleaning up grounds or facilities. We believe that we are in material compliance with all applicable requirements.

We are strongly committed to safety as evidenced by our record-low injury incidence rate of 0.51 per 100 full-time workers per year in 2018 and 0.69 in 2017. The 2017 average injury incidence rate for our NAICS Code (326 Plastics and Rubber Products Manufacturing) was 3.9. We hold the American Chemistry Council's certification as a Responsible Care Management System® (RCMS) company. Certification was granted based on PolyOne's conformance to the RCMS's comprehensive environmental health, safety and security requirements. The RCMS certification affirms the importance PolyOne places on having world-class environmental, health, safety and security performance.

In January 2019, PolyOne, along with 29 other member companies located throughout North America, South America, Europe, Asia, Africa and the Middle East, joined together as founding members of the Alliance to End Plastic Waste (AEPW). The AEPW has thus far committed over $1.0 billion to help end plastic waste in the environment. The AEPW intends to develop and bring to scale solutions expected to minimize and manage plastic waste and promote solutions for used plastics by helping enable a circular economy. Our commitment to AEPW confirms the importance we place on being a global leader in all aspects of how we define sustainability: people, products, planet and performance.

In our operations, we must comply with product-related governmental law and regulations affecting the plastics industry generally and also with content-specific law, regulations and non-governmental standards. We believe that compliance with current governmental laws and regulations and with non-governmental content-specific standards will not have a material adverse effect on our financial position, results of operations or cash flows. The risk of additional costs and liabilities, however, is inherent in certain plant operations and certain products produced at these plants, as is the case with other companies in the plastics industry. Therefore, we may incur additional costs or liabilities in the future. Other developments, such as increasingly strict environmental, safety and health laws, regulations and related enforcement policies, including those under the Restrictions on the Use of Certain Hazardous Substances (RoHS), Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), the Dodd-Frank Wall Street Reform and Consumer Protection Act (covering Conflict Minerals), and the Consumer Product Safety Improvement Act, the implementation of additional content-specific standards, discovery of unknown conditions, and claims for damages to property, persons or natural resources resulting from plant emissions or products, could also result in additional costs or liabilities.

We incurred environmental expenses, before insurance recoveries, of $23.2 million in 2018, $14.8 million in 2017 and $8.3 million in 2016. The increase in environmental expense is primarily due to arbitration related to potential recoveries of previously incurred costs from third parties and insurance carriers. In 2018, 2017 and 2016, we recognized gains associated with insurance recoveries of $4.3 million, $9.1 million and $6.1 million, respectively, as reimbursement of previously incurred environmental remediation costs.

We also conduct investigations and remediation at certain of our active and inactive facilities and have assumed responsibility for the resulting environmental liabilities from operations at certain sites we, or our predecessors, formerly owned or operated. With respect to the former Goodrich Corporation Calvert City site, the United States Environmental Protection Agency (USEPA) issued its Record of Decision (ROD) in September 2018, selecting a remedy consistent with our accrual assumptions. In October 2018, the USEPA sent a letter to the respondents inviting negotiation of an agreement to conduct the remedial design; that negotiation is ongoing. Our current reserve of $103.3

million is consistent with the USEPA's estimates contained in the ROD. Environmental reserves for all other sites totaled $10.8 million as of December 31, 2018, covering probable future environmental expenditures that we can reasonably estimate related to previously contaminated sites, other third-party liabilities, alleged contributions of contamination and contractual indemnification of other parties. This amount represents our best estimate of probable costs, based upon the information and technology currently available. We continue to pursue available insurance coverage related to all matters and recognize gains as we receive reimbursement. No receivable has been recognized for future recoveries.

Refer to Note 11, Commitments and Contingencies, to the accompanying consolidated financial statements for further discussion of the Calvert City site and our overall environmental liability.

We expect 2019 cash environmental expenditures to approximate $10.0 million.

International Operations

Our international operations are subject to a variety of risks, including currency fluctuations and devaluations, exchange controls, currency restrictions and changes in local economic conditions. While the impact of these risks is difficult to predict, any one or more of them could adversely affect our future operations. For more information about the noted risks, see Item 1A. Risk Factors. For more information about our international operations, see Note 14, Segment Information, to the accompanying consolidated financial statements.

Where You Can Find Additional Information

Our principal executive offices are located at 33587 Walker Road, Avon Lake, Ohio 44012, and our telephone number is (440) 930-1000. We are subject to the information reporting requirements of the Exchange Act, and, in accordance with these requirements, we file annual, quarterly and other reports, proxy statements and other information with the SEC relating to our business, financial results and other matters. The reports, proxy statements and other information we file are available to the public at the SEC's website at http://www.sec.gov.

Our Internet address is www.polyone.com. Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act are available, free of charge, on our website (www.polyone.com, select Investors and then SEC Filings) or upon written request, as soon as reasonably practicable after we electronically file or furnish them to the SEC. The contents of our website are not part of this Annual Report on Form 10-K, and the reference to our website does not constitute incorporation by reference into this Form 10-K of the information contained at that site.

ITEM 1A. RISK FACTORS

The following are certain risk factors that could affect our business, results of operations, financial position or cash flows. These risk factors should be considered along with the forward-looking statements contained in this Annual Report on Form 10-K because these factors could cause our actual results or financial condition to differ materially from those projected in forward-looking statements. The following discussion is not an all-inclusive listing of risks, although we believe these are the more material risks that we face. If any of the following occur, our business, results of operations, financial position or cash flows could be adversely affected.

Demand for and supply of our products and services may be adversely affected by several factors, some of which we cannot predict or control.

Several factors may affect the demand for and supply of our products and services, including:

- economic downturns or other volatility in the significant end markets that we serve;
- product obsolescence or technological changes that unfavorably alter the value/cost proposition of our products and services;
- competition from existing and unforeseen polymer and non-polymer based products;
- declines in general economic conditions or reductions in industrial production growth rates, both domestically and globally, which could impact our customers' ability to pay amounts owed to us;
- changes in environmental regulations that would limit our ability to sell our products and services in specific markets;
- changes in laws and regulations regarding plastic materials; and
- inability to obtain raw materials or supply products to customers due to factors such as supplier work stoppages, supply shortages, plant outages or regulatory changes that may limit or prohibit overland transportation of certain hazardous materials and exogenous factors, like severe weather.

If any of these events occur, the demand for and supply of our products and services could suffer and potentially lead to asset impairment or otherwise adversely affect our results.

Our manufacturing operations are subject to hazards and other risks associated with polymer production and the related storage and transportation of raw materials, products and wastes.

The occurrence of an operating problem at our facilities (e.g., an explosion, mechanical failure, chemical spills or discharges) may have a material adverse effect on the productivity and profitability of a particular manufacturing or distribution facility or on our operations as a whole, during and after the period of these operating difficulties. Operating problems may cause personal injury and/or loss of life, customer attrition and severe damage to or destruction of

property and equipment and environmental damage. We are subject to present claims and potential future claims with respect to workplace exposure, workers' compensation and other matters. Our property and casualty insurance, which we believe is of the types and in the amounts that are customary for the industry, may not fully insure us against all potential hazards that are incident to our business or otherwise could occur.

Environmental, health and safety laws and regulations impact our operations and financial statements.

Our operations on, and ownership of, real property are subject to environmental, health and safety laws and regulations at the national, state and local governmental levels (including, but not limited to, the Restrictions on the Use of Certain Hazardous Substances and the Consumer Product Safety Information Act of 2008). The nature of our business exposes us to compliance costs and risks of liability under these laws and regulations due to the production, storage, transportation, recycling or disposal and/or sale of materials that can cause contamination and other harm to the environment or personal injury if they are improperly handled and released. Environmental compliance requirements on us and our vendors may significantly increase the costs of these activities involving raw materials, energy, finished products and wastes. We may incur substantial costs, including fines, criminal or civil sanctions, damages, remediation costs or experience interruptions in our operations for violations of these laws.

Our operations could be adversely affected by various risks inherent in conducting operations worldwide.

Our operations are subject to risks; including, but not limited to, the following:

- changes in local government regulations and policies including, but not limited to duty or tariff restrictions, foreign currency exchange controls or monetary policy, repatriation of earnings, expropriation of property, investment limitations and tax policies;
- risks associated with the withdrawal of the United Kingdom (UK) from the European Union (EU), commonly known as "Brexit";
- political and economic instability and disruptions, including labor unrest, civil strife, acts of war, guerrilla activities, insurrection and terrorism;
- legislation that regulates the use of chemicals;
- disadvantages of competing against companies from countries that are not subject to U.S. laws and regulations, including the Foreign Corrupt Practices Act (FCPA) and the U.K. Bribery Act;
- compliance with international trade laws and regulations, including export control and economic sanctions;
- difficulties in staffing and managing multi-national operations;
- limitations on our ability to enforce legal rights and remedies;
- reduced protection of intellectual property rights;
- other risks arising out of foreign sovereignty over the areas where our operations are conducted; and
- increasingly complex laws and regulations concerning privacy and data security, including the European Union's General Data Protection Regulation.

On June 23, 2016, the UK held a referendum in which UK voters approved an exit from the EU. The June 2016 referendum result, and the subsequent commencement of the official withdrawal process by the UK government in March 2017, has created uncertainties affecting business operations in the UK and the EU. The long-term nature of the UK's relationship with the EU is unclear and there is considerable uncertainty when any relationship will be agreed and implemented. The long term effects of Brexit will depend on any agreements the UK makes to retain access to EU markets, either during a transitional period or more permanently. Given the lack of comparable precedent, it is unclear what financial, trade and legal implications the withdrawal of the UK from the EU would have and how such withdrawal would affect us. It is possible that the withdrawal could, among other things, affect the legal and regulatory environments to which our businesses are subject, impact trade between the UK and the EU through potential restrictions on the free movement of goods and labor between the UK and the EU, create economic and political uncertainty in the region, and create other impediments to our ability to transact within and between the UK and EU. Less than 2% of our total consolidated sales originated in the UK and shipped to the EU for the year ended December 31, 2018.

In addition, we could be adversely affected by violations of the FCPA, U.K Bribery Act and similar worldwide anti-bribery laws as well as export controls and economic sanction laws. The FCPA, U.K. Bribery Act and similar anti-bribery laws in other jurisdictions generally prohibit companies and their intermediaries from making improper payments to non-U.S. officials for the purpose of obtaining or retaining business. Our policies mandate compliance with these laws. We operate in many parts of the world that have experienced governmental corruption to some degree and, in certain circumstances, strict compliance with anti-bribery laws may conflict with local customs and practices. We cannot assure you that our internal controls and procedures will always protect us from the reckless or criminal acts committed by our employees or agents. If we are found to be liable for FCPA, U.K Bribery Act, export control or sanction violations, we could suffer from criminal or civil penalties or other sanctions, including loss of export privileges or authorization needed to conduct aspects of our international business, which could have a material adverse effect on our business.

Any of these risks could have an adverse effect on our international operations by reducing demand for our products.

Natural gas, electricity, fuel, logistics and raw material costs could cause volatility in our results.

The cost of our natural gas, electricity, fuel, logistics and raw materials, may not correlate with changes in the prices we receive for our products, either in the direction of the price change or in absolute magnitude. Natural gas and raw materials costs represent a substantial part of our manufacturing costs. Most of the raw materials we use are commodities and the price of each can fluctuate widely for a variety of reasons, including changes in availability because of major capacity additions or reductions or significant facility operating problems. Other external factors beyond our control can also cause fluctuations in raw materials prices, which could negatively impact demand for our products and cause volatility in our results.

We face competition from other companies and customers' in-house production.

We encounter competition in price, payment terms, delivery, service, performance, product innovation, product recognition and quality, depending on the product involved.

We expect that our competitors will continue to develop and introduce new and enhanced products, which could cause a decline in the market acceptance of our products. In addition, our competitors could cause a reduction in the selling prices of some of our products as a result of intensified price competition. Competitive pressures can also result in the loss of customers.

Increased information systems security threats and more sophisticated and targeted computer crime could pose a risk to our systems, networks and products, which could harm our business.

We depend on integrated information systems to conduct our business. Increased global information systems security threats and more sophisticated and targeted computer crime pose a risk to the security of our systems and networks and the confidentiality, availability and integrity of our data and communications. Our systems, networks and products may be vulnerable to advanced persistent threats or other types of system failures. Depending on their nature and scope, such threats and system failures could potentially lead to the compromising of confidential information and communications, improper use of our systems and networks, manipulation and destruction of data, defective products, production downtimes and operational disruptions, which in turn could cause customers to cancel orders or otherwise adversely affect our reputation, competitiveness and results of operations.

Disruptions in the global credit, financial and/or currency markets could limit our access to credit or otherwise harm our financial results, which could have a material adverse impact on our business.

Global credit and financial markets experience volatility, including volatility in security prices, liquidity and credit availability, declining valuations of certain investments and significant changes in the capital and organizational structures of certain financial institutions. Market conditions may limit our ability to access the capital necessary to grow and maintain our business. Accordingly, we may be forced to delay raising capital, issue shorter tenors than we prefer or pay unattractive interest rates, which could increase our interest expense, decrease our profitability and significantly reduce our financial flexibility.

We are exposed to fluctuations in foreign currency exchange rates. Any significant change in the value of the currencies of the countries in which we do business against the U.S. dollar, whether precipitated by governmental monetary policy or otherwise, could affect our ability to sell products competitively and control our cost structure, which could have a material adverse effect on our business, financial condition and results of operations. For additional detail related to this risk, see Item 7A, "Quantitative and Qualitative Disclosure About Market Risk."

The agreements governing our debt, including our revolving credit facility, term loan and other debt instruments, contain various covenants that limit our ability to take certain actions and also require us to meet financial maintenance tests, failure to comply with which could have a material adverse effect on us.

The agreements governing our senior secured revolving credit facility and our senior secured term loan, and the indentures and credit agreements governing other debt, contain a number of customary restrictive covenants that, among other things, limit our ability to: sell or otherwise transfer assets, including in a spin-off, incur additional debt or liens, consolidate or merge with any entity or transfer or sell all or substantially all of our assets, pay dividends or make certain other restricted payments, make investments, enter into transactions with affiliates, create dividend or other payment restrictions with respect to subsidiaries, make capital investments and alter the business we conduct.

In addition, certain of these agreements require us to comply under certain circumstances with specific financial tests, under which we are required to achieve certain or specific financial and operating results. Our ability to comply with these provisions may be affected by events beyond our control. A breach of any of these covenants would result in a default under such agreements and instruments, which in certain circumstances could be a default under all of these agreements and instruments. In the event of any default, our lenders could elect to declare all amounts borrowed under the agreements, together with accrued interest thereon, to be due and payable. In such event, we cannot assure that we would have sufficient assets to pay debt then outstanding under the agreements governing our debt.

Furthermore, certain of these agreements condition our ability to obtain additional borrowing capacity, engage in certain transactions or take certain other actions, on our achievement of certain or specific financial and operating results, although our failure to achieve such results would not result in a default under such agreements. Any future refinancing of the revolving credit facility or other debt may contain similar restrictive covenants.

To service our indebtedness, we will require a significant amount of cash. Our ability to generate cash depends on many factors beyond our control.

Our ability to pay interest on our debt and to satisfy our other debt obligations will depend in part upon our future financial and operating performance and that of our subsidiaries and upon our ability to renew or refinance borrowings. Prevailing economic conditions and financial, business, competitive, legislative, regulatory and other factors, many of which are beyond our control, will affect our ability to make these payments. While we believe that cash flow from our current level of operations, available cash and available borrowings under our revolving credit facilities provide adequate sources of liquidity, a significant drop in operating cash flow resulting from economic conditions, competition or other uncertainties beyond our control could create the need for alternative sources of liquidity. If we are unable to generate sufficient cash flow to meet our debt service obligations, we will have to pursue one or more alternatives, such as reducing or delaying capital or other expenditures, refinancing debt, selling assets, or raising equity capital.

We have a significant amount of goodwill, and any future goodwill impairment charges could adversely impact our results of operations.

As of December 31, 2018, we had goodwill of $650.3 million. The future occurrence of a potential indicator of impairment, such as a significant adverse change in business climate, an adverse action or assessment by a regulator, unanticipated competition, a material negative change in relationships with customers, strategic decisions made in response to economic or competitive conditions, loss of key personnel or a more-likely-than-not expectation that a reporting unit or a significant portion of a reporting unit will be sold or disposed of, could result in goodwill impairment charges, which could adversely impact our results of operations. We have recorded goodwill impairment charges in the past, and such charges materially impacted our historical results of operations and financial condition. Based on our 2018 goodwill impairment test, performed as of October 1, 2018, no reporting units were identified as being at risk of future impairment. For additional information, see Note 4, Goodwill and Intangible Assets, to the accompanying consolidated financial statements and “Critical Accounting Policies” included in Item 7, "Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

Headquartered in Avon Lake, Ohio we operate globally with principal locations consisting of 74 manufacturing sites and eight distribution facilities in North America, South America, Europe and Asia. We own the majority of our manufacturing sites and lease our distribution facilities. We believe that the quality and production capacity of our facilities is sufficient to maintain our competitive position for the foreseeable future. The following table identifies the principal facilities of our segments:

Performance Products and Solutions	Specialty Engineered Materials	Color, Additives and Inks		Distribution
1. Carson, California	1. Birmingham, Alabama	1. Glendale, Arizona	25. Tianjin, China	1. Rancho Cucamonga,
2. Terre Haute, Indiana	2. Englewood, Colorado	2. Phoenix, Arizona	26. Tabor, Czech Republic	California
3. Louisville, Kentucky	3. Montrose, Colorado	3. Fort Smith, Arkansas	27. Odkarby, Finland	2. Chicago, Illinois
4. Lockport, New York	4. North Haven, Connecticut	4. Bethel, Connecticut	28. Cergy, France	3. Eagan, Minnesota
5. Avon Lake, Ohio	5. McHenry, Illinois	5. Kennesaw, Georgia	29. Tossiat, France	4. Edison, New Jersey
6. Clinton, Tennessee	6. Winona, Minnesota	6. Elk Grove Village, Illinois	30. Diez, Germany	5. Statesville, North
7. Dyersburg, Tennessee	7. Hickory, North Carolina	7. La Porte, Indiana	31. Gyor, Hungary	Carolina
8. Pasadena, Texas	8. Avon Lake, Ohio	8. St. Louis, Missouri	32. Pune, India	6. Elyria, Ohio
9. Seabrook, Texas	9. Hatfield, Pennsylvania	9. Pineville, North Carolina	33. Milan, Italy	7. La Porte, Texas
10. Orangeville, Ontario,	10. Changzhou, China	10. Berea, Ohio	34. Toluca, Mexico	8. Brampton, Ontario,
Canada	11. Shenzhen, China	11. Massillon, Ohio	35. Eindhoven, Netherlands	Canada
11. St. Remi de Napierville,	12. Suzhou, China	12. North Baltimore, Ohio	36. Lima, Peru	(8 Distribution Facilities)
Quebec, Canada	14. Gaggenau, Germany	13. Norwalk, Ohio	37. Kutno, Poland	
12. Dongguan, China	15. Melle, Germany	14. Lehigh, Pennsylvania	38. Jeddah, Saudi Arabia	
13. Ramos Arizpe, Mexico	16. Leeuwarden, Netherlands	15. Mountain Top,	39. Alicante, Spain	
(13 Manufacturing Plants)	17. Barbastro, Spain	Pennsylvania	40. Barcelona, Spain	
	18. Istanbul, Turkey	16. Vonore, Tennessee	41. Pamplona, Spain	
	19. Leek, United Kingdom	17. Richland Hills, Texas	42. Bangkok, Thailand	
	Dyersburg, Tennessee (1)	18. Assesse, Belgium	43. Knowsley, United	
	Seabrook, Texas (1)	19. Itupeva, Brazil	Kingdom	
	Shanghai, China (2)	20. Novo Hamburgo, Brazil	Suwanee, Georgia (2)	
	Pune, India (1)	21. Pudong (Shanghai),	Shenzhen, China (1)	

(18 Manufacturing Plants)	China	Pamplona, Spain [2]
	22. & 23. Shanghai, China [3]	(43 Manufacturing Plants)
	24. Suzhou, China	

(1) Facility is not included in manufacturing plants total as it is also included as part of another segment.
(2) Facility is not included in manufacturing plants total as it is a design center/lab.
(3) There are two manufacturing plants located at Shanghai, China

ITEM 3. LEGAL PROCEEDINGS

Information regarding other legal proceedings can be found in Note 11, Commitments and Contingencies, to the accompanying consolidated financial statements and is incorporated by reference herein.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

EXECUTIVE OFFICERS OF THE REGISTRANT

Executive officers are elected by our Board of Directors to serve one-year terms. The following table lists the name of each person serving as an executive officer of the Company, their age, and position with the Company as of February 1, 2019.

Name	Age	Position
Robert M. Patterson	46	Chairman, President and Chief Executive Officer
Bradley C. Richardson	60	Executive Vice President, Chief Financial Officer
Mark D. Crist	60	Senior Vice President, President of Color, Additives and Inks
Michael A. Garratt	55	Senior Vice President, Chief Commercial Officer
J. Scott Horn	63	Senior Vice President, President of Distribution
Lisa K. Kunkle	50	Senior Vice President, General Counsel and Secretary
M. John Midea, Jr.	54	Senior Vice President, Global Operations and Process Improvement
Chris L. Pederson	52	Senior Vice President, President of Specialty Engineered Materials
Joel R. Rathbun	46	Senior Vice President, Mergers & Acquisitions
João José San Martin Neto	58	Senior Vice President, Chief Human Resources Officer
Donald K. Wiseman	51	Senior Vice President, President of Performance Products and Solutions

Robert M. Patterson: Chairman, President and Chief Executive Officer, May 2016 to date. President and Chief Executive Officer, May 2014 to May 2016. Executive Vice President and Chief Operating Officer, March 2012 to May 2014. Executive Vice President and Chief Financial Officer, January 2011 to March 2012. Senior Vice President and Chief Financial Officer, May 2008 to January 2011. Vice President and Treasurer of Novelis, Inc. (an aluminum rolled products manufacturer) from 2007 to May 2008. Vice President, Controller and Chief Accounting Officer of Novelis from 2006 to 2007. Mr. Patterson served as Vice President and Segment Chief Financial Officer, Thermal and Flow Technology Segments of SPX Corporation (a multi-industry manufacturer and developer) from 2005 to 2006 and as Vice President and Chief Financial Officer, Cooling Technologies and Services of SPX from 2004 to 2005.

Bradley C. Richardson: Executive Vice President, Chief Financial Officer, November 2013 to date. Executive Vice President, Chief Financial Officer of Diebold, Incorporated (an integrated self-service delivery manufacturer for the banking industry and security systems) from November 2009 through November 2013. Executive Vice President, Corporate Strategy and Chief Financial Officer at Modine Manufacturing Company (a manufacturer of thermal management systems and components) from 2003 to 2009. Vice President, Performance Management Planning and Control, Chief Financial Officer, Upstream, BP Amoco, London, (a producer of oil, natural gas, and petro chemicals) from 2000 to 2003. Mr. Richardson serves on the Board of Directors of Brady Corporation and is Chair of its Audit Committee.

Mark D. Crist: Senior Vice President, President of Color, Additives and Inks, July 2017 to date. Senior Vice President, President of Distribution, June 2014 to July 2017. Vice President, Global Key Accounts and Vice President of Asia January 2012 to May 2014. Global Commercial Director of Geon Performance Materials, June 2008 to December 2011. General Manager, Nalco Chemical Company Europe (a manufacturer of specialty chemicals, services and systems) from April 2006 to March 2008. General Manager, Nalco Chemical Company North America from June 2003 to March 2006.

Michael A. Garratt: Senior Vice President, Chief Commercial Officer, April 2016 to date. Senior Vice President, President of Performance Products and Solutions, September 2013 to April 2016. President, Marmon Utility (a manufacturer of medium-high voltage utility, subsea and down-hole power cables and molded insulator systems) from March 2011 to September 2013. Chief Operating Officer, Excel Polymers (a custom thermoset rubber formulator) from November 2009 to December 2010. Vice President and General Manager - Americas Compounding and Performance Additives, Excel Polymers from March 2009 to November 2009. Vice President and General Manager - Industrial and Consumer, Excel Polymers from December 2005 to March 2009. From April 1996 to June 2005, Mr. Garratt worked for DuPont Dow Elastomers, a joint venture of Dupont and Dow (global manufacturers of engineered thermoset rubber and thermoplastic elastomer materials) in market development and product management positions, culminating in a regional commercial leadership role for Europe, the Middle East and Africa.

J. Scott Horn: Senior Vice President, President of Distribution, July 2017 to date. General Manager, Distribution, 2000 to July 2017. Vice President of M.A. Hanna Resin Distribution from 1995 to 2000, when PolyOne was formed. President, Fiberchem, Inc. (a leading regional distributor of thermoplastic and thermoset resins) from 1991, upon acquisition of Fiberchem by PolyOne's predecessor, M.A. Hanna Company, to 1995. Mr. Horn worked in various roles of increasing responsibility at Fiberchem from 1981 to 1991.

Lisa K. Kunkle: Senior Vice President, General Counsel and Secretary, May 2015 to date. Vice President, General Counsel and Secretary, August 2007 to May 2015, Assistant General Counsel February 2007 to August 2007. Partner, Jones Day (a global law firm) from January 2006 to February 2007. Associate, Jones Day from August 1995 to January 2006.
M. John Midea, Jr.: Senior Vice President, Global Operations and Process Improvement, February 2015 to date. President and Chief Executive Officer, Resco Products (a refractory products company) from August 2012 to October 2014. President and Chief Operating Officer, Ennis Traffic Safety Solutions (a traffic safety and infrastructure company) from June 2008 to July 2012. Vice President, North American - General Industrial, Valspar Corporation (a manufacturer of paints and coatings) from June 2007 to May 2008. Vice President and General Manager, Power Coatings, Valspar Corporation from February 2002 to June 2007.
Chris L. Pederson: Senior Vice President, President of Specialty Engineered Materials, November 2018 to date. Vice President, Strategy, Hexcel Corporation (a global leader in advanced composites technology) from March 2017 to November 2018. Vice President, Aerospace of Cytec Engineered Materials (a producer of specialty bonding adhesives and composite materials) from November 2009 to February 2016. Vice President, Research and Development of Cytec from January 2004 to November 2009. Mr. Pederson served as a Senior Engineer at Boeing (a global aerospace company) from 1992 to 2001.
Joel R. Rathbun: Senior Vice President, Mergers and Acquisitions, January 2016 to date. General Manager, Specialty Engineered Materials North America, February 2013 to January 2016. Vice President, Mergers and Acquisitions, June 2011 to February 2013. Mr. Rathbun served as Senior Vice President, Mergers and Acquisitions, Moelis & Company (an American global independent investment bank) from January 2008 to June 2011. He also served as Executive Director, Mergers and Acquisitions of CIBC World Markets (an investment bank in the domestic and international equity and debt capital markets) from 2006 to 2008.
João José San Martin Neto: Senior Vice President, Chief Human Resources Officer, November 2016 to date. Senior Director, Human Resources, Color, Additives and Inks, February 2013 to November 2016. Group Global Director, Human Resources, Engineered Products and Solutions from November 2012 to February 2013. Vice President Human Resources, Alcoa Power and Propulsion (a business unit of Alcoa Inc. specializing in titanium and aluminum castings) from May 2009 to October 2012. Vice President Human Resources, Alcoa Electrical & Electronic Solutions (a business unit of Alcoa Inc. specializing in the design, development and production of electrical and electronic distribution systems) from August 2003 to April 2009.
Donald K. Wiseman: Senior Vice President, President of Performance Products and Solutions, April 2016 to date. General Manager of Geon Performance Materials, September 2015 to April 2016. Prior to PolyOne, he worked at Johns Manville (a manufacturer of insulation, roofing materials and engineered products), where he had responsibility for its Performance Materials business from December 2013 to September 2015. Managing Director, Cabot Microelectronics Corporation (a provider of chemical mechanical planarization solutions) from June 2012 to December 2013. Global Business Director, Cabot Microelectronics Corporation from June 2007 to June 2012. Vice President of Operations, Michelman (a manufacturer of advanced materials used in coatings, printing & packaging and industrial markets) from May 2005 to June 2007.

PART II

ITEM 5. MARKET FOR REGISTRANT’S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Our common shares, at $0.01 par value per share, are traded on the New York Stock Exchange under the symbol “POL”.

As of February 1, 2019, there were 1,781 holders of record of our common shares.

We currently have an authorized common share repurchase program. For the full year 2018, we repurchased 3.4 million common shares at a weighted average share price of $37.01. During the three months ended December 31, 2018, we repurchased 2.1 million common shares as shown in the table below.

Period	Total Number of Shares Purchased	Weighted Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Program	Maximum Number of Shares that May Yet be Purchased Under the Program(1)
October 1 to October 31	792,446	$ 31.76	792,446	4,444,140
November 1 to November 30	1,336,668	$ 33.55	1,336,668	3,107,472
December 1 to December 31	—	—	—	3,107,472
Total	2,129,114	$ 32.91	2,129,114	

(1) On August 18, 2008, we announced that our Board of Directors approved a common share repurchase program authorizing PolyOne to purchase up to 10.0 million of its common shares. On October 11, 2011 and October 23, 2012, we further announced that our Board of Directors had increased the common share repurchase authorization by an additional 5.3 million and 13.2 million, respectively. On May 16, 2016, we announced that we would increase our share buyback by 7.3 million to 10.0 million. As of December 31, 2018, approximately 3.1 million shares remained available for purchase under these authorizations. Purchases of common shares may be made by open market purchases or privately negotiated transactions and may be made pursuant to Rule 10b5-1 plans and accelerated share repurchases.

ITEM 6. SELECTED FINANCIAL DATA

Refer to Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," in Part II of this Annual Report on Form 10-K and the notes to our accompanying consolidated financial statements for additional information regarding the financial data presented below, including matters that might cause this data not to be indicative of our future financial condition, results of operations or cash flows.

(In millions, except per share data)	2018	2017	2016	2015	2014
Sales	$3,533.4	$3,229.9	$2,938.6	$2,928.8	$3,219.0
Operating income	273.7	272.8	267.7	258.4	200.5
Net income from continuing operations	160.8	173.6	166.2	148.5	74.7
Net income from continuing operations attributable to PolyOne shareholders	161.1	173.5	166.4	148.4	75.5
Cash dividends declared per common share	$0.720	$0.580	$0.495	$0.420	$0.340
Earnings per share from continuing operations attributable to PolyOne shareholders:					
Basic	$2.02	$2.13	$1.98	$1.69	$0.82
Diluted	$2.00	$2.11	$1.96	$1.67	$0.81
Total assets	$2,723.3	$2,705.3	$2,735.8	$2,620.3	$2,666.3
Long-term debt	$1,336.2	$1,276.4	$1,239.4	$1,127.6	$948.5

ITEM 7. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Overview

Management’s Discussion and Analysis of Financial Condition and Results of Operations (MD&A) is designed to provide information that is supplemental to, and should be read together with, our consolidated financial statements and the accompanying notes contained in this Annual Report on Form 10-K. Information in this Item 7 is intended to assist the reader in obtaining an understanding of our consolidated financial statements, the changes in certain key items in those financial statements from year to year, the primary factors that accounted for those changes, and any known trends or uncertainties that we are aware of that may have a material effect on our future performance, as well as how certain accounting principles affect our consolidated financial statements.

The following discussion contains forward-looking statements that reflect our plans, estimates and beliefs. Our actual results could differ materially from those discussed in these forward-looking statements. Factors that could cause or contribute to these differences include, but are not limited to, those discussed below and elsewhere in this Annual Report on Form 10-K, particularly in “Cautionary Note on Forward-Looking Statements” and Item 1A, “Risk Factors.”

Our Business

We are a premier provider of specialized polymer materials, services and solutions with operations in specialty engineered materials, advanced composites, color and additive systems and polymer distribution. We are also a highly specialized developer and manufacturer of performance enhancing additives, liquid colorants, and fluoropolymer and silicone colorants. Headquartered in Avon Lake, Ohio, with 2018 sales of $3.5 billion, we have manufacturing sites and distribution facilities in North America, South America, Europe and Asia. We currently employ approximately 6,900 people and offer more than 35,000 polymer solutions to over 10,000 customers across the globe. We provide value to our customers through our ability to link our knowledge of polymers and formulation technology with our manufacturing and supply chain capabilities to provide value-added solutions to designers, assemblers and processors of plastics (our customers).

Key Challenges

Our business faces macroeconomic exposures resulting from economic downturns, especially as it relates to cyclical markets such as building and construction, automotive and industrial. In addition, with 56% and 54% of our respective Color, Additives and Inks and Specialty Engineered Materials segments' sales outside the United States, we experience volatility related to foreign currency fluctuations, most significantly the Euro. Increasing profitability during periods of raw material price volatility is another challenge. Further, we strive to capitalize on the opportunity to accelerate development of products that meet a growing body of environmental laws and regulations such as lead and phthalate restrictions included in the Restrictions on the Use of Certain Hazardous Substances and the Consumer Product Safety Information Act of 2008.

Strategy and Key Trends

To address these challenges and achieve our vision, we have implemented a strategy with four core components: specialization, globalization, operational excellence and commercial excellence. Specialization differentiates us through products, services, technology and solutions that add value. Globalization allows us to service our customers with consistency wherever their operations might be around the world. Operational excellence empowers us to respond to the voice of the customer while focusing on continuous improvement. Commercial excellence enables us to deliver value to customers by supporting their growth and profitability with superior customer service.

In the short term, we will maintain our focus on sales growth with expanding margins, with a goal of offsetting weaker foreign currencies, raw material volatility and logistics cost inflation. Longer term, we will continue to focus on accelerating the launch of new products and collaborating with our customers to develop new and unique solutions for their benefit while focusing on our four cornerstones of sustainability - people, products, planet and performance to ensure the growth we achieve is sustainable for us and our customers. Capital expenditures will be focused primarily to support sales growth, investment in recent acquisitions, and other strategic investments. We also continue to consider acquisitions and other synergy opportunities that complement our core platforms. These actions will ensure that we continue to invest in our core capabilities and continue to support growth in key markets and product offerings.

We will continue our enterprise-wide Lean Six Sigma program directed at improving margin, profitability and cash flow by applying proven management techniques and strategies to key areas of the business, such as pricing, supply chain and operations management, productivity and quality. Long-term trends that currently provide opportunities to leverage our strategy include improving health and wellness, protecting the environment, globalizing and localizing and increasing energy efficiency. Examples of how our strategy supports these trends can be found in numerous initiatives:

active participation in the medical device market, leveraging our global footprint to deliver consistent solutions globally, lightweighting and metal replacement and development of solutions that respond to ever-changing market needs by offering alternatives to traditional materials.

Recent Developments

On January 2, 2019, the Company completed the acquisition of Fiber-Line, a global leader in polymer coated engineered fibers and composite materials, for $120.2 million, subject to a working capital adjustment and contingent earn-out consideration over a two-year period. The results of Fiber-Line will be reported in the Specialty Engineered Materials segment. The acquisition of Fiber-Line is expected to add approximately $100.0 million in annual sales.

On May 31, 2018, the Company acquired the outstanding shares of PlastiComp, Inc. (PlastiComp) for total consideration of $43.6 million, net of cash acquired and inclusive of contingent earn-out consideration that will be finalized two years from the date of acquisition. Specializing in long-fiber reinforced thermoplastics, PlastiComp's results are reported in the Specialty Engineered Materials segment.

On January 2, 2018, the Company completed the acquisition of IQAP Masterbatch Group S.L. (IQAP), an innovative producer of specialty colorants and additives based in Spain with customers throughout Europe, for $74.9 million, net of cash acquired. The results of operations of IQAP are reported in the Color, Additives and Inks segment.

Highlights and Executive Summary

A summary of PolyOne’s sales, operating income, income from continuing operations net of income taxes and net income from continuing operations attributable to PolyOne common shareholders is included in the following table:

(In millions)	2018	2017	2016
Sales	$3,533.4	$3,229.9	$2,938.6
Operating income	273.7	272.8	267.7
Net income from continuing operations	160.8	173.6	166.2
Net income from continuing operations attributable to PolyOne common shareholders	161.1	173.5	166.4

Results of Operations

(Dollars in millions, except per share data)	2018	2017	2016	Variances — Favorable (Unfavorable) 2018 versus 2017 Change	% Change	2017 versus 2016 Change	% Change
Sales	$3,533.4	$3,229.9	$2,938.6	$303.5	9.4 %	$291.3	9.9 %
Cost of sales	2,788.5	2,511.0	2,262.2	(277.5)	(11.1)%	(248.8)	(11.0)%
Gross margin	744.9	718.9	676.4	26.0	3.6 %	42.5	6.3 %
Selling and administrative expense	471.2	446.1	408.7	(25.1)	(5.6)%	(37.4)	(9.2)%
Operating income	273.7	272.8	267.7	0.9	0.3 %	5.1	1.9 %
Interest expense, net	(62.8)	(60.8)	(59.7)	(2.0)	(3.3)%	(1.1)	(1.8)%
Debt extinguishment costs	(1.1)	(0.3)	(0.4)	(0.8)	nm	0.1	25.0 %
Other (expense) income, net	(12.6)	0.6	19.0	(13.2)	nm	(18.4)	96.8 %
Income from continuing operations before income taxes	197.2	212.3	226.6	(15.1)	(7.1)%	(14.3)	(6.3)%
Income tax expense	(36.4)	(38.7)	(60.4)	2.3	5.9 %	21.7	35.9 %
Net income from continuing operations	$160.8	$173.6	$166.2	$(12.8)	(7.4)%	$7.4	4.5 %
Loss from discontinued operations, net of income taxes	(1.3)	(231.2)	(1.2)	229.9	nm	(230.0)	nm
Net income (loss)	159.5	(57.6)	165.0	217.1	nm	(222.6)	(134.9)%
Net loss (income) attributable to noncontrolling interests	0.3	(0.1)	0.2	0.4	nm	0.3	150.0 %
Net income (loss) attributable to PolyOne common shareholders	$159.8	$(57.7)	$165.2	$217.5	nm	$(222.9)	(134.9)%

Earnings (loss) per share attributable to PolyOne common shareholders - basic:			
Continuing operations	$2.02	$2.13	$1.98
Discontinued operations	(0.01)	(2.84)	(0.01)
Total	$2.01	$(0.71)	$1.97

Earnings (loss) per share attributable to PolyOne common shareholders - diluted:			
Continuing operations	$2.00	$2.11	$1.96
Discontinued operations	(0.01)	(2.81)	(0.01)
Total	$1.99	$(0.70)	$1.95

nm - not meaningful

Sales

Sales increased $303.5 million, or 9.4%, in 2018 compared to 2017 primarily driven by organic sales growth of 5.3%, acquisitions of 3.3%, and favorable foreign exchange.

Sales increased $291.3 million, or 9.9%, in 2017 compared to 2016. Previous commercial investments drove organic sales growth of 6.6%, while acquisitions added 3.2%.

Cost of sales

As a percent of sales, cost of sales increased from 77.7% in 2017 to 78.9% in 2018 primarily as a result of raw material cost inflation and increased North American logistics costs.

As a percent of sales, cost of sales increased from 77.0% in 2016 to 77.7% in 2017 primarily as a result of raw material cost inflation.

Selling and administrative expense

These costs include selling, technology, administrative functions, corporate and general expenses. Selling and administrative expense in 2018 increased $25.1 million, primarily related to acquired businesses of $19.0 million, additional investment in commercial resources and $3.1 million of translation impact from foreign exchange.

Selling and administrative expense in 2017 increased $37.4 million, primarily related to $20.3 million in additional compensation and employee costs, which included our investment in commercial resources, as well as the impact from acquired businesses of $16.3 million.

Interest expense, net

Interest expense, net increased $2.0 million in 2018 compared to 2017 due to the impact of increased interest rates associated with our variable rate debt. Partially offsetting this increase was an interest rate reduction from amending the senior secured term loan in April to reduce the margin by 25 basis points and a $2.0 million favorable impact from the net investment hedges that were executed during 2018. See Note 15, Derivatives and Hedging, to the accompanying consolidated financial statements for detail on those hedges.

Interest expense, net increased $1.1 million in 2017 compared to 2016 due to the impact of increased interest rates associated with our variable rate debt and higher borrowings on our senior secured revolving credit facility. Partially offsetting these increases were interest rate reductions from amending the senior secured term loan in January 2017 and August 2017 to reduce the margin by 50 basis points and 25 basis points, respectively.

Other (expense) income, net

The Company has adopted Accounting Standards Update (ASU) 2017-07, Compensation - Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost on January 1, 2018. As a result, all components of net periodic benefit cost, except for service costs, are presented here. For further detail, see Note 10, Employee Benefit Plans, to the accompanying consolidated financial statements.

Debt extinguishment costs

Debt extinguishment costs of $1.1 million and $0.3 million for 2018 and 2017, respectively, includes the write-off of unamortized deferred financing costs and premium and consent payments in connection with the amendments of the senior secured term loan due 2026 and the senior secured revolving credit facility. See Note 5, Financing Arrangements, to the accompanying consolidated financial statements for additional information.

Income taxes

The Company is subject to taxation in the U.S. and numerous foreign jurisdictions. In determining the effective income tax rate, the Company analyzes various factors, including annual earnings, the laws of taxing jurisdictions in which the earnings were generated, the impact of state and local income taxes, the ability to use tax credits, net operating loss carryforwards, and available tax planning alternatives. Discrete items, including the effect of changes in tax laws, statutory tax rates, and valuation allowances or other non-recurring tax adjustments are reflected in the period in which they occur as an addition to, or reduction from, the income tax provision.

The Tax Cuts and Jobs Act (TCJA) was enacted on December 22, 2017. Among other things, effective in 2018, the TCJA reduced the U.S. federal corporate tax rate from 35% to 21%, exempts from U.S. federal income taxation dividends from certain foreign corporations to their U.S. shareholders, eliminates or reduces the effect of various federal tax deductions and creates new taxes on certain outbound payments and future foreign earnings generated after 2017. The TCJA required U.S. companies to pay a one-time transition tax on earnings of foreign corporate subsidiaries that were at least ten-percent owned by such U.S. companies and that were previously deferred from U.S. taxation.

As of December 31, 2018, we had completed our accounting for the tax effects of the enactment of the TCJA. In compliance with the one-year measurement period of the SEC's Staff Accounting Bulletin 118 (SAB 118) (issued December 22, 2017), we have finalized the effects of the TCJA on our existing deferred income tax balances, the one-time transition tax and, as discussed below, the impact the TCJA had on our indefinite reinvestment assertion pursuant to Accounting Principles Board 23 (APB 23). These finalized effects are included as components of income tax expense from continuing operations and are noted in the following tabular reconciliation.

As of December 31, 2018, we had completed our analysis with respect to the impact of the TCJA on our continuing assertion that our foreign earnings are indefinitely reinvested pursuant to APB 23 of Accounting Standards

Codification 740-30 (ASC 740-30). APB 23 provides guidance that US companies do not need to recognize tax effects on foreign earnings that are indefinitely reinvested. Our assertion has changed with respect to certain earnings of foreign affiliates in certain countries, which resulted in a recognition of tax liabilities. As of December 31, 2018, and noted in the Repatriation of certain foreign earnings from prior and current periods line in the following tabular reconciliation, we recognized an impact of 4.5% to our provision from a decision to repatriate prior year earnings after completing our analysis with respect to the TCJA and 1.2% pertaining to our decision to repatriate certain current year earnings. The rest of our foreign earnings are indefinitely reinvested pursuant to APB 23 and our policy. No deferred income taxes were recorded on outside basis differences as it was not practicable to determine the provision impact, if any, due to the complexities associated with this calculation.

We elected to recognize the resulting tax on the global intangible low-taxed income (GILTI) as a period expense in the period the tax is incurred.

A reconciliation of the applicable U.S. federal statutory tax rate to the consolidated effective income tax rate from continuing operations along with a description of significant or unusual reconciling items is included below.

	2018	2017	2016
Federal statutory income tax rate	21.0 %	35.0 %	35.0 %
Foreign tax rate differential	(5.8)	(11.1)	(5.6)
State and local tax, net	2.8	1.4	2.1
Tax on GILTI	1.5	—	—
Repatriation on certain foreign earnings from prior and current periods	5.7	0.4	—
Tax benefits on certain foreign investments	—	(6.8)	(1.9)
Domestic production activities deduction	(0.7)	(1.9)	(1.5)
Amended prior period tax returns and corresponding favorable audit adjustments	—	(3.6)	(1.3)
Net impact of uncertain tax positions	(0.4)	2.2	(1.1)
Changes in valuation allowances	(1.8)	0.7	0.4
U.S. tax reform, transition tax	0.8	11.3	—
U.S. tax reform, tax effect on net deferred tax liabilities	(3.5)	(9.5)	—
Other	(1.1)	0.1	0.6
Effective income tax rate	18.5 %	18.2 %	26.7 %

2018

The increase in the Repatriation on certain foreign earnings from prior and current periods line item resulted from a decision to repatriate certain foreign earnings from current and prior periods.

The benefit reflected in the Changes in valuation allowances line resulted from the realizability of a deferred tax asset for one of our foreign entities.

2017

The increase in the Foreign tax rate differential line item in the table above, compared to 2016, primarily related to a European legal entity realignment.

Tax benefits on certain foreign investments decreased the effective tax rate by 6.8% ($14.4 million) related to distributions from foreign subsidiaries with net foreign tax credits.

U.S. tax reform had a net unfavorable impact of 1.8% ($3.8 million) that included the unfavorable impact of the transition tax of 11.3% ($24.0 million) and was partially offset by the lower U.S. federal corporate tax rate reducing our net deferred tax liabilities, which reduced the tax rate by 9.5% ($20.2 million).

2016

Tax benefits on certain foreign investments decreased the effective tax rate by 1.9% ($4.3 million) primarily related to the dissolution of an entity.

The Net impact of uncertain tax positions decreased the effective tax rate by 1.1% ($2.5 million) and primarily related to the reversal of an uncertain tax position due to the expiration of the statute of limitations.

Segment Information

Operating income is the primary measure that is reported to our chief operating decision maker for purposes of making decisions about allocating resources to the segments and assessing their performance. Operating income at the segment level does not include: corporate general and administrative costs that are not allocated to segments; intersegment sales and profit eliminations; charges related to specific strategic initiatives, such as the consolidation of operations; restructuring activities, including employee separation costs resulting from personnel reduction programs, plant closure and phase-in costs; costs incurred directly in relation to acquisitions or divestitures; integration costs; executive separation agreements; share-based compensation costs; environmental remediation costs and other liabilities for facilities no longer owned or closed in prior years; actuarial gains and losses associated with our pension and post-retirement benefit plans; and certain other items that are not included in the measure of segment profit or loss that is reported to and reviewed by our chief operating decision maker. These costs are included in Corporate and eliminations.

PolyOne has four reportable segments: (1) Color, Additives and Inks; (2) Specialty Engineered Materials; (3) Performance Products and Solutions; and (4) Distribution.

Our segments are further discussed in Note 14, Segment Information, to the accompanying consolidated financial statements.

Sales and Operating Income — 2018 compared with 2017 and 2017 compared with 2016

				2018 versus 2017		2017 versus 2016	
(Dollars in millions)	2018	2017	2016	Change	% Change	Change	% Change
Sales:							
Color, Additives and Inks	$1,046.5	$893.2	$797.7	$153.3	17.2 %	$95.5	12.0 %
Specialty Engineered Materials	645.8	624.3	565.8	21.5	3.4 %	58.5	10.3 %
Performance Products and Solutions	735.8	720.6	668.5	15.2	2.1 %	52.1	7.8 %
Distribution	1,265.4	1,154.6	1,071.0	110.8	9.6 %	83.6	7.8 %
Corporate and eliminations	(160.1)	(162.8)	(164.4)	2.7	1.7 %	1.6	1.0 %
Sales	$3,533.4						