



TRINSEO™

20:16

Annual Report

It's Time....

Trinseo Products in Everyday Life

Our Commitment to You...

Trinseo (NYSE:TSE) is a global materials solutions provider and manufacturer of plastics, latex binders, and synthetic rubber.

We are focused on delivering innovative and sustainable solutions to help our customers create products that touch lives every day — products that are intrinsic to how we live our lives — across a wide range of customer oriented end-markets, including automotive, consumer electronics, appliances, medical devices, lighting, electrical, carpet, paper and board, building and construction, and high performance tires.

We collaborate with our customers to meet their most complex materials challenges.

Fast Facts about Trinseo

- \$3.7 Billion in revenue (2016)
- About 2,200 employees in 27 countries
- Global Footprint
 - 15 manufacturing sites
 - 10 R&D facilities
- Two Business Divisions:
 - Performance Materials (Latex Binders, Synthetic Rubber and Performance Plastics)
 - Basic Plastics & Feedstocks (Basic Plastics, Feedstocks, Americas Styrenics JV)

We believe that innovation through our technology and the creativity of our people power our success and the success of our customers.

People



Technology

Customers

People.

We are outstanding and diverse individuals, passionate about developing solutions to create shared value for our customers and Trinseo. We think deep and act fast.

Technology.

Trinseo was born out of one of the most storied technology companies in the world, with a six decade rich and proud history. We're proud of where we're from, but it's where we're going that excites us the most.

Customers.

The products, processes and solutions we develop enable our customers' innovations that benefit consumers all over the world. Our customers come to us when they need a challenge solved, and that's exactly what we do.



...and to The World

As a signatory to the Responsible Care® Guiding Principles, Trinseo is committed to:

- Continuously improving our company's performance related to health, safety, and the environment

- Communicating with stakeholders about our products and processes

- Managing our products in a safe and sustainable manner and encouraging our suppliers and customers to join our efforts

- Maintaining a robust Ethics and Compliance program

- Publishing an annual Sustainability and Corporate Social Responsibility Report and continuously reducing energy use, preserving health, enhancing safety, improving durability, and conserving natural resources





A Letter to Our Shareholders

Trinseo achieved strong fundamental performance across the company in 2016. I am proud of our record profitability across several metrics including net income, Adjusted EBITDA, and cash provided by operating activities in 2016. In addition, we had record performance in both our Performance Materials and Basic Plastics & Feedstocks divisions. These accomplishments are the result of the dedication, innovation, agility and focus on shareholder value.

We continue to deliver on our commitment to return capital to shareholders. Over the year we repurchased approximately 4.5 million shares, representing about 9% of our outstanding shares, and we initiated a quarterly cash dividend¹ in July. In total, we returned approximately \$242 million, or 87% of free cash flow, to shareholders in 2016.

A few of our 2016 full-year financial highlights include:

- Net Income of \$318 million and diluted EPS of \$6.70²
- Adjusted EPS of \$7.28³
- Adjusted EBITDA of \$611 million³
- Cash provided by operating activities of \$404 million; free cash flow of \$280 million⁴

In the third quarter Trinseo became a fully publicly traded company with improving trading liquidity. I am very proud of the work by all of the Trinseo employees who made this result possible.

In the fourth quarter of 2016, we modified our business segment reporting representing a step change to increase transparency to investors, specifically into the profitability and drivers of the Basic Plastics & Feedstocks division. We began reporting on Feedstocks, which is essentially our styrene monomer business, Basic Plastics, and Americas Styrenics as discrete reporting segments.

In addition, we announced several important growth initiatives during the year.

- Capacity expansion for SSBR to meet growing customer demand for specialty rubber to increase energy efficiency, safety and durability in performance tires.
- A new S-SBR pilot plant being built in Schkopau, Germany, to accelerate the development process from lab sample to commercialization of our high performance SSBR products.
- The construction of a modern R&D facility in Terneuzen, The Netherlands allowing greater collaboration and innovation for rapid response to customer and market needs.
- Our first ABS production site in Zhangjiagang, China, in support of our long-term commitment to supplying the automotive industry globally. This will also support regional ABS demand for applications in home appliances, office equipment, consumer electronics, toys, and more.

In 2016, Trinseo achieved its best safety results since the company's formation. Environmental Health and Safety and Responsible Care® are the foundation of our culture at Trinseo. They drive behavior and ideals that are fundamental to how we our work at Trinseo—with respect for individuals and environment through smart, empowered behaviors. Our yearly goal for all of Trinseo's facilities around the globe is zero on-the-job injuries, zero spills or losses of containment, and zero process safety incidents.

In 2016, 21 Trinseo manufacturing teams and three global R&D groups—covering 1,486 employees—earned the “Triple Zero Award” for this achievement. In September, Trinseo's Ulsan, Korea plant was recognized by the Korea government's Occupational Safety & Health Agency for 21 years as an “accident free business”. I am proud to lead a company that has safety ingrained into its culture.

We have been building on Trinseo's momentum since the IPO in June of 2014. At our first Investor Day in November, we discussed the Company's transformation, sustained profitability, growth opportunities, cash deployment, dividends and share buybacks, and outlook in detail. We displayed almost 100 end-use products that are made with Trinseo's plastics, synthetic rubber or latex binders. One comment we heard repeatedly from attendees was “I use this product and had no idea your products were in there.”

This report builds on the concept of “it's time” – not just Trinseo's time to grow as a company – but all times of the day, across the globe, that our material solutions are intrinsic to people's lives.

We help our customers meet their most complex materials challenges. Our plastics enable manufacturers to create LED lighting that is brighter and cooler and reduces energy consumption ... and medical devices that are impervious to the harsh chemical cleansers used in sterilization ... and electronics that are thinner and lighter... and cars that weigh less and use less fuel.

Our synthetic rubber allows tire manufacturers to make high-performance tires with improved wet grip and low rolling resistance for greater fuel efficiency.

And, our latex binders enable manufacturers to deliver tailored solutions that enhance packaging materials... strengthen building materials ... give carpet and artificial grass longevity ... improve shipping boxes ... and help highway infrastructure last longer.

I hope as you go about your daily routine, the examples we show in this report will allow you to see just how intrinsic our materials solutions are to your everyday life.

Looking to 2017, we continue to see strong business fundamentals across all segments and expect continued strong cash generation. We remain committed to balancing future growth initiatives with returning capital to shareholders. Our executive management team continues to explore strategic growth options – whether that's acquisitions, ventures or other types of strategic developments.

I am very proud of the company's performance in 2016. We remain focused on achieving strong 2017 results and delivering on our growth targets.

In closing, I would like to thank our shareholders, customers, suppliers and employees for their steadfast support of Trinseo. I am excited and believe 2017 will be another successful year, both financially and strategically, for Trinseo.

Christopher D. Pappas
CEO and President
May 2017

¹ The Company may distribute cash to shareholders under Luxembourg law via repayments of equity or an allocation of statutory profits. Since the Company began paying dividends, all distributions have been considered repayments of equity under Luxembourg law.

²⁻⁴ For a reconciliation of this non-GAAP measure, please see page 6.

2016 Financial Highlights

Highlights of Consolidated Financial Statements¹

\$Millions unless noted	2014	2015	2016
Sales Volume	5,210	5,339	5,296
Net Sales	5,128	3,972	3,717
Net Income	(67)	134	318
Wtd Average Shares - diluted (MM)	43	49	47
EPS (\$)	(1.55)	2.73	6.70
Adj EBITDA ²	262	492	611
Adj Net Income ³	8	225	346
Adj EPS (\$) ³	0.18	4.59	7.28
Cash provided by operating activities	117	353	404
Free Cash Flow ⁴	19	244	280

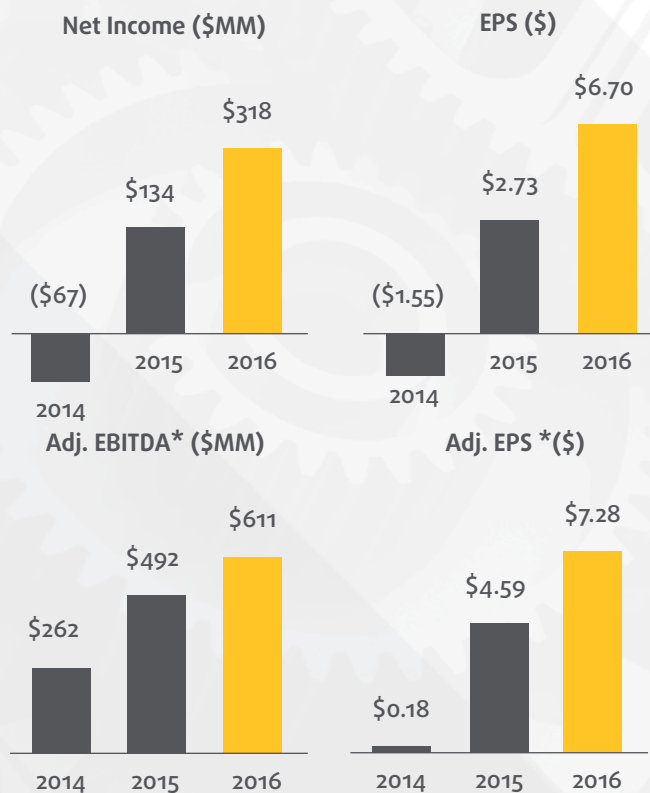
¹ See page 6 for a reconciliation of US GAAP to non-GAAP measures.

² For a definition of Adjusted EBITDA, as well as description of the reconciling items and the usefulness and purpose of this measure, please see pages 54-55 of this Annual Report.

³ For a definition of Adjusted Net Income and Adjusted EPS, as well as a description of the reconciling items and the usefulness and purpose of these measures, please see Exhibit 99.1 of the Company's Form 8-K filed on February 22, 2017.

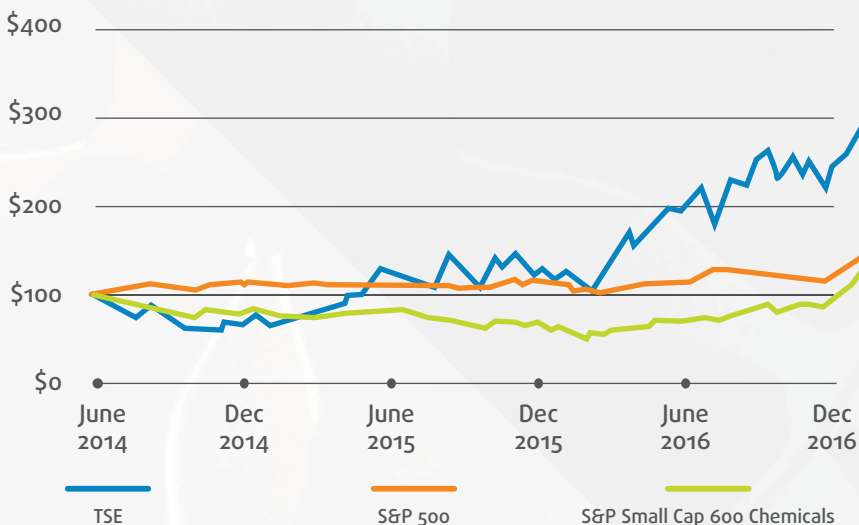
⁴ For a definition of Free Cash Flow, as well as a description of and the usefulness and purpose of these measures, please see pages 57-58 of this Annual Report.

Record Profitability in 2016



*See page 6 for reconciliation of non-GAAP measures.

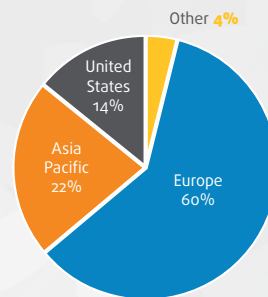
Stock performance Chart – Outpaced S&P 500 and S&P Small Cap Chemicals for second consecutive year



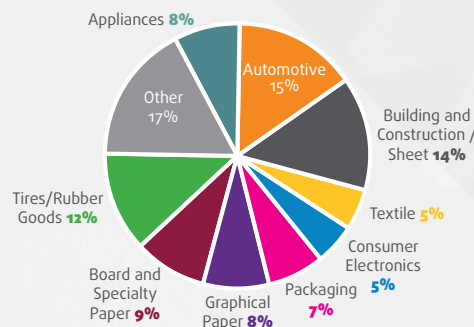
This stock performance chart reflects the comparative changes in the value from June 12, 2014, the first trading day of our ordinary shares on the NYSE, through December 31, 2016, assuming an initial investment of \$100 and the reinvestment of dividends or other cash distributions, if any, in (1) our ordinary shares, (2) the S&P 500 Index, and (3) the S&P Small Cap 600 Chemicals Index. The share price performance shown in the graph is not necessarily indicative of future price performance.

Diversified regions and end markets

2016 Net Sales by Geography



2016 Net Sales by End Market



US GAAP to non-GAAP Reconciliation

(in \$millions, unless noted)	2014	2015	2016
Net Income (Loss)	(67.3)	133.6	318.3
Interest expense, net	124.9	93.2	75.0
Provision for (benefit from) income taxes	19.7	70.2	87.0
Depreciation and amortization	103.7	96.8	96.4
EBITDA	181.0	393.8	576.7
Loss on extinguishment of long-term debt	7.4	95.2	-
Other items	38.4	2.2	(4.4)
Restructuring and other charges	10.0	0.8	23.5
Net (gains) / losses on dispositions of businesses and assets	(0.6)	-	15.1
Fees paid pursuant to advisory agreement	25.4	-	-
Adjusted EBITDA	261.6	492.0	610.9
Adjusted EBITDA to Adjusted Net Income	2014	2015	2016
Adjusted EBITDA	261.6	492.0	610.9
Interest expense, net	124.9	93.2	75.0
Provision for (benefit from) income taxes - Adjusted	29.4	84.9	94.6
Depreciation and amortization - Adjusted	99.6	89.3	95.4
Adjusted Net Income	7.7	224.6	345.9
Weighted Average Shares – Diluted (ooo)	43,476	48,970	47,478
Adjusted EPS - Diluted (\$)	0.18	4.59	7.28
Free Cash Flow Reconciliation	2014	2015	2016
Cash provided by operating activities	117.2	353.2	403.7
Capital expenditures	(98.6)	(109.3)	(123.9)
Free Cash Flow	18.6	243.9	279.8

Cautionary Note on Forward-Looking Statements. This report and shareholder letter contains forward-looking statements including, without limitation, statements concerning plans, objectives, goals, projections, strategies, future events or performance, and underlying assumptions and other statements, which are not statements of historical facts or guarantees or assurances of future performance. Forward-looking statements are based on current expectations and assumptions that are subject to risks and uncertainties which may cause actual results to differ materially from the forward-looking statements. Factors that might cause such a difference include, but are not limited to, those discussed in this Annual Report under Part I, Item 1A – “Risk Factors” and elsewhere in this report. We caution you against relying on any of these forward-looking statements. The forward-looking statements included in this report and shareholder letter are made only as of the date hereof. We undertake no obligation to update or revise any forward-looking statement as a result of new information, future events or otherwise, except as otherwise required by law.

Use of non-GAAP measures. In addition to using standard measures of performance and liquidity that are recognized in accordance with accounting principles generally accepted in the United States of America (“GAAP”), we use additional measures of income and liquidity excluding certain GAAP items (“non-GAAP measures”), such as Adjusted EBITDA, Adjusted Net Income, Adjusted EPS, and Free Cash Flow. We believe these measures are useful for investors and management in evaluating key business trends and performance each period. These measures are also used to manage our business and assess current period profitability, as well as to provide an appropriate basis to evaluate the effectiveness of our pricing strategies. These measures are not recognized in accordance with GAAP and should not be viewed as an alternative to GAAP measures of performance.

Company Highlights

January

- New thermo-moldable binders for carpets, safety belts and tire cords perform against safety, insulation and acoustic requirements, without compromising on style or comfort

February

- Expansion of custom medical compounding global production and fulfillment of its CALIBRE™ Polycarbonate Resins in Asia Pacific for medical market
- New EMERGE™ 8830 LT Advanced Resin for lighting market, an innovative transparent polycarbonate that balances the properties of transparency, thickness and ignition resistance

March

- Bain Capital Everest Manager Holding SCA sells 10,600,000 ordinary shares in first Secondary offering, of which Trinseo repurchases about 1,600,000 ordinary shares
- Trinseo receives Silver Medal level of achievement for Corporate Social Responsibility from EcoVadis, a leading sustainability assessor
- New PULSE™ XT line of PC-ABS products, lightweight and cost effective solutions for exterior automotive applications such as roof spoilers, side mirrors, mirror housings, roof bows, front grills, front bumper grills, and spoilers

April

- Trinseo begins open market repurchases of about 752,000 shares through June





May

- Bain Capital Everest Manager Holding SCA sells 8,000,000 ordinary shares in second Secondary offering



June

- Ground breaking of new facility in Terneuzen, The Netherlands, with modern R&D facilities, allowing greater collaboration and innovation for rapid response to customer and market needs
- Board of Directors authorizes \$100 million share repurchase program, underscoring the Company's confidence in its business portfolio and cash generation



July

- Publication of sixth Sustainability and Corporate Social Responsibility Report, demonstrating Trinseo's commitment to reducing its environmental footprint. Since its first report in 2011, the company achieved reductions in:
 - Electricity use, down 4%
 - Total chemical emissions, down 18%
 - Volatile organic chemical (VOC) emissions, down 50%
 - Waste, down 17% (over 2014)
- Trinseo redesigned external website www.trinseo.com for enhanced customer experience and increased engagement with an improved and more powerful product finder

August

- Third year in a row, Trinseo holds Global Volunteers Days Program. Giving back to the communities where we live and work to encourage employee volunteerism, cultivate morale and enhance team unity among employees
- Bain Capital Everest Manager Holding SCA sells 8,000,000 ordinary shares in third Secondary offering



September

- Bain Capital Everest Manager Holding SCA completes fourth and final sale of its remaining 10,669,567 shares. Trinseo reaches milestone as fully public company
- Korea's Occupational Safety & Health Agency (KOSHA) recognizes Trinseo's Ulsan plant for 21 years "Accident Free Business"



October

- New products and capacity expansion announced at K Show 2016, the world's premiere fair for the plastics and rubber industry:
 - Capacity expansion for Solution-Styrene Butadiene Rubber (S-SBR) to meet growing customer demand for specialty rubber to increase energy efficiency, safety and durability in performance tires
 - New S-SBR pilot plant being built in Schkopau, Germany, to quicken the development process from lab sample to commercialization, expected to be online in Q4 2017
 - Production of MAGNUM™ ABS Resin will begin at the Company's Zhangjiagang, China site in second half of 2017, reinforcing long-term commitment of automotive business to production. China ABS resins production will also support regional demand for applications in home appliances, office equipment, consumer electronics, toys, and more
 - New STYRON X-TECH™ 2175 Polystyrene resin for home appliance market that enables stronger, thinner walls in freezers and refrigerators and up to 10% material savings
 - Broadens medical portfolio with new STYRON™ 2678 MED Polystyrene Resin, a biocompatible grade ideal for clear packaging, diagnostic components, petri dishes and test kit housings
- Ceases manufacturing operations at Latex Binders Business at Livorno, Italy, to bring our production capacity more closely into balance with European demand for SB latex in paper coating applications
- Trinseo Synthetic Rubber business is awarded Supplier Award by Pirelli, for third time since Trinseo's formation in 2010



November

- First Investor Day, discussing Company's transformation, sustained profitability, growth opportunities, cash deployment, dividends and share buybacks, and outlook



December

- ICIS, the world's largest petrochemical market information provider, names Chris Pappas tenth on its list of "ICIS Top 40 Power Players 2016" in the chemical industry, increasing his position 29 spots from 2015 -- citing Trinseo more than doubling its stock price as a top performer from a shareholder value perspective in 2016
- Record EH&S Performance in 2016, with 21 manufacturing teams and three R&D teams attaining zero injuries, spills or safety incidents

Trinseo Products in Everyday Life



7:00AM

Durable, Stylish Products to Start your Day

Consumers today desire products with functionality, durability, quality and appealing aesthetics.

Trinseo's premium plastics, CALIBRE™ polycarbonate, TYRIL™ SAN, MAGNUM™ ABS resins, STYRON™ Polystyrene are used in various consumer goods applications, notably household goods and recreational equipment to meet the rigors of daily use.



Take a look at the sleek, transparent design of a water filter pitcher or the comfortable grip on a plastic travel cup

that also insulates hot and cold beverages. Trinseo provides solutions for durable and scratch-resistant luggage parts; protective bike helmets that perform under pressure; smooth polycarbonate floor mats for under a desk chair; decorative table tops and edge banding; and elegant, convenient disposable cutlery that will shine at any party.





8:00AM

Engineered Comfort for your Morning Commute

Trinseo's innovative high-performance automotive resins - including ABS, PC/ABS, polypropylene compounds and reinforced elastomers help automakers meet the increasing need for functional and aesthetic vehicle interiors.

These plastics solutions meet car manufacturers' demands for safe, comfortable, lighter weight and cost-effective interior automotive applications. Door panels, instrument panels, overhead consoles, seating, glove boxes, mid/floor consoles, pillars, and trims all are made with Trinseo products.

Mercedes Benz and BMW recently collaborated with Trinseo to create unpainted premium aesthetic interior components for their flagship vehicles. Car makers appreciate the high-end look and superior scratch resistance that help achieve high aesthetic performance for unpainted components in car interiors.

Trinseo designed a customized UV stabilized and colored PULSE™ GX50 UVB grade to create the matte high quality look for the interior of the BMW i3.



Mid/floor consoles - ABS and PC/ABS used for high functionality, aesthetics and light-weighting.

Overhead console - advanced plastics solutions with low density and high flow to support designs for comfortable ambiance, connected functionality, and style.



Instrument panel - LGF PP solutions, PC/ABS resins and polypropylene compounds to fulfill the complex requirements for a unique driving experience.

Pillars - plastics to enhance safety, performance, and the appearance of vehicle interior pillars.

Trim - globally available, innovative plastics with high flow and low density, enabling cost-effective processing, fewer CO2 emissions, and improved fuel efficiency for vehicles.

12:00PM

Packaging Solutions for Lunch on the Go

The food service industry has seen an increase for higher productivity, new convenient products, aesthetic packaging, disposable merchandise and safe protection of food products.

Trinseo's plastics are widely used for packaging because they are light and can easily conform to fit different packaging needs. The Company collaborates with customers to meet price pressures, differentiation, sustainability, and weight reduction - both for cost savings and sustainability requirements.

Trinseo's products are used in dairy, food service, deli and bakery, frozen/chilled and more applications.



You will see Trinseo plastics on your grocer's shelves in brown egg plastic containers to protect product from breaking; dairy containers, like yogurt cups, which must be both strong and flexible; and plastic salad or fruit containers to protect and preserve food. And Trinseo's latex binders are used for coating paperboard, also used to package food and consumer products.



3:00PM Performance Plastics Steer Functionality and Style

Cars are subjected to all kinds of conditions on the road, and the Honda Civic five door hatchback is no exception. Trinseo's Automotive resins provide the high-heat and high-impact properties that are vital for exterior applications.

Approved against the specifications of major OEMs, Trinseo's MAGNUM™ ABS Resins were selected for the Honda Civic upper and mid rear spoilers.

In addition to having all the right properties, MAGNUM™ ABS provides color stability and consistency, assuring the customer can match all exterior parts to a consistent color. MAGNUM™ ABS is also easy to fabricate, which keeps production costs down.



Not only was Trinseo MAGNUM™ ABS grade selected for the Honda spoilers, Trinseo was also asked to support the coloring of the workpiece. Trinseo's solution improves the compatibility between the polymer and masterbatch.

Following several trials, the Company's black masterbatch was selected to pair with high-heat MAGNUM™ ABS grade, a combination known for excellent paintability for several OEMs.





4:00PM

Latex Binders keep the Ball Rolling

In 2016, Trinseo experienced a soaring volume growth of 346% in the artificial grass market in China where its Latex Binders are used as the substrate underneath artificial grass.



Artificial grass, commonly applied in fields in universities, schools and sport facilities

as well as residential and landscaped spaces, is a rapidly growing application in China.

Subject to stringent government regulations on total volatile organic compounds (VOCs), Trinseo binders have the high quality and low VOCs to meet these requirements for indoor and outdoor spaces.



Trinseo's latex binders also possess

excellent wet binding strength and anti-aging properties, which are essential for artificial grass that will stand up to sports activities.

They are designed to be used in prolonged wet conditions such as in an artificial playing field environment where high temperature and rainfall are a day-to-day phenomenon. Typical end-use products include pre-coat and adhesive backings and ENVERSA™ Cushion Technology Backing.

Trinseo is among one of the unique few material suppliers in China capable of manufacturing latex binders in compliance with specific industry requirements for the European, Asia Pacific and the Middle East marketplaces.

5:30PM

Synthetic Rubber grades Drive Safer and more Sustainable Tires

To improve a car's fuel efficiency, drivers are demanding "green tires." With functionalized Solution Styrene Butadiene Rubber (S-SBR) grades from Trinseo, a driver can reduce fuel consumption up to three percent and reduce greenhouse gas emissions. Over a typical life span of a set of tires – about 22,000 miles – that could mean savings of up to 21 gallons of fuel compared to traditional tires.



Tires today have more technology than ever, and include more specialized rubber grades that meet consumer needs and environmental requirements. Trinseo's SPRINTAN™ Rubber offers tire producers excellent performance with improved wet and snow grip, high abrasion resistance, reduced tire heat buildup, and low rolling resistance.

The company is currently expanding its S-SBR production capacity to meet this growing demand.



6:00PM Latex Coated Corrugated Board Delivers your Shipped Goods

An increase in both global trade and online shopping is driving the demand for corrugated board, used for shipping, storage and/or in-store displays.

Trinseo works with each customer to understand desired performance characteristics, creating custom binder solutions, providing technical assistance throughout the lifetime of the product.

Trinseo's Multi-Layer Curtain Coating (MLCC) process applies extremely thin - or thick - and uniform layers simultaneously on paper or board all within one coating station.

In Europe and the US, select board manufacturers have already opted for MLCC to respond to the market push for white top liners (the outer layer of corrugated board), ideal for more sophisticated printing and design. MLCC has enabled corrugated packaging to grow into new markets, such as electronics and wine packaging.



Customers use Trinseo's products to improve brightness uniformity, reduce coat weight and improve print performance. We also offer advice to optimize glueability, stiffness and scoring, and enhance ink and varnish performance.

Trinseo is the only latex binder supplier with two state-of-the-art pilot coaters. Our state-of-the-art research and development centers and application laboratories ensure that we, along with our customers, stay close to innovation.



Polycarbonate blends offers a variety of benefits, compared to traditional materials such as metal, including:



Design freedom: resins can easily be fabricated into complex shapes offering designers endless possibilities for attractive and innovative lighting designs.



Lighter weight: The density of polycarbonate is far less than that of metal, resulting in much lighter weight parts for the same volume.



Cost savings: Expensive secondary processes for metals such as painting and coating can be eliminated, reducing system costs. In addition, parts can be consolidated, streamlining assembly.



Impact resistance: Transparent resins have far better impact resistance than glass, resulting in a reduced chance of breaking lenses and optics made from polycarbonate.



Aesthetics: Trinseo's specialized lighting grades can offer translucence that hides hot spots in LED lights, providing more attractive appearance while enabling energy efficiencies.

As more elements of consumer's everyday lives integrate with technology, such as turning on a front porch light from your mobile device, the multi-functional properties of Trinseo's Performance Plastics are paving the way to a more integrated way of life – from traditional electronics to improved lighting applications.

8:00PM

Performance Plastics Light the Way

Trinseo's Performance Plastics have opened doors in outdoor and area lighting applications.



**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, 2016

**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: 001-36473

Trinseo S.A.

(Exact name of registrant as specified in its charter)

Luxembourg
(State or other jurisdiction of
incorporation or organization)

N/A
(I.R.S. Employer Identification Number)

1000 Chesterbrook Boulevard, Suite 300
Berwyn, PA 19312
(Address of Principal Executive Offices)

(610) 240-3200
(Registrant's telephone number)

Securities registered pursuant to Section 12(b) of the Act:

<u>Title of Each Class</u>	<u>Name of Each Exchange on Which Registered</u>
Ordinary Shares, par value \$0.01 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 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 (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 No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

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

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

Large accelerated filer	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/> (Do not check if a smaller reporting company)	Smaller reporting company	<input type="checkbox"/>

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

As of February 24, 2017, there were 43,958,209 shares of the registrant's ordinary shares outstanding.

The aggregate market value of the voting and non-voting shares of the registrant held by non-affiliates of Trinseo S.A. computed by reference to the closing price of the registrant's common stock on the New York Stock Exchange as of June 30, 2016 was approximately \$1,181,459,401.

Documents Incorporated by Reference

Portions of the registrant's definitive Proxy Statement for the 2017 Annual General Meeting of Shareholders to be filed with the Securities and Exchange Commission pursuant to Regulation 14A not later than 120 days after the end of the fiscal year covered by this Form 10-K are incorporated by reference in Part III, Items 10-14 of this Form 10-K.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This annual report on Form 10-K (“Annual Report”) contains forward-looking statements including, without limitation, statements concerning plans, objectives, goals, projections, strategies, future events or performance, and underlying assumptions and other statements, which are not statements of historical facts. Forward looking statements may be identified by the use of words like “expect,” “anticipate,” “intend,” “forecast,” “outlook,” “will,” “may,” “might,” “potential,” “likely,” “target,” “plan,” “contemplate,” “seek,” “attempt,” “should,” “could,” “would” or expressions of similar meaning. Forward-looking statements reflect management’s evaluation of information currently available and are based on our current expectations and assumptions regarding our business, the economy and other future conditions. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict. Specific factors that may impact performance or other predictions of future actions have, in many but not all cases, been identified in connection with specific forward-looking statements. Our actual results may differ materially from those contemplated by the forward-looking statements. They are neither statements of historical fact nor guarantees or assurances of future performance. Important factors that could cause actual results to differ materially from those in the forward-looking statements include economic, business, competitive, market and regulatory conditions and the following:

- our current level of indebtedness;
- the restrictions on our operations due to our indebtedness;
- the stability of our joint ventures;
- any disruptions in production at our manufacturing facilities;
- volatility in costs or disruption in the supply of the raw materials or energy utilized for our products;
- the execution of capital projects in accordance with the Company’s plan, budget and forecasts;
- strategic acquisitions or divestitures affecting current operations;
- liabilities and lawsuits resulting from our products or operations;
- conditions in the global economy and capital markets;
- our continued reliance on our relationship with The Dow Chemical Company;
- changes to and our compliance with environmental, health and safety laws;
- failure to maintain an effective system of internal controls;
- changes to our tax rates or exposure to additional tax liabilities;
- changes in laws and regulations applicable to our business;
- fluctuations in currency exchange rates;
- our ability to receive distributions from our subsidiaries and joint ventures;
- the outcome of the ongoing investigation involving one of our joint ventures;
- the loss of customers;
- any inability to continue technological innovation and successful introduction of new products;
- any inability to protect our trademarks, patents or other intellectual property rights;
- our infringement on the intellectual property rights of others;
- data security breaches;
- restrictive labor laws, strikes, work stoppages or slowdowns;
- local business risks in different countries in which we operate;
- risks associated with our incorporation in Luxembourg;
- other risks described in the “Risk Factors” section of this Annual Report.

We derive many of our forward-looking statements from our operating budgets and forecasts, which are based upon many detailed assumptions. While we believe that our assumptions are reasonable, we caution that it is very difficult to predict the impact of known factors, and, it is impossible for us to anticipate all factors that could affect our

actual results. Important factors that could cause actual results to differ materially from our expectations, or cautionary statements, are disclosed under the sections entitled “Risk Factors”, “Management’s Discussion and Analysis of Financial Condition and Results of Operations”, and “Quantitative and Qualitative Disclosures About Market Risk” in this Annual Report. All written and oral forward-looking statements attributable to us, or persons acting on our behalf, are expressly qualified in their entirety by the cautionary statements as well as other cautionary statements that are made from time to time in our other public communications. You should evaluate all forward-looking statements made in this Annual Report in the context of these risks and uncertainties.

We caution you that the important factors referenced above may not contain all of the factors that are important to you. In addition, we cannot assure you that we will realize the results or developments we expect or anticipate or, even if substantially realized, that they will result in the consequences or affect us or our operations in the way we expect. The forward-looking statements included in this Annual Report are made only as of the date hereof. We undertake no obligation to publicly update or revise any forward-looking statement as a result of new information, future events or otherwise, except as otherwise required by law.

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Trinseo S.A.
Form 10-K Annual Report
For the Fiscal Year Ended December 31, 2016

Unless otherwise indicated or required by context, as used in this Annual Report, the term “Trinseo” refers to Trinseo S.A. (NYSE: TSE), a public limited liability company (société anonyme) existing under the laws of Luxembourg, and not its subsidiaries. The terms “Company,” “we,” “us” and “our” refer to Trinseo and its consolidated subsidiaries, taken as a consolidated entity and as required by context, may also include our business as owned by our predecessor, The Dow Chemical Company, for any dates prior to June 17, 2010. The terms “Trinseo Materials Operating S.C.A.” and “Trinseo Materials Finance, Inc.” refer to Trinseo’s indirect subsidiaries, Trinseo Materials Operating S.C.A., a Luxembourg partnership limited by shares incorporated under the laws of Luxembourg, and Trinseo Materials Finance, Inc., a Delaware corporation, and not their subsidiaries. All financial data provided in this Annual Report is the financial data of the Company, unless otherwise indicated.

Prior to our formation, our business was wholly owned by The Dow Chemical Company. We refer to our predecessor business as “the Styron business.” On June 17, 2010, investment funds advised or managed by affiliates of Bain Capital Partners, LP (“Bain Capital”) acquired the Styron business and Dow Europe Holding B.V., which we refer to as “Dow Europe,” or, together with other affiliates of The Dow Chemical Company, “Dow,” retained an ownership interest in the Styron business through an indirect ownership interest in us. We refer to our acquisition by Bain Capital as the “Acquisition”. During 2016, Bain Capital divested its entire ownership in the Company in a series of secondary offerings to the market.

Definitions of capitalized terms not defined herein appear in the notes to our consolidated financial statements. Specifically, refer to Note 10 in the consolidated financial statements for definitions of the Company’s debt facilities.

In the first quarter of 2015, we completed a rebranding process to change our operating name and legal entities from “Styron” to “Trinseo,” a name that we believe reflects our breadth as a company with broad global reach and a diverse portfolio of materials and technologies.

PART I

Item 1. Business

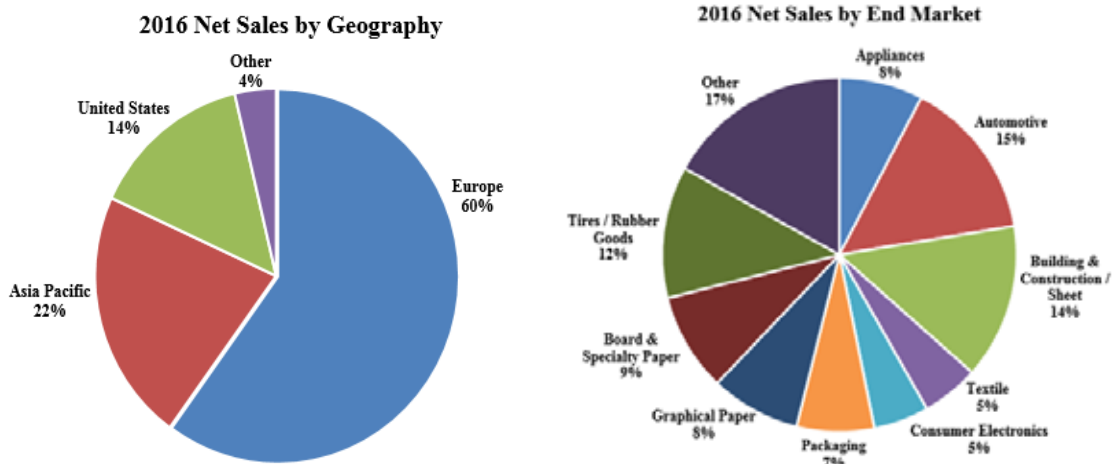
BUSINESS

The Company

Trinseo S.A. (NYSE: TSE) is a public limited liability company (société anonyme) formed in 2010 and existing under the laws of Luxembourg. Prior to our formation, our business was wholly owned by Dow. On June 17, 2010, investment funds advised or managed by affiliates of Bain Capital acquired our business and Dow Europe. During 2016, Bain Capital divested its entire ownership in the Company in a series of secondary offerings to the market.

We are a leading global materials company engaged in the manufacture and marketing of synthetic rubber, latex binders, and plastics, including various specialty and technologically differentiated products. We have leading market positions in many of the markets in which we compete. Our products that are incorporated into a wide range of our customers' products throughout the world, including tires and other products for automotive applications, carpet and artificial turf backing, coated paper, specialty paper and packaging board, food packaging, appliances, medical devices, consumer electronics and construction applications, among others. We have long-standing relationships with a diverse base of global customers, many of whom are leaders in their markets and rely on us for formulation, technological differentiation, and compounding expertise to find sustainable solutions for their businesses. Many of our products represent only a small portion of a finished product's production costs, but provide critical functionality to the finished product and are often specifically developed to customer specifications. Therefore, we seek to regularly develop new and improved products and processes, supported by our intellectual property portfolio, designed to enhance our customers' product offerings. We believe these product traits result in substantial customer loyalty for our products.

We have significant manufacturing and production operations around the world, which allow us to serve our global customer base. As of December 31, 2016, our production facilities included 30 manufacturing plants (which included a total of 75 production units) at 23 sites across 12 countries, including joint ventures and contract manufacturers. Additionally, as of December 31, 2016, we operated 10 research and development ("R&D") facilities globally, including mini plants, development centers and pilot coaters, which we believe are critical to our global presence and innovation capabilities. Our significant global operations provide geographic revenue diversity, and diversity in end markets for our products.



Our Business Strategy

We believe that there are significant opportunities to improve our business globally and enhance our position as a leading global materials company engaged in the manufacture and marketing of standard, specialty and technologically differentiated emulsion polymers and plastics.

For 2016, the Company progressed on its initiatives for improvement by:

- Making strategic divestitures or closures in non-performing segments and geographies, including the divestiture of our performance plastics and latex binders operations in Brazil and the cessation of manufacturing activities at our latex binders plant in Livorno, Italy.
- Initiating further expansion of our solution styrene-butadiene rubber, or SSBR, production capacity at our Schkopau, Germany facility, which is expected to provide 50 kMT of new capacity by January 2018.
- Providing sustained cash generation that has allowed the Company to return cash to its shareholders through quarterly cash distributions and the repurchase of approximately 4.5 million ordinary shares during 2016.
- The introduction of ENLITE™ PP LGF 1851 and 1852, an 85% Long Glass Fiber (“LGF”) Polypropylene (“PP”) concentrate product for automotive semi-structural applications by our Performance Plastics segment. This innovation in glass concentration allows customers to achieve cost savings of up to 10% through significantly reduced compounding costs, and other efficiencies such as outstanding pellet robustness combined with good dispersion properties.

For 2017, in addition to continuing initiatives launched in 2016, the Company’s strategy will include:

- Making strategic capital investments to extend our leadership position in select market segments and meet expected growing demand for our products.
- Opportunistically pursuing strategic acquisitions and joint ventures that have attractive risk-adjusted returns to extend our leadership positions in what we believe are the more attractive markets and geographies for us, including emerging markets.
- Continuing to innovate and provide technological differentiation by addressing our customers’ critical materials needs with our technological expertise and development capabilities to create specialty grades, new and sustainable products and technologically differentiated formulations.

Our Financial Strategy

In addition to managing our business and growth initiatives, we remain committed to maintaining a strong financial position with appropriate financial flexibility and liquidity. The Company employs a disciplined approach to capital allocation and deployment of cash that strives to balance the growth of our business and continued cash generation while providing attractive returns to our shareholders. The priorities for uses of available cash include the servicing of our debt, the continued payment of quarterly cash distributions to our shareholders, the funding of targeted growth initiatives, and the repurchase of our ordinary shares. Management expects that the combination of strong cash flow generation, continued profitability, and spending discipline will continue to provide the Company with flexibility to pursue organic and inorganic growth.

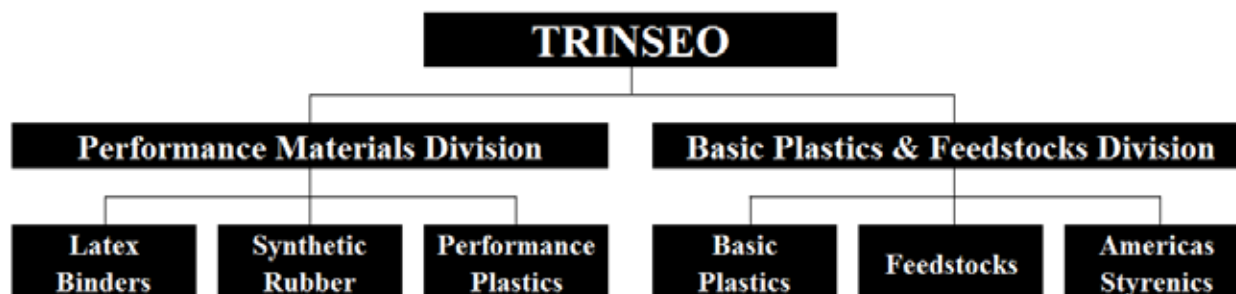
Business Segments and Products

We operate our business in two divisions: Performance Materials and Basic Plastics & Feedstocks. Our two divisions are of similar size in terms of sales, but have different margin profiles, different strategic focus, different value drivers and different operating requirements. By organizing in this way, we believe that we can best manage and operate the Company, focusing on accelerating the growth of our Performance Materials division and improving the profitability of our Basic Plastics & Feedstocks division.

Our chief executive officer, who is our chief operating decision maker, previously managed our operations under four reporting segments: Latex, Synthetic Rubber, Performance Plastics, and Basic Plastics & Feedstocks. Effective October 1, 2016, the Company realigned its reporting segments in order to provide increased clarity and understanding around the drivers of profitability and cash flow in our business. First, the previous Basic Plastics & Feedstocks segment was split into three new segments: Basic Plastics, which includes polystyrene, copolymers, and polycarbonate; Feedstocks, which represents our styrene monomer business; and Americas Styrenics, which reflects the equity earnings from our 50%-owned styrenics joint venture. In addition, certain highly differentiated acrylonitrile-butadiene-styrene (or ABS) supplied into Performance Plastics markets, which was previously included in the results of Basic Plastics & Feedstocks, is now included in Performance Plastics. Finally, the Latex segment was renamed to Latex Binders.

Prior period financial information included within this Annual Report has been recast from its previous presentation to reflect the Company’s new organizational structure.

The following chart provides an overview of this organizational structure:



The major products in our Performance Materials division include: styrene-butadiene latex, or SB latex, and styrene-acrylate latex, or SA latex, in our Latex Binders segment; SSBR, lithium polybutadiene rubber, or Li-PBR, emulsion styrene-butadiene rubber, or ESBR, nickel polybutadiene rubber, or Ni-PBR, and neodymium polybutadiene rubber, or Nd-PBR, in our Synthetic Rubber segment; highly engineered compounds and blends products for automotive end markets, as well as consumer electronics, medical, electrical and lighting, which we collectively call consumer essential markets, or CEM, in our Performance Plastics segment. The major products in our Basic Plastics & Feedstocks division include: polystyrene, polycarbonate, or PC, acrylonitrile-butadiene-styrene, or ABS, and styrene-acrylonitrile, or SAN, in our Basic Plastics reporting segment; styrene monomer in our Feedstocks segment; and styrene and polystyrene in our Americas Styrenics reporting segment

Refer to Note 19 in the consolidated financial statements for information regarding sales and Adjusted EBITDA by segment, which is the performance metric used by management to evaluate our segments’ performance, as well as sales and long-lived assets by geographic area.

Latex Binders Segment

Overview

We are a global leader in SB latex, holding a strong market position across the geographies and applications in which we compete, including the #1 position in SB latex capacity in Europe and the #1 position in capacity in North America. In 2016 approximately 42% of our Latex Binders segment’s sales were generated in Europe, 28% were generated in the United States, and the majority of the remaining net sales were generated in Asia.

Products and End Uses

We hold the #1 position for supplying SB latex for the coated paper market globally. SB latex is widely used as a binder for mineral pigments as it allows high coating speeds, improved smoothness, higher gloss level, opacity and water resistance that is valued in the product’s end use in advertising, magazines, and packaging board coatings.

We are also a leading supplier of latex polymers and binders to the carpet and artificial turf industries and offer a diverse range of products for use in residential and commercial broadloom, needlefelt, and woven carpet backings. We produce high solids SB latex, SA latex, vinylidene chloride, and butadiene-methacrylate latex products for the

commercial and niche carpet markets. We incorporate vinyl acrylic latex in our formulations for its ignition resistant properties, with the sourcing of vinyl acrylic latex readily available from a number of industry suppliers. SB latex is also used in flooring as an adhesive for carpet and artificial turf fibers.

We also offer a broad range of performance latex products, including SB latex, SA latex, and vinylidene chloride latex primarily for the adhesive, building and construction as well as the technical textile paper market, and have begun to implement the use of starch and associated new chemistries in paper coatings and carpet backing.

Competition and Customers

Our principal competitors in our Latex Binders segment include BASF Group, Omnova Solutions Inc., and Synthomer plc. In our Latex Binders segment, we compete primarily based on our ability to offer differentiated and reliable products, the quality of our customer service and the length and depth of our relationships. We also believe our growth prospects could be enhanced if the recent trend of industry capacity reduction and consolidation continues.

We believe our Latex Binders segment is able to differentiate itself by offering customers value-added formulation and product development expertise. Our R&D team and Technical Services and Development team, which we refer to as TS&D, are able to use our two pilot coating facilities in Switzerland and the United States, three paper fabrication and testing labs in China, Switzerland and the United States, three carpet technology centers located near carpet producers in China, the United States and Switzerland, and two product development and process research centers, one each in Germany and the United States, to assist customers in designing new products and enhancing the manufacturing process. Many of our major customers rely on our dedicated R&D and TS&D teams to complement their limited in-house resources for formulation and reformulation tests and trials. We believe that this capability allows us to capture new business, strengthen our existing customer relationships and broaden our technological expertise.

Additionally, our global manufacturing capabilities are key in serving customers cost-effectively, as latex binders are costly to ship over long distances due to their high water content. We believe that our global network of service and manufacturing facilities is highly valued by our customers. We seek to capture the value of our R&D and TS&D services and manufacturing capabilities through our pricing strategy. In 2016, we estimate that approximately one half of net sales in this segment related to contracts that include raw material pass-through clauses.

Synthetic Rubber Segment

Overview

We are a significant producer of styrene-butadiene and polybutadiene-based rubber products and we have a leading European market position, providing approximately 52% of Western Europe's SSBR capacity available for sale. While substantially all of our sales were generated in Europe in 2016, approximately 25% of these net sales were exported to Asia, 8% to North America, and 6% to Latin America.

Products and End Uses

Our Synthetic Rubber segment produces synthetic rubber products used in high-performance tires, impact modifiers and technical rubber products, such as conveyor belts, hoses, seals and gaskets. We participate significantly in the European synthetic rubber industry, where tire producers focus on high-performance and ultra high-performance tires and rely heavily on rubber suppliers to provide their supply of rubber, in contrast to North America where tire manufacturers produce most of their required rubber. We have a broad synthetic rubber technology and product portfolio, focusing on specialty products, such as SSBR, Li-PBR, and Nd-PBR, while also producing core products, such as ESBR. Our synthetic rubber products are extensively used in tires, with approximately 85% of our net sales from this segment in 2016 attributable to the tire market. We estimate that 75% of these sales relate to replacement tires. We have strong relationships with many of the top global tire manufacturers and believe we have remained a supplier of choice as a result of our broad rubber portfolio and ability to offer technologically differentiated product and product customization capabilities. Other applications for our synthetic rubber products include polymer modification and technical rubber goods.

SSBR. We sell SSBR products for high-performance and ultra high-performance tire applications. We produce both clear and oil extended SSBR through batch polymerization in our three SSBR production lines. We believe these processes provide leading and technologically differentiated solutions to tire manufacturers.

During the last six years, we have been working closely with major tire producers around the world to develop multiple new SSBR grades, addressing key marketplace needs for improved tire fuel economy, grip, and abrasion characteristics, which we believe will lead to significant demand growth for our rubber products in Europe and around the world. We expect our synthetic rubber product mix to continue to shift to more advanced SSBR grades (from approximately 8% of total Synthetic Rubber volume sold in 2011 to 28% in 2016) in order to meet expected demand growth. In 2016, SSBR represented approximately 60% of total segment net sales.

Performance tires represent an especially attractive market to rubber producers because they provide substantial value to end customers and the market for performance tires is expected to grow at a rate that is 2 to 3 times that of the standard tire market. Tire manufacturers are expected to continually seek improvements in advanced rubber, which optimizes the combination of fuel economy and wet grip in order to meet EU regulations which set minimum requirements and are being phased in through 2020. Other jurisdictions have adopted or are considering similar legislation and are also beginning to adopt the tire labeling requirements that have become mandatory in Europe. We believe our growth prospects are enhanced by increasing demand for high performance tires, which are now more commonly used by automakers as original equipment manufacturer specified tires in their vehicles as a result of regulatory reforms in the EU, Japan and Korea that are aimed at improving fuel efficiency and reducing carbon dioxide emissions.

ESBR. Our ESBR products are used in standard tires, technical goods, and footwear. Our ESBR product portfolio offers tire producers a comprehensive suite of synthetic rubber capabilities. For example, ESBR provides enhanced wet grip to tire treads and strength to the inner liner of tires, allowing the tires to be more easily processed. In 2016, ESBR represented approximately 33% of total segment net sales.

Ni-PBR and Nd-PBR. Throughout much of 2016, we sold Ni-PBR products for use in standard tires, performance tires, technical goods and footwear. In 2016, Ni-PBR represented approximately 5% of total segment net sales. In November 2015, we completed the conversion of our Ni-PBR production capacity at our Schkopau, Germany facility to a swing line, allowing for the production of Ni-PBR as well Nd-PBR, a more advanced, higher margin polybutadiene rubber that is a key material in the latest generation of performance tires, and is also sold for use in industrial rubber goods and polymer modification. In 2016, we began trials of Nd-PBR production, and expect to increase sales in this area in the future.

Li-PBR. Our Li-PBR is used primarily for our own internal polymer modification applications. Polymer modification is the use of synthetic rubber to improve the impact resistance quality of plastic products. In 2016, approximately 85% of our Li-PBR products were consumed within our Basic Plastics segment for high impact polystyrene, or HIPS, and ABS production. We make two grades of Li-PBR exclusively for our polymer modification uses. In addition to impact resistance, Li-PBR provides visual surface gloss. In 2016, Li-PBR represented approximately 2% of total segment net sales.

Competition and Customers

Our principal competitors in our Synthetic Rubber segment include Asahi Kasei Corporation, JSR Corporation, ARLANXEO, Zeon Corporation, Versalis S.p.A and Synthos S.A. In our Synthetic Rubber segment, we compete primarily based on our ability to offer differentiated and reliable products, the quality of our customer service and the length and depth of our relationships. We maintain deep and long-standing relationships with a large number of multinational customers, including many of the top global tire manufacturers, as well as fast growing Asian tire manufacturers. Our relationships with our top customers, including with our predecessor business operated by Dow prior to the Acquisition (as defined in Note 1 in the consolidated financial statements), exceed 10 years on average. Our top three customers in this segment accounted for 54% of our net sales in this reporting segment. The loss of one or more of these customers could have a material adverse effect on the performance of the Synthetic Rubber segment.

We believe we have remained a supplier of choice given our broad rubber portfolio, including technologically differentiated grades, and our product customization capabilities. Our R&D and TS&D teams use our broad rubber portfolio to develop differentiated specialty products for customers. Once implemented with a customer, these newly-developed specialty products cannot be easily replaced with a competitor's product. As a result, we believe customers are likely to buy from us throughout the life cycle of specific tire models to avoid high switching costs and prevent repetition of the expensive development process.

Enhanced SSBR, which includes later generations of SSBR and functionalized SSBR and is used in the new generation of performance tires, is expected to approach 50% of the total SSBR market by 2018. We believe the Company is well-positioned to capture additional market share in the high-growth, high-performance tire application markets. We expect that demand for enhanced SSBR will grow at a rate in excess of supply, resulting in an expected increase in industry utilization rates.

In order to address this anticipated demand, the Company has added 75 kMT of SSBR capacity since 2012 and plans to have an additional 50kT in SSBR capacity come online in January 2018 at our Schkopau, Germany facility. By the end of 2017, we also expect to have operational a new SSBR rubber pilot plant that will expedite the product development process from lab sample to commercialization by delivering sufficient quantities of new formulations without the need to interrupt production in our industrial lines.

While we export our rubber products worldwide, our production facilities currently are solely in Europe. Therefore, we may face competitive challenges with rubber customers who would prefer local rubber manufacturers.

We seek to capture the value of our R&D and TS&D services through our pricing strategy. We estimate that approximately 80% of net sales in this segment relate to contracts that include raw material pass-through clauses.

Performance Plastics Segment

Overview

We are a producer of highly engineered compounds and blends for automotive end markets, as well as consumer electronics, medical, electrical, and lighting, or CEM. In 2016, approximately 41% of our Performance Plastics segment's net sales were generated in Europe, approximately 28% were generated in the United States, and approximately 18% were generated in Asia, with the remainder in other geographic regions, including Latin America and Canada.

Products and End Uses

Our Performance Plastics segment consists of compounds and blends and some specialized ABS grades. We have a significant position in PC/ABS blends, which combine the heat resistance and impact strength of PC with the easy to process qualities and resilience of ABS. Our Performance Plastics segment also compounds and blends our PC and ABS plastics into differentiated products for customers within these sectors, as well as compounds of polypropylene. We have also developed compounds containing post-consumer recycled polymers to respond to what we believe is a growing need for some customers to include recycled content in their products. We believe our ability to offer technologically differentiated products to meet customer needs sets us apart from our competitors, and with our history as a leading innovator in compounds and blends, we have established ourselves as a leading supplier of PC-based products.

For the automotive industry, we manufacture PC blends under the PULSE™ brand, and we innovate collaboratively with our customers to develop performance solutions to meet the industry's needs, such as reducing the weight of vehicles. As a result, we are a key supplier of these products to leading automotive companies in North America and Europe, who tend to specify these products on a per car program platform basis, making it difficult to be displaced as a supplier once selected and providing us with relatively stable and predictable cash flows for several years during the production lifecycle. We are also accelerating our development of similar supply capabilities in growing areas such as China.

For the consumer electronics, electrical and lighting and medical device industries, we manufacture our products under the EMERGE™ brand, among others, and we believe that we have substantial growth opportunities in tablets, notebooks, smart phones and other handheld devices, and electrical and lighting and medical device components. In serving these markets, we leverage our polymer and compound technologies to meet increasingly stringent performance requirements along with the aesthetic and color-matching requirements which are crucial characteristics for the products involved.

Competition and Customers

Our principal competitors in our Performance Plastics segment are Covestro AG, LG Chem Ltd., Mitsubishi Chemical Corporation, Saudi Basic Industries Corporation, Teijin Limited, Borealis AG, Celanese Corporation,

Styrolution Group, and LyondellBasell Industries. In our Performance Plastics segment, we compete primarily based on our ability to offer differentiated and reliable products, the quality of our customer service and the length and depth of our customer relationships.

We believe growth in the Performance Plastic segment is driven by a number of factors, including consumer preference for lighter weight and impact-resistant products and the development of new consumer electronics, increases in LED lighting applications and continuing growth in medical device applications. Additionally, we believe growth is bolstered by sustainability trends, such as the substitution of lighter-weight plastics for metal in automobiles. Therefore, we believe our history of innovation and our focus on differentiated products enhances our growth prospects in this segment. Our innovation has contributed to long-standing relationships with customers who are recognized leaders in their respective end-markets. We also believe our global facilities are a competitive advantage that allows us to provide customers with consistent grades across markets and positions us to strategically serve emerging markets.

Basic Plastics Segment

Overview

Basic Plastics consists of styrenic polymers, including polystyrene, ABS, and SAN products, as well as PC. We do not anticipate investing in strategic growth initiatives in this segment in the near term. In 2016, approximately 69% of sales from our Basic Plastics segment were generated in Europe and an additional 25% of sales were generated in Asia.

Products and End Uses

Polystyrene. We are a leading producer of polystyrene and focus on sales to injection molding and thermoforming customers. Our product offerings include a variety of general purpose polystyrenes, or GPPS, and HIPS, which is polystyrene that has been modified with polybutadiene rubber to increase its impact resistant properties. These products provide customers with performance and aesthetics at a low cost across applications, including appliances, packaging, including food packaging and food service disposables, consumer electronics and building and construction materials.

We believe our STYRON™ brand is one of the longest established brands in the industry and is widely recognized in the global marketplace. We believe our R&D efforts have resulted in valuable, differentiated solutions for our customers. For instance, during the early 2000s, we developed an innovative STYRON A-TECH™ family of resins that is an advanced polystyrene product allowing customers to balance key properties such as toughness, gloss, stiffness, flow and cost, and provide combinations of properties that were previously not available with standard HIPS. We believe that over the past decade, this product family has become the industry standard for this application. In 2016, polystyrene represented approximately 62% of total segment net sales.

Acrylonitrile-Butadiene-Styrene (ABS). We are a leading producer of ABS in Europe and are one of the few producers with a presence in North America. We produce mass ABS, or mABS, a variation of ABS that has lower conversion and capital costs compared to the more common emulsion ABS, or eABS, process, marketed under our MAGNUM™ brand. mABS has similar properties to eABS but has greater colorability, thermal stability and lower gloss. mABS products can be manufactured to stricter specifications because it is produced in a continuous process as opposed to the batch process used in eABS. mABS also has environmental benefits such as waste reduction and higher yields. In addition to our own mABS production capacity, we have licensed our proprietary mABS technology to other producers.

Primary end uses for our ABS products include automotive and construction sheet applications. We maintain a significant share of ABS sales into these markets, which we believe is driven by the differentiating attributes of our mABS products, our reputation as a knowledgeable supplier, our broad product mix and our customer collaboration and design capabilities. In 2016, ABS products represented approximately 21% of total segment net sales.

Styrene-Acrylonitrile. SAN is composed of styrene and acrylonitrile, which together provide clarity, stiffness, enhanced ability to be processed, mechanical strength, barrier properties, chemical resistance and heat resistance. SAN is used mainly in appliances, consumer goods and construction sheets, due to its low-cost, clarity and chemical resistance properties. Within our Basic Plastics segment, we manufacture SAN under the TYRIL™ brand name for use in housewares, appliances, automotive, construction sheets, battery cases and lighting applications. In addition, TYRIL™ is suitable for self-coloring which adds value in many of these uses. In 2016, SAN represented approximately 4% of total segment net sales.

Polycarbonate. PC has high levels of clarity, impact resistance and temperature resistance. PC can be used in its neat form (prior to any compounding or blending) for markets such as construction sheet, optical media and LED lighting. Additionally, PC can be compounded or blended with other polymers, such as ABS, which imparts specific performance attributes tailored to the product's end-use.

Our products for glazing and construction sheets are marketed under the CALIBRE™ brand name and offer customers a combination of clarity, heat resistance and impact performance. Glazing and construction sheet represents our largest PC application, and is a key growth focus for us. Key end-markets include the construction industry, with additional opportunities for growth with compounded products in the medical device market, consumer electronics and other applications such as smart meter casings that require plastics with enhanced weatherability, ignition resistance and impact performance. In 2016, PC represented approximately 13% of total segment net sales.

Competition and Customers

Our principal competitors in our Basic Plastics segment are Styrolution Group GmbH, Versalis S.p.A., Total S.p.A., Covestro AG, LG Chem Ltd., Mitsubishi Chemical Corporation, Formosa Plastics Corporation, Saudi Basic Industries Corporation, Shanghai SECCO Petrochemical Company Limited, and Chi Mei Corporation. In our Basic Plastics segment, we compete primarily based on our ability to offer differentiated and reliable products, the quality of our customer service and the length and depth of our relationships.

Our customer centric model focuses on understanding customers' needs and developing tailored solutions that create value for both parties. For durable applications, we focus our TS&D, R&D and marketing teams on product design engineering initiatives for developing and specifying plastics in the next generation of construction applications, appliances, automotive, and consumer electronics. In non-durable applications, we focus on innovative products that provide clear cost advantages to our customers, serving customers with our cost-advantaged technology and operating excellence. We have leveraged industry-leading product development and technology capabilities in many of our basic plastics product lines to develop long-standing customer relationships with many of our customers, including a number who have purchased from us, including our predecessor business operated by Dow prior to the Acquisition, for more than 20 years. We believe that our global presence is an advantage, allowing us to provide customers with consistent product grades and positioning us to strategically serve growth economies.

We have a leading competitive position in many of the products in our basic plastics segment. However, for PC, we have a lower competitive position than those of our peers, which may ultimately impact our ability to implement an effective pricing strategy. The ABS market has also experienced a number of capacity rationalizations since 2006. These rationalizations, combined with improved end-market demand, have resulted in a substantial improvement in operating rates since the most recent global economic downturn. We believe the Company's global footprint make the Basic Plastics segment well-positioned to compete in this market.

Feedstocks Segment

Overview

Our Feedstocks segment is primarily focused on the revenue and profitability related to the Company's production and procurement of styrene monomer outside of North America. The Feedstocks segment supplied 15% of the styrene monomer capacity out of Europe in 2016. Annually, the Company produces nearly 700 kilotons of styrene in Western Europe and purchases approximately 300 kilotons of styrene in Asia on a raw material cost basis. With all other inputs remaining equal, a \$50 per metric ton change in styrene margin over raw materials would be expected to impact our Feedstock reporting segment's annual Adjusted EBITDA by approximately \$35 million and \$15 million in Europe and Asia, respectively.

Products and End Uses

Styrene monomer is a basic building block of plastics and a key input to many of the Company's products. Styrene monomer is a key raw material for the production of polystyrene, expandable polystyrene, SB latex, ABS resins, unsaturated polyethylene resins, and styrene-butadiene rubber.

Competition and Customers

Our principal competitors in our Feedstocks segment are: Styrolution Group GmbH, Versalis S.p.A., Total S.p.A., BASF SE, Saudi Basic Industries Corporation, LyondellBasell, Repsol S.A., Shanghai SECCO Petrochemical Company Limited, and Royal Dutch Shell plc. The majority of styrene monomer produced within the Feedstocks segment is consumed by the Company in its own manufacturing activities.

Within styrene monomer, we believe there is a current and longer term trend towards higher styrene margins, due to demand growth, an aging industry asset base, and limited new capacity expected over the next several years that will allow the Company to remain competitive. Global styrene operating rates were approximately 85% in 2016 and are forecasted to remain flat through 2020. These relatively high operating rates can result in periods of elevated margins due to planned or unplanned production outages.

Americas Styrenics Segment

Overview

This segment solely consists of the operations of our 50%-owned joint venture with Chevron Phillips Chemical Company, Americas Styrenics LLC (“Americas Styrenics”), which continues to be a leading producer in North America of both styrene and polystyrene. Specifically, Americas Styrenics is the #1 producer of polystyrene in North America. In 2016, Americas Styrenics supplied 17% of the styrene monomer capacity in North America. Additionally, we received \$130.0 million in cash dividends from Americas Styrenics during 2016.

Products and End Uses

Styrene monomer is a basic building block of plastics and a key input to many of the Company’s products. Styrene monomer is a key raw material for the production of polystyrene, and in 2016 approximately 63% of the styrene monomer produced by Americas Styrenics is consumed in its own production of polystyrene. The remainder of Americas Styrenics’ product is sold as a key raw material to other manufacturers of polystyrene, expandable polystyrene, SB latex, ABS resins, unsaturated polyethylene resins, and styrene-butadiene rubber.

Americas Styrenics also produces GPPS, high heat, high impact resin, and STYRON A-TECH™ polystyrene products. Major applications for these polystyrene products include appliances, food packaging, food service disposables, consumer electronics and building and construction materials.

Competition and Customers

Americas Styrenics’ principal competitors are Styrolution Group GmbH, Total S.p.A. and LyondellBasell. In our Americas Styrenics segment, we compete primarily based on our ability to offer differentiated and reliable products, the quality of our customer service and the length and depth of our relationships.

As a leading styrenics producer in North America, this segment is well-positioned to benefit from the recent consolidation dynamics in the styrene and polystyrene industries within the region. With global utilization rates expected to steadily improve as demand grows in end-markets, we believe opportunities will be created for us, given our scale and geographic reach that will benefit the Americas Styrenics segment. However, like many of competitors in the styrenics market, the aged assets associated with this segment may result in unplanned outages that may adversely impact our service levels and competitive position.

Our Relationship with Dow

We have entered into certain agreements with Dow, including the Second Amended and Restated Master Outsourcing Services Agreement, which was modified on June 1, 2013 (“SAR MOSA”), the Amended and Restated MOD5 Computerized Process Control Software, Licenses and Services Agreement, with Rofan Services, Inc. which was modified June 1, 2013 (“AR MOD5 Agreement”), site and operating services agreements (“SAR SSAs”), and supply agreements.

The SAR MOSA provides for ongoing worldwide services from Dow, in areas such as information technology, enterprise resource planning, finance, environmental health and safety, training, customer service, marketing and sales

support, supply chain and certain sourcing and transactional procurement services. The term of this agreement runs through December 2020 and which automatically renews for two year periods unless either party provides six months' notice of non-renewal to the other party. The services provided pursuant to the SAR MOSA generally are priced per function, and we have the ability to terminate the services or any portion thereof, for convenience any time after June 1, 2015, subject to payment of termination charges. Services which are "highly integrated" follow a different process for evaluation and termination. In addition, either party may terminate for cause, which includes a bankruptcy, liquidation or similar proceeding by the other party, for material breach which is not cured, or by Dow in the event of our failure to pay for the services thereunder. In the event of a change of control, as defined in the agreement, Dow has the right to terminate the SAR MOSA.

We use SAP's Enterprise Resource Planning ("ERP") software systems to support our operations worldwide and to manage our day-to-day business processes and relationships with customers and suppliers. Under the SAR MOSA, Dow provides us with ERP systems support, global data/voice network and server infrastructure for desktop computing, email, file sharing, intranet and internet website access, and mainframe and midrange computer access.

Under the AR MOD5 Agreement, Dow provides worldwide process control technology, including hardware, software licenses and support services, and related enterprise resource planning services. The AR MOD5 Agreement, with a term through December 2020, may be terminated by either party for cause, which includes a bankruptcy, liquidation or similar proceeding by the other party, for material breach which is not cured by us if we no longer wish to receive maintenance and support for any licensed software; or by Dow if we use the licensed software for any purposes other than Company business. Dow may terminate the maintenance and support terms at any time if we fail to make payments when due and the default is not corrected within 30 days from notice, or upon two years written notice us, if Dow has made the decision not to support the software systems, provided that Dow will use commercially reasonable efforts to assist us in locating and transitioning to an alternate service provider. While we are not permitted to use this automation technology for new plants or to substantially expand existing plants, we can use other technology solutions for those situations. We have started to move our plants off the AR MOD5 process control technology through a strategic external relationship with ABB Ltd. and expect to convert all of our plants by 2020.

In addition, we entered into various site services agreements with Dow, which were modified as of June 1, 2013, (the "Amendment Date") where at Dow owned sites, Dow provides site services to Company. Conversely, we entered into similar agreements with Dow in June 2010, where at Company owned sites, we provide such services to Dow. These SAR SSAs cover general services that are provided at specific facilities co-located with Dow, rather than organization-wide services, and include utilities, site administration, environmental health and safety, site maintenance and supply chain. In certain circumstances, the parties may adjust certain prices and volumes. These agreements generally have 25-year terms from the Amendment Date, with options to renew. These agreements may be terminated at any time by agreement of the parties, or, by either party, for cause, including a bankruptcy, liquidation or similar proceeding by the other party, or under certain circumstances for a material breach which is not cured. In addition, we may terminate for convenience any services that Dow has agreed to provide to us that are identified in any site services agreement as "terminable" with 12 months prior notice to Dow, dependent upon whether the service is highly integrated into Dow operations. Highly integrated services are agreed to be nonterminable. With respect to "nonterminable" services that Dow has agreed to provide to us, such as electricity and steam, we generally cannot terminate such services prior to the termination date unless we experience a production unit shut down for which we provide Dow with 15-months prior notice, or upon payment of a shutdown fee. Upon expiration or termination, we would be obligated to pay a monthly fee to Dow, which obligation extends for a period of 45 (in the case of expiration) to 60 months (in the case of termination) following the respective event of each site services agreement. The agreements under which Dow receives services from us may be terminated under the same circumstances and conditions.

For the years ended December 31, 2016, 2015, and 2014, we incurred a total of \$224.7 million, \$244.8 million, and \$285.2 million in expenses under the SAR MOSA, AR MOD5 Agreement, and site services agreements (which include utilities), including \$174.8 million, \$194.1 million, and \$233.7 million, respectively, for both the variable and fixed cost components of the site service agreements and \$49.9 million, \$50.7 million, \$51.5 million, respectively, covering all other agreements.

In addition, upon Acquisition, we entered into a contract manufacturing agreement pursuant to which we operate and maintain our SAN facility in Midland, Michigan to produce products for Dow. This agreement has a 25-year term, with automatic renewals for five-year terms unless one party gives notice at least 18 months prior to the end of the period. We may terminate any operational service under the agreement in the event that we experience a production unit

shutdown, with 15-months prior notice to Dow. Furthermore, the agreement may be terminated by mutual agreement between the parties, by either party on notice that the other party fails to cure non-performance or if the other party is in material breach of a material obligation under the agreement within certain parameters, or because of either party's insolvency.

We have also entered into certain license agreements pursuant to which we have obtained exclusive licenses to use certain of Dow's intellectual property in connection with the Styron business as it was conducted by Dow and non-exclusive licenses to use certain Dow intellectual property, other than patents, with respect to products outside of the Styron business as it was conducted by Dow prior to the Acquisition, subject to certain limitations. While our license rights are sufficient to allow us to operate our current business, new growth opportunities in latex binders and, to a lesser extent, plastics involving new products may fall outside of our license rights with Dow. Therefore, our ability to develop new products may be adversely impacted by intellectual property rights that have been retained by Dow.

For the years ended December 31, 2016, 2015, and 2014, purchases and other charges from Dow and its affiliated companies (excluding the SAR MOSA, AR MOD5 Agreement, and site services agreements) were approximately \$865.7 million, \$999.4 million, and \$1,910.8 million, respectively. For the years ended December 31, 2016, 2015, and 2014, sales to Dow and its affiliated companies were approximately \$203.5 million, \$227.0 million, and \$343.8 million, respectively.

We continue to leverage Dow's scale and operational capabilities by procuring certain raw materials, utilities, site services, and other information technology and business services from Dow. In connection with the Acquisition, we entered into several agreements with Dow relating to the provision of certain products and services and other operational arrangements. Dow provides significant operating and other services, and certain raw materials used in the production of our products, under agreements that are important to our business. The failure of Dow to perform their obligations, or the termination of these agreements, could adversely affect our operations. See Item 1A—*Risk Factors*.

Sources and Availability of Raw Materials

The prices of our key raw materials are volatile and can fluctuate significantly over time. While the predominant driver of this volatility is the impact of market imbalances in supply and demand from time to time, energy prices may also impact the volatility of some of our raw materials. The table below shows our key raw materials by reporting segment.

	Performance Materials			Basic Plastics & Feedstocks		
	Latex	Synthetic	Performance	Basic		Americas
	Binders	Rubber	Plastics	Plastics	Feedstocks	Styrenics
<i>Benzene</i>					X	X
<i>Bisphenol A</i>				X		
<i>Butadiene</i>	X	X				
<i>Ethylene</i>					X	X
<i>Polycarbonate</i>			X			
<i>Styrenic resins</i>			X			
<i>Styrene</i>	X	X		X	X	X

We have supply contracts in place to help maintain our supply of raw materials at competitive market prices and seek to implement the most efficient and reliable raw material strategy for each of our segments, including maintaining a balance between contracted and spot purchases of raw materials. We also produce raw materials for use by our businesses, such as styrene monomer.

In 2016, we obtained approximately 31% of our raw materials from Dow (based on aggregate purchase price). While Dow provides a significant portion of our raw materials to us pursuant to supply agreements, we have developed a comprehensive strategy for obtaining additional sources of supply where needed. Our 2010 agreements with Dow for ethylene, benzene, and butadiene, have 10-year terms with automatic 2-year renewal provisions. Minimum and maximum monthly contract quantities were established based on historical consumption rates, and our pricing terms are based on commodity indices in the relevant geography.

In 2016, Dow supplied us with approximately 98% of our benzene requirements and 100% of our ethylene requirements through 10-year contracts that commenced in 2010 and include automatic 2-year renewal provisions. Dow is our largest supplier for these materials in Europe, where we purchase directly from Dow's existing butadiene extraction facilities pursuant to the terms of a 10-year contract that commenced in 2010 and includes an automatic 2-year renewal term. Other supply sources in Europe include major producers with contract terms of up to five years at competitive market prices. Supply to North America and Asia are exclusively from other major third party producers via supply contracts.

In addition to purchasing styrene through long-term strategic contracts and spot market purchases, we produce styrene internally from purchased ethylene and benzene at our own manufacturing sites. These sources provided 41%, 15%, and 44%, respectively, of our supply in 2016. With this mix of purchased and produced styrene, we seek to optimize our overall costs of securing styrene through efficient logistics, manufacturing economics and market dynamics.

BPA is the major raw material associated with PC production. This raw material is produced by a subsidiary of Olin Corporation and is supplied via pipeline to us through a supply contract in Europe that has an initial term expiring in December 2019. We source BPA for Sumika Styron Polycarbonate Limited ("Sumika Styron Polycarbonate"), our Asian joint venture, from other market participants.

Technology

Our R&D and TS&D activities across our segments focus on identifying needs in our customers' end-markets. As part of our customer-centric model, our R&D/TS&D organization interfaces with our sales and marketing teams and directly with customers to determine their product requirements in light of trends in their industries and market segments. This information is used to select R&D/TS&D projects that are value-enhancing for both our customers and us.

Our R&D facilities support our technological capabilities. In addition to our two SB latex pilot coaters and our product development centers, certain of our businesses operate "mini plants" in Stade and Schkopau, Germany. These mini plants are used to make samples of experimental products for testing, which we believe is a critical step in our new product development process.

R&D and TS&D costs are included in expenses as incurred. Our R&D and TS&D costs were \$51.0 million, \$51.9 million, and \$53.4 million for the years ended December 31, 2016, 2015, and 2014, respectively.

Sales and Marketing

We have a customer-centric business model that has helped us to develop strong relationships with many customers. Our sales and marketing professionals are primarily located at our facilities or at virtual offices within their respective geographies. We have approximately 126 professionals working in sales and marketing around the world, along with approximately 79 customer service professionals and we sell our products to customers in over 80 countries. We primarily market our products through our direct sales force. Typically our direct sales are made by our employees in the regions closest to the given customer.

Intellectual Property

We evaluate on a case-by-case basis how best to utilize patents, trademarks, copyrights, trade secrets and other intellectual property in order to protect our products and our critical investments in research and development, manufacturing and marketing. We focus on securing and maintaining patents for certain inventions, while maintaining other inventions as trade secrets, derived from our customer-centric business model, in an effort to maximize the value of our product portfolio and manufacturing capabilities. Our policy is to seek appropriate protection for significant product and process developments in the major markets where the relevant products are manufactured or sold. Patents may cover products, processes, intermediate products and product uses. Patents extend for varying periods in accordance with the date of patent application filing and the legal life of patents in the various countries. The protection afforded, which may also vary from country to country, depends upon the type of subject matter covered by the patent and the scope of the claims of the patent.

In most industrial countries, patent protection may be available for new substances and formulations, as well as for unique applications and production processes. However, given the geographical scope of our business and our continued growth strategy, there are regions of the world in which we do business or may do business in the future where intellectual property protection may be limited and difficult to enforce. We maintain strict information security policies and procedures wherever we do business. These information security policies and procedures include data encryption, controls over the disclosure and safekeeping of confidential information, as well as employee awareness training. Moreover, we monitor our competitors' products and, if circumstances were to dictate that we do so, we would vigorously challenge the actions of others that conflict with our patents, trademarks and other intellectual property rights.

The technologies we utilize in some of our business lines have been in use for many years (e.g., SB latex and ABS) and a number of our patents relating to such technologies have expired or will expire in within the next several years. As patents expire, or are allowed to lapse, the products and processes described and claimed in those patents become generally available for use by the public. We believe that the expiration of any single patent or family of patents that is scheduled to expire in the next 3 years would not materially adversely affect our business or financial results. We believe that our trade secrets relating to manufacturing and other processes used in connection with products to which expiring patents relate will continue to provide us with a competitive advantage after the expiration of these patents.

We use trademarks as a means of differentiating our products. We protect our trademarks against infringement where we deem appropriate. We have successfully registered the TRINSEO™ trademark in over 90 countries and have other trademark applications pending.

Dow has either transferred to us or granted perpetual, royalty-free licenses to us to use Dow's intellectual property that was used by Dow to operate the Styron business prior to the Acquisition. This intellectual property includes certain processes, compositions and apparatus used in the manufacture of our products. In addition to our license rights to use Dow's intellectual property related to the Styron business, we have obtained licenses to use Dow's intellectual property to the extent necessary to perform our obligations under the contracts transferred to us in the Acquisition and to use such intellectual property (other than patents) for products outside of the Styron business as it was conducted by Dow prior to the Acquisition, subject to certain limitations. While we believe our license rights with respect to Dow's intellectual property are sufficient to allow us to operate our current business, new growth opportunities in latex binders and, to a lesser extent, plastics involving new products may fall outside of our license rights with Dow. Therefore, our ability to develop new products may be impacted by intellectual property rights that have not been licensed to us by Dow. We have the right, with Dow's cooperation, to directly enforce the patents that are exclusively licensed to us by Dow where infringement is primarily within the scope of our business; but nothing obligates Dow to enforce against third parties the intellectual property rights of Dow that are licensed to us on a non-exclusive basis or where the infringement is primarily outside the scope of our business.

Since our formation on June 17, 2010, we have focused our product innovation on the Performance Materials division, including the Synthetic Rubber, Latex Binders and Performance Plastics segments. The intellectual property that we have created since we were a wholly-owned subsidiary of Dow is largely in these segments and covers areas such as material formulations, material process technologies and various end-use industrial applications.

Environmental and Other Regulations

Obtaining, producing and distributing many of our products involve the use, storage, transportation and disposal of toxic and hazardous materials. We are subject to extensive, evolving and increasingly stringent national and local environmental laws and regulations, which address, among other things, the following:

- emissions to the air;
- discharges to soils and surface and subsurface waters;
- other releases into the environment;
- prevention, remediation or abatement of releases of hazardous materials into the indoor or outdoor environment;
- generation, handling, storage, transportation, treatment and disposal of waste materials;
- maintenance of safe conditions in the workplace;
- registration and evaluation of chemicals;
- production, handling, labeling or use of chemicals used or produced by us; and
- stewardship of products after manufacture.

Some of our products are also subject to food contact regulations.

We maintain policies and procedures to monitor and control environmental, health and safety risks, and to monitor compliance with applicable state, national, and international environmental, health and safety requirements. Trinseo's Supplier Code of Conduct includes our expectations for our suppliers to comply with applicable laws and regulations and encourages them to adhere to the highest principles of environmental responsibility. We have a strong environmental, health and safety organization. We follow the American Chemistry Council Responsible Care® Guiding Principles for our global facilities and last received third party certification of our Responsible Care® Management System in 2016. We have a staff of professionals who are responsible for environmental health, safety and product regulatory compliance in addition to the standards, tools and services purchased from Dow. We have implemented a corporate audit program for all of our facilities. We expect that stringent environmental regulations will continue to be imposed on us and our industry in general.

Following the National Toxicology Program ("NTP")'s classification of styrene as "reasonably anticipated to be a human carcinogen", the State of California's Office of Environmental Health Hazard Assessment ("OEHHA") has listed styrene as a substance "known to the State to cause cancer" under Proposition 65. Under Proposition 65, effective in 2017 manufacturers of products containing styrene that is sold in the state of California may have to provide warning if the styrene exposures associated with the use of their products are below the No Significant Risk Level ("NSRL") for styrene. Polystyrene is excluded from the rule. Trinseo has determined that a warning is not required for its products since it is under the proposed NSRL. Additionally, styrene monomer is considered to have low toxicity and is not classified as a carcinogen or mutagen in the EU Nations. We have not seen a significant shift in customer demand away from styrenics products. We believe that there are no simple substitutes for our products that can deliver the same performance, quality, safety and cost effectiveness as the current set of products our customers buy from us.

There has been controversy for a number of years regarding the safety of BPA. However, we have not seen a material impact on our products or manufacturing operations. After several years of study, the U.S. Food and Drug Administration continues to reaffirm that BPA is safe at the current levels occurring in foods. Similarly, the European Food Safety Authority ("EFSA") has concluded there is no consumer health risk from Bisphenol A exposure.

Sustainability and Climate Change

Our July 2016 Sustainability and Corporate Social Responsibility Report, which is available on our website, provides our most recent sustainability highlights for our products, performance and operations. The report also profiles how our products help our customers improve their own sustainability in areas such as LED lighting, green tires, building insulation, smart meters, life-saving medical devices, and lighter weight vehicles. Also in this report, the company tracks its greenhouse gas emissions and works to improve its performance at reducing chemical emissions and energy consumption.

Chemical Registration

Trinseo is subject to a growing number of chemical regulation requirements globally. The Frank R. Lautenberg Chemical Safety for the 21st Century Act (“LCSA”) was enacted in 2016 and modernized the U.S. Toxic Substances Control Act (“TSCA”). The LCSA provides United States chemical manufacturers, processors importers, and downstream users of the chemistries with multiple opportunities to provide input to the Environmental Protection Agency (“EPA”) and allows the EPA to request further information on chemicals. TSCA, as revised by the LCSA, requires EPA to assess chemicals using a risk based approach and requires unreasonable risks to be mitigated. We actively monitor the progress of these and other legislative developments, and anticipate TSCA reforms this year.

Registration, Evaluation, and Authorization of Chemicals (“REACH”), the regulatory system for chemicals management in the EU, requires EU manufacturers and importers to disclose information on the properties of their substances that meet certain volume or toxicological criteria and register the information in a central database to be maintained by the European Chemicals Agency. We have completed the REACH requirements for registration of high-volume and high-hazard substances that we manufacture in or import into Europe and we are currently on track to complete the remaining implementation requirements by the deadline in 2018. Other jurisdictions have enacted legislation similar to REACH, including China, Japan and Korea.

We do not expect that the costs to comply with TSCA, REACH and similar requirements will be material to our operations and consolidated financial position. We currently do not expect to need to register additional chemicals under REACH until 2018, at which time we will be required to register our low volume chemicals.

Environmental Proceedings

Prior to our separation from Dow, the EPA conducted a multimedia investigation at Dow’s Midland, Michigan sites, including the ABS site that we now operate. The investigation uncovered a number of alleged violations, including of the Clean Air Act’s leak detection and repair program (“LDAR”). LDAR requires chemical and petroleum companies to control fugitive (i.e., non-point source) emissions of hazardous air pollutants that occur from valves, pumps, flanges, connectors and other piping components. We, Dow and the United States executed a consent decree, which was approved by the District Court in Michigan in 2011. The decree provides that Dow will implement an enhanced LDAR program at our ABS facility over a five year period, which is intended to further reduce fugitive emissions at the ABS facility. We are not a defendant in the action, but under the decree, we or any future owner of the affected equipment will be responsible for performing an enhanced LDAR program at the ABS facility should Dow fail to perform. The consent decree obligations have been fulfilled and Dow has requested the EPA to terminate the consent decree.

Environmental Remediation

Environmental laws and regulations require mitigation or remediation of the effects of the disposal or release of chemical substances. Under some of these regulations, as the current owner or operator of a property, we could be held liable for the costs of removal or remediation of hazardous substances on or under the property, without regard to whether we knew of or caused the contamination, and regardless of whether the practices that resulted in the contamination were permitted at the time they occurred. At our Allyn’s Point, Connecticut property we lease a portion of the property to our joint venture, Americas Styrenics, for its operations, which includes a regulated hazardous waste boiler. Potential liabilities resulting from our owner status are addressed through financial assurance mechanisms and other agreements. Many of our production sites have an extended history of industrial use, and it is impossible to predict precisely what effect these laws and regulations will have on us in the future. Soil and groundwater contamination has occurred at some of the sites, and might occur or be discovered at other sites. Subject to certain monetary and temporal limitations, Dow is obligated to indemnify and hold us harmless with respect to releases of hazardous material that existed at our sites prior to our separation from Dow in June 2010. However, we cannot be certain that Dow will fully honor the indemnity or that the indemnity will be sufficient to satisfy all claims that we may incur. In addition, we face the risk that future claims might fall outside of the scope of the indemnity, particularly if we experience a release of hazardous materials that occurs in the future or at any time after our separation from Dow. Except for minor monitoring activities that we are performing in Livorno, Italy pursuant to an agreement with Dow, we do not currently have any material obligations to perform environmental remediation on our properties, and any active remedial projects on our properties are being performed by Dow pursuant to its indemnification obligations or for any Superfund sites.

Facility Security

We recognize the importance of security and safety to our employees and the community. Physical security measures have been combined with process safety measures (including the use of technology), and emergency response preparedness into integrated security plans. We have conducted vulnerability assessments at our operating facilities in the U.S. and high priority sites worldwide and identified and implemented appropriate measures to protect these facilities from physical and cyber-attacks. Effort and resources in assessing security vulnerabilities and taking steps to reinforce security at our manufacturing facilities will continue to be required to comply with U.S. Department of Homeland Security (“DHS”) and other requirements.

Employees

As of December 31, 2016, we had 2,197 employees worldwide. Nearly 78% of our personnel are located at the various manufacturing sites, research and development, pilot coating, paper fabrication and testing and technology centers. The remaining employees are located at operating centers, virtual locations or geographically dispersed marketing and sales locations. Our Midland, Michigan site is the only U.S. facility with union representation for its approximately 58 hourly operations personnel, and employees at certain of our locations are represented by work councils. We consider relations with our personnel and the various labor organizations to be good. There have been no labor strikes or work stoppages in these locations in recent history.

Available Information

Our annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, are available free of charge through the Investor Relations section of our website, www.trinseo.com, as soon as reasonably practicable after the reports are electronically filed or furnished with the U.S. Securities and Exchange Commission. We provide this website and the information contained in or connected to it for informational purposes only. That information is not part of this Annual Report.

Item 1A. *Risk Factors*

Risks Related to Our Business

Our current and future level of indebtedness of our subsidiaries could adversely affect our financial condition.

As of December 31, 2016, our indebtedness totaled approximately \$1,187.4 million. Additionally, as of December 31, 2016, the Company had \$309.1 million (net of \$15.9 million outstanding letters of credit) of funds available for borrowings under our 2020 Revolving Facility, as well as \$126.5 million of funds available for borrowings under our Accounts Receivable Securitization Facility. We are also party to a short-term revolving credit facility through our subsidiary in China that provides uncommitted funds available for borrowing, subject to the availability of collateral. Our level of indebtedness could have important consequences, including:

- increasing our vulnerability to economic downturns and adverse industry conditions;
- compromising our flexibility to capitalize on business opportunities and to react to competitive pressures, as compared to our competitors;
- placing us at a disadvantage compared to other, less leveraged competitors or competitors with comparable debt at more favorable interest rates; and
- increasing our cost of borrowing.

Although the Senior Credit Facility and the Indenture governing our 2022 Senior Notes contain restrictions on the incurrence of additional indebtedness, these restrictions are subject to a number of qualifications and exceptions and the

indebtedness incurred in compliance with these restrictions could be substantial. Also, we are not prevented from incurring obligations that do not constitute “indebtedness” as defined in the Senior Credit Facility or the Indenture, such as operating leases and trade payables. If new debt is added to our subsidiaries’ current debt levels, the risks related to indebtedness that we now face could intensify.

In addition, a substantial portion of our subsidiaries current indebtedness is secured by substantially all of our assets, which may make it more difficult to secure additional borrowings at reasonable costs. If we default or declare bankruptcy, after these obligations are met, there may not be sufficient funds or assets to satisfy our subordinate interests, including those of our shareholders. For more information regarding our indebtedness, please see Item 7—*Management’s Discussion and Analysis of Financial Conditions and Results of Operations—Indebtedness*.

The terms of our subsidiaries’ indebtedness may restrict our current and future operations, particularly our ability to respond to change or to take certain actions.

The Indenture and the credit agreement governing the Borrowers’ Senior Credit Facility contain a number of covenants imposing certain restrictions on our subsidiaries’ businesses. These restrictions may affect our ability to operate our business and may limit our ability to take advantage of business opportunities. These agreements restrict, among other things, our subsidiaries’ ability to:

- sell assets;
- incur additional indebtedness;
- pay dividends to Trinseo S.A.;
- make investments or acquisitions;
- incur liens;
- repurchase or redeem capital stock;
- engage in mergers or consolidations;
- materially alter the business they conduct;
- engage in transactions with affiliates; and
- consolidate, merge or transfer all or substantially all of their assets.

The ability of our subsidiaries to comply with the covenants and financial ratios and tests contained in the Indenture and Credit Agreement, to pay interest on indebtedness, fund working capital, and make anticipated capital expenditures depends on our future performance, which is subject to general economic conditions and other factors, some of which are beyond our control. There can be no assurance that our business will generate sufficient cash flow from operations or that future borrowings will be available under our Senior Credit Facility to fund liquidity needs in an amount sufficient to enable them to service their indebtedness. Furthermore, if we need additional capital for general corporate purposes or to execute on an expansion strategy, there can be no assurance that this capital will be available on satisfactory terms or at all.

A failure to repay amounts owed under the Senior Credit Facility or 2022 Senior Notes at maturity would result in a default. In addition, a breach of any of the covenants in the Senior Credit Facility or Indenture governing our 2022 Senior Notes or our inability to comply with the required financial ratios or limits could result in a default. If a default occurs, lenders may refuse to lend us additional funds and the lenders or noteholders could declare all of the debt and any accrued interest and fees immediately due and payable. A default under one of our subsidiaries debt agreements may trigger a cross-default under our other debt agreements. For more information regarding our indebtedness, please see Item 7—*Management’s Discussion and Analysis of Financial Conditions and Results of Operations—Indebtedness*.

Our joint ventures may not operate according to their business plans if we or our partners fail to fulfill our or their obligations, or differences in views among our joint venture partners result in delayed decisions, which may adversely affect our results of operations and may force us to dedicate additional resources to these joint ventures.

For the year ended December 31, 2016, we received dividends of \$136.2 million and equity earnings of \$144.7 million from two joint ventures. We may enter into additional joint ventures in the future. The nature of a joint venture requires us to share control with unaffiliated third parties. If our joint venture partners do not fulfill their obligations, the affected joint venture may not be able to operate according to its business plan. In that case, our results of operations

may be adversely affected and we may be required to increase the level of our commitment to the joint venture. Differences in views among joint venture participants and our inability to unilaterally implement sales and production strategies or determine cash distributions from our joint ventures may significantly impact short-term and longer term financial results, financial condition and the value of our ordinary shares.

Production at our manufacturing facilities could be disrupted for a variety of reasons. Disruptions could expose us to significant losses or liabilities.

The hazards and risks of disruption associated with chemical manufacturing and the related storage and transportation of raw materials, products and wastes exist in our operations and the operations of other occupants with whom we share manufacturing sites. These potential risks of disruption include, but are not necessarily limited to:

- pipeline and storage tank leaks and ruptures;
- explosions and fires;
- inclement weather and natural disasters;
- terrorist attacks;
- failure of mechanical, process safety and pollution control equipment;
- chemical spills and other discharge or releases of toxic or hazardous substance or gases; and
- exposure to toxic chemicals.

These hazards could expose employees, customers, the community and others to toxic chemicals and other hazards, contaminate the environment, damage property, result in personal injury or death, lead to an interruption or suspension of operations, damage our reputation and adversely affect the productivity and profitability of a particular manufacturing facility or us as a whole, and result in the need for remediation, governmental enforcement, regulatory shutdowns, the imposition of government fines and penalties, and claims brought by governmental entities or third parties. Legal claims and regulatory actions could subject us to both civil and criminal penalties, which could affect our product sales, reputation and profitability. Furthermore, the environmental, health and safety compliance, management systems, and emergency response and crisis management plans we have in place may not address or foresee all potential risks or causes of disruption.

If disruptions occur, alternative facilities with sufficient capacity or capabilities may not be available, may cost substantially more or may take a significant time to start production. Each of these scenarios could negatively affect our business and financial performance. If one of our key manufacturing facilities is unable to produce our products for an extended period of time, our sales may be reduced by the shortfall caused by the disruption and we may not be able to meet our customers' needs, which could cause them to seek other suppliers. Furthermore, to the extent a production disruption occurs at a manufacturing facility that has been operating at or near full capacity, the resulting shortage of our product could be particularly harmful because production at the manufacturing facility may not be able to reach levels achieved prior to the disruption. Our property, business interruption, comprehensive general liability, environmental impairment liability and other insurance policies may not fully insure against all potential causes of disruption due to limitations and exclusions in those policies. Therefore, incidents that significantly disrupt our operations may expose us to significant losses and or liabilities.

Volatility in energy and the cost of the raw materials utilized for our products, or disruption in the supply of the raw materials utilized for our products, may adversely affect our financial condition and results of operations.

Our results of operations can be directly affected, positively and negatively, by volatility in the cost of our raw materials, which are subject to global supply and demand and other factors beyond our control. Our principal raw materials (benzene, ethylene, butadiene, BPA and styrene) together represent approximately 54% of our total cost of goods sold. Additionally, we use natural gas and electricity to operate our facilities and generate heat and steam for our various manufacturing processes. Crude oil prices also impact our raw material and energy costs. Generally, higher crude oil prices lead to higher costs of natural gas and raw materials, although some raw materials are impacted less than others. Volatility in the cost of energy or raw materials makes it more challenging to manage pricing and pass the increases on to our customers in a timely manner. We believe that rapid changes in pricing also can affect the volume our customers consume. As a result, our gross profit and margins could also be adversely affected.

We have long-term supply agreements with Dow for ethylene, benzene, and butadiene, which are critical raw materials to our business and expire in June 2020. These raw materials and other less critical materials amount to

approximately 31% of our raw materials (based on aggregate purchase price). The remainder is purchased via other third-party suppliers on a global basis. As our Dow contracts and other third-party contracts expire, we may be unable to renew these contracts or obtain new long-term supply agreements on terms comparable or favorable to us, depending on market conditions, which may significantly impact our operations. See Item 1—*Business— Sources and Availability of Raw Materials*.

If the availability of any of our principal raw materials is limited, we may be unable to produce some of our products in the quantities demanded by our customers, which could have an adverse effect on plant utilization and our sales of products requiring such raw materials. Suppliers may have temporary limitations preventing them from meeting our requirements, and we may not be able to obtain substitute alternative suppliers in a timely manner or on favorable terms.

Capital projects may have lengthy deadlines during which market conditions may deteriorate between the capital expenditure’s approval date and the conclusion of the project, negatively impacting projected returns. If we are unable to execute on our capital projects within their expected budget and timelines, or if the market conditions assumed in our projections deteriorate, our business, financial condition, results of operations and cash flows could be materially and adversely affected.

Delays or cost increases related to capital spending programs involving engineering, procurement and construction of facilities or manufacturing lines could materially adversely affect our ability to achieve forecasted operating results. Project delays or budget overages may arise as a result of unpredictable events, which may be beyond our control, including:

- denial of or delay in receiving requisite regulatory approvals, licenses and/or permits;
- unanticipated increases in the cost of construction materials or labor;
- disruptions in transportation of components or construction materials;
- adverse weather conditions or natural disasters, equipment malfunctions, explosions, fires or spills affecting our facilities, or those of vendors or suppliers;
- shortages of sufficiently skilled labor, or labor disagreements resulting in unplanned work stoppages; or
- nonperformance by, or disputes with, vendors, partners, suppliers, contractors or subcontractors.

Furthermore, presumed demand for the technologies or product provided by the manufacturing facilities or lines being constructed may deteriorate during the project period. If we were unable to stay within a project’s overall timeline or budget, or if market conditions change, it could materially and adversely affect our business, financial condition, results of operations and cash flows.

We may engage in strategic acquisitions or dispositions of certain assets and/or businesses that could affect our business, results of operations, financial condition and liquidity.

We may selectively pursue complementary acquisitions and joint ventures, each of which inherently involves a number of risks and presents financial, managerial and operational challenges, including:

- potential disruption of our ongoing business and distraction of management;
- difficulty with integration of personnel and financial and other systems;
- hiring additional management and other critical personnel; and
- increasing the scope, geographic diversity and complexity of our operations.

In addition, we may encounter unforeseen obstacles or costs in the integration of acquired businesses. Also, the presence of one or more material liabilities of an acquired company that are unknown to us at the time of acquisition may have a material adverse effect on our business or financial results. Our acquisition and joint venture strategy may not be successfully received by customers, and we may not realize any anticipated benefits from acquisitions or joint ventures.

We may also opportunistically pursue dispositions of certain assets and/or businesses, which may involve material amounts of assets or lines of business, and adversely affect our results of operations, financial condition and liquidity. If any such dispositions were to occur, under the terms of the Credit Agreement governing our Senior Credit Facility and the Indenture, we may be required to apply the proceeds of the sale to repay any borrowings under our Senior Credit Facility or our 2022 Senior Notes. Dispositions may also involve continued financial involvement in the divested business, such as through continuing equity ownership, transition service agreements, guarantees, indemnities or other

current or contingent financial obligations. Under these arrangements, performance by the divested businesses or other conditions outside our control could affect our future financial results.

We may be subject to losses due to liabilities or lawsuits related to contaminated land we own or operate or arising out of environmental damage or personal injuries associated with exposure to chemicals or the release of chemicals.

The Comprehensive Environmental Response, Compensation and Liability Act, or CERCLA, and analogous state and foreign laws are designed to address the problems associated with contaminated land, especially inactive and abandoned hazardous waste sites listed on the “National Priorities List”, or NPL. Under CERCLA and similar statutes, the current or former owner or operator of a property contaminated by hazardous substance releases is subject to strict, unlimited, joint, several and retroactive liability for the investigation and remediation of the property, and also may be liable for natural resource damages associated with the releases. We also face the risk that individuals could seek damages for personal injury due to exposure to chemicals at our facilities, chemicals which have been released from our facilities, chemicals otherwise owned or controlled by us, or chemicals which allegedly migrated from products containing our materials. Legal claims and regulatory actions could subject us to both civil and criminal penalties, which could affect our reputation as well as our results of operations, financial condition, and liquidity.

There are several properties which we now own on which Dow has been conducting remediation to address historical contamination. Those properties include Allyn’s Point, Connecticut; Dalton, Georgia; and Livorno, Italy. There are other properties with historical contamination that are owned by Dow that we lease for our operations, including our facility in Midland, Michigan. While we did not assume the liabilities associated with these properties in the U.S., because CERCLA and similar laws can impose liability for contamination on the current owner or operator of a property, even if it did not create the contamination, there is a possibility that a governmental authority or private party could seek to include us in an action or claim for remediation or damages, even though the contamination may have occurred prior to our ownership or occupancy. While Dow has agreed to indemnify us for liability for releases of hazardous materials that occurred prior to our separation from Dow, the indemnity is subject to monetary and temporal limitations, and we cannot be certain that Dow will fully honor the indemnity or that the indemnity will be sufficient to satisfy all claims that we may incur. In addition, we face the risk that future claims might fall partially or fully outside of the scope of the indemnity, particularly if there is a release of hazardous materials that occurs in the future or at any time after our separation from Dow or if the condition requiring remediation is attributable to a combination of events or operations occurring prior to and after our separation from Dow.

Risks are inherent in the chemical business, particularly risks associated with safety, health and the environment. The U.S. EPA Risk Management Program (“RMP”) requires facilities that produce, handle, process, distribute or store certain highly hazardous chemicals to develop a risk management plan and program in the event of an accidental release of such chemicals. RMP also requires facilities to assess potential impacts to off-site populations in the event of a credible worst-case release and to document the policies, procedures, equipment and work practices in place to mitigate identified risks. Similar risk management requirements are imposed under the Emergency Planning and Community Right-to-Know Act, which contains chemical emergency response planning, accident release and other reporting and notification requirements applicable to our facility. In addition, we are subject to the Occupational Safety and Health Administration Process Safety Management standard, which requires the development of a program to manage workplace risks associated with highly hazardous chemicals. Similar laws apply to many of our international facilities. Failure to comply with such laws could subject us to both civil and criminal penalties, which could affect our product sales, reputation and profitability. We may be subject to claims with respect to workplace exposure, workers’ compensation and other health and safety matters.

Conditions in the global economy and capital markets may adversely affect our results of operations, financial condition and cash flows.

Our products are sold in markets that are sensitive to changes in general economic conditions, such as sales of automotive and construction products. Downturns in general economic conditions can cause fluctuations in demand for our products, product prices, volumes and margins.

Turbulence in the credit markets, fluctuating commodity prices, volatile exchange rates and other challenges currently affecting the global economy continue to affect us and our customers. Instability in financial and commodity markets throughout the world has caused, among other things, severely diminished liquidity and credit availability,

rating downgrades of certain investments and declining valuations and pricing volatility of others, volatile energy and raw materials costs, geopolitical issues and failure and the potential failure of major financial institutions. Adverse events affecting the health of the economy, including sovereign debt and economic crises, refugee crises, terrorism, Brexit, and rising protectionism, could have a negative impact on the health of the global economy. These developments, or the perception that any of them could occur, may have a material adverse effect on global economic conditions or on the stability of global financial markets. During any period of uncertainty or heightened market volatility, consumer confidence may decline which could lead to a decline in demand for our products or a shift to lower-margin products, which could adversely affect sales of our products and our profitability and could also result in impairments of certain of our assets.

Deterioration in the financial and credit market heightens the risk of customer bankruptcies and delay in payment. We are unable to predict the duration of the current economic conditions or their effects on financial markets, our business and results of operations. If economic conditions deteriorate, our results of operations, financial condition and cash flows could be materially adversely affected.

Dow provides significant operating and other services, and certain raw materials used in the production of our products, under agreements that are important to our business. The failure of Dow to perform its obligations, or the termination of these agreements, could adversely affect our operations.

Prior to our inception, we were operated by Dow, which has provided and continues to provide services under certain agreements that are important to our business. We are a party to:

- The SAR MOSA, an outsourcing service agreement pursuant to which Dow provides certain administrative and business services to us for our operations;
- The AR MOD5 agreement, an outsourcing service agreement pursuant to which Dow provides worldwide process control technology and related enterprise resource planning services;
- supply and sales agreements pursuant to which Dow, among other things, provides us with raw materials, including ethylene, benzene, and butadiene; and
- an operating services agreement pursuant to which Dow will operate and maintain certain of our facilities at Rheinmunster, Germany as well as employ and provide almost all of the staff for this facility.

Under the terms of the above agreements, either party is permitted to terminate the applicable agreement in a variety of situations, including in the event of the other party's uncured material breach, insolvency, change of control or cessation of operations. Should Dow fail to provide these services or raw materials, or should any of the above agreements be terminated, we would be forced to obtain these services and raw materials from third parties or provide them ourselves. Additionally, if Dow terminates agreements pursuant to which we are obligated to provide certain services, we may lose the fees received by us under these agreements. The failure of Dow to perform its obligations under, or the termination of, any of these contracts could adversely affect our operations and, depending on market conditions at the time of any such termination, we may not be able to enter into substitute arrangements in a timely manner, or on terms as favorable to us. For more information regarding our relationship with Dow, please see Item 1—*Business — Our Relationship with Dow*.

We are party to certain license agreements with Dow relating to intellectual property that is essential to our business. Because of this relationship, we may have limited ability to expand our use of certain intellectual property beyond the field of the license or to police infringement that may be harmful to our business.

In connection with the Acquisition, we acquired ownership of, or in some cases, a worldwide right and license to use, certain patents, patent applications and other intellectual property of Dow that were used by Dow to operate our business segments or held by Dow primarily for the benefit of our business segments, prior to the Acquisition. Generally, we acquired ownership of the intellectual property that was primarily used in our business segments and acquired a license to a more limited set of intellectual property that had broader application within Dow beyond our core business segments. Our license from Dow is perpetual, irrevocable, fully paid, and royalty-free. Furthermore, our license from Dow is exclusive within our business segments for certain patents and patent applications that were used by Dow primarily in the Styron business prior to the Acquisition, subject to licenses previously granted by Dow, and to certain retained rights of Dow, including Dow's retained right to use patents and patent applications outside of our business segments and for internal consumption by Dow. Our license from Dow relates to polymeric compositions, manufacturing

processes and end applications for the polymeric compositions; and is limited to use in defined areas corresponding to our current business segments excluding certain products and end-use application technology retained by Dow. Our ability to develop, manufacture or sell products and technology outside of these defined areas may be impeded by the intellectual property rights that have been retained by Dow, which could adversely affect our business, financial condition and results of operations. Additionally, infringement on these intellectual property rights could also impact our business and competitive position. We may not be able to enforce our rights, and Dow may be unwilling to enforce its rights, with respect to this intellectual property that has been licensed by Dow.

Regulatory and statutory changes applicable to our raw materials and products and our customers' products could require material expenditures, changes in our operations and could adversely affect our financial condition and results of operations.

Changes in environmental, health and safety regulations, in jurisdictions where we manufacture and sell our products, could lead to a decrease in demand for our products. In addition to changes in regulations, health and safety concerns could increase the costs incurred by our customers to use our products and otherwise limit the use of these products, which could lead to decreased demand for these products. Such a decrease in demand likely would have an adverse effect on our business and results of operations. Materials such as acrylonitrile, ethylbenzene, styrene, butadiene, BPA and halogenated flame retardant are used in the manufacturing of our products and have come under scrutiny due to potentially significant or perceived health and safety concerns.

Additionally, these regulatory regimes currently require significant compliance expenditures by us, and changes applicable to our raw materials and products or our customers' products could require significant additional expenditures by us, or changes in our operations.

Our products are also used in a variety of end-uses that have specific regulatory requirements such as those relating to products that have contact with food or medical device end-uses. We and many of the applications for the products in the end markets in which we sell our products are regulated by various national and local rules, laws and regulations, such as the TSCA. Changes in regulations could result in additional compliance costs, seizures, confiscations, recall or monetary fines, any of which could prevent or inhibit the development, distribution and sale of our products. Changes in environmental and safety laws and regulations banning or restricting the use of these residual materials in our products, or our customers' products, could adversely affect our results of operations and financial condition. Failure to appropriately manage safety, human health, product liability and environmental risks associated with our products, product life cycles and production processes could adversely impact employees, communities, stakeholders, our reputation and the results of our operations.

Compliance with extensive and evolving environmental, health and safety laws may require substantial expenditures.

We use large quantities of hazardous substances, generate hazardous wastes and emit wastewater and air pollutants in our manufacturing operations. Consequently, our operations are subject to extensive environmental, health and safety laws and regulations at both the national and local level in multiple jurisdictions. Many of these laws and regulations have become more stringent over time and the costs of compliance with these requirements may increase, including costs associated with any capital investments for pollution control facilities. In addition, our production facilities and operations require operating permits, licenses or other approvals that may be subject to periodic renewal and, in circumstances of noncompliance, may be subject to revocation. The necessary licenses, permits or other approvals may not be issued or continue in effect, and any issued licenses, permits or approvals may contain more stringent limitations that restrict our operations or that require further expenditures to meet the permit requirements.

This continuing focus on climate change in jurisdictions in which we operate could result in new, potentially diverging or inconsistent, environmental regulations that may negatively affect us. Additional future regulation of greenhouse gases in the U.S. could occur pursuant to future international treaty obligations, regulatory changes under the federal Clean Air Act or other existing legislation, federal, state or regional adoption of greenhouse gas regulatory schemes, or any combination of the foregoing or otherwise. This could cause us to incur additional costs in complying with any new regulations, which may adversely impact our operations and financial condition.

Compliance with more stringent environmental requirements would likely increase our costs of transportation and storage of raw materials and finished products, as well as the costs of storage and disposal of wastes. Additionally, we

may incur substantial costs, including penalties, fines, damages, criminal or civil sanctions and remediation costs, or experience interruptions in our operations for failure to comply with these laws or permit requirements.

We could be subject to changes in our tax rates and the adoption of tax legislation or exposure to additional tax liabilities that may adversely affect our results of operations.

We are subject to taxes in Luxembourg, the U.S., and numerous other foreign jurisdictions where our subsidiaries are organized. Due to economic and political conditions, tax rates in various jurisdictions may be subject to significant change. Our future effective tax rates could be affected by changes in the mix of earnings in countries with differing statutory tax rates, changes in the valuation of deferred tax assets and liabilities, and changes in tax laws or their interpretation, such as interpretations as to the legality of tax advantages granted under the EU state aid rules. Our tax returns and other tax matters are subject to examination by local tax authorities and governmental bodies. We regularly assess the likelihood of an adverse outcome resulting from these examinations to determine the adequacy of our provision for taxes. There can be no assurance as to the outcome of these examinations. If our effective tax rates were to increase, or if the ultimate determination of the taxes owed by us is for an amount in excess of amounts previously accrued, our operating results, cash flows, and financial condition could be adversely affected.

Our business involves risk of exposure to product liability claims.

Even though we are generally a materials supplier rather than a manufacturer of finished goods, the development, manufacture and sales of specialty emulsion polymers and plastics by us involves inherent risks of exposure to product liability claims, product recalls and related adverse publicity. While we attempt to protect ourselves from such claims and exposures by our adherence to standards and specifications and in our contractual negotiations, there can be no assurance that our efforts in this regard will ultimately protect us from any such claims. For instance, a customer may attempt to seek contribution from us due to a product liability claim brought against them by a consumer, or a consumer may bring a product liability claim directly against us. A product liability claim or judgment against us could result in substantial and unexpected expenditures, affect consumer or customer confidence in our products, and divert management's attention from other responsibilities. A successful product liability claim or series of claims against us in excess of our insurance coverage payments, for which we are not otherwise indemnified, could have a material adverse effect on our financial condition or results of operations.

We are subject to customs, international trade, export control, and antitrust laws that could require us to modify our current business practices and incur increased costs.

We are subject to numerous regulations, including customs and international trade laws, export/import control laws, and associated regulations. These laws and regulations limit the countries in which we can do business; the persons or entities with whom we can do business; the products which we can buy or sell; and the terms under which we can do business, including anti-dumping restrictions. In addition, we are subject to antitrust laws and zoning and occupancy laws that regulate manufacturers generally and/or govern the importation, promotion and sale of our products, the operation of factories and warehouse facilities and our relationship with our customers, suppliers and competitors. If any of these laws or regulations were to change or were violated by our management, employees, suppliers, buying agents or trading companies, the costs of certain goods could increase, or we could experience delays in shipments of our goods, be subject to fines or penalties, or suffer reputational harm, which could reduce demand for our products and hurt our business and negatively impact results of operations. In addition, in some areas we benefit from certain trade protections, including anti-dumping protection and the EU's Authorized Economic Operator program, which provides expedited customs treatment for materials crossing national borders. If we were to lose these protections, our results of operations could be adversely affected.

Fluctuations in currency exchange rates may significantly impact our results of operations and may significantly affect the comparability of our results between financial periods.

Our operations are conducted by subsidiaries in many countries. The results of the operations and the financial position of these subsidiaries are reported in the relevant foreign currencies and then translated into U.S. dollars at the applicable exchange rates for inclusion in our consolidated financial statements. The main currency to which we are exposed is the euro, noting that approximately 60% of our net sales were generated in Europe for the year ended December 31, 2016. To a lesser degree, we are also exposed to other currencies, including the Chinese yuan, Swiss

franc, and Indonesian rupiah. The exchange rates between these currencies and the U.S. dollar in recent years have fluctuated significantly and may continue to do so in the future. A depreciation of these currencies against the U.S. dollar, in particular the euro, will decrease the U.S. dollar equivalent of the amounts derived from these operations reported in our consolidated financial statements and an appreciation of these currencies will result in a corresponding increase in such amounts. Because some of our raw material costs are procured in U.S. dollars rather than on these currencies, depreciation of these currencies may have an adverse effect on our profit margins or our reported results of operations. Conversely, to the extent that we are required to pay for goods or services in foreign currencies, the appreciation of such currencies against the U.S. dollar will tend to negatively impact our results of operations. In addition, currency fluctuations may affect the comparability of our results of operations between financial periods.

We incur currency translation risk whenever we enter into either a purchase or sale transaction using a currency other than the local currency of the transacting entity. From time to time, we enter into foreign exchange forward contracts to hedge fluctuations associated with certain monetary assets and liabilities, primarily accounts receivable, accounts payable and certain intercompany obligations. However, attempts to hedge against foreign currency fluctuation risk may be unsuccessful and result in an adverse impact to our operating results. Given the volatility of exchange rates, there can be no assurance that we will be able to effectively manage our currency translation risks or that any volatility in currency exchange rates will not have a material adverse effect on our financial condition or results of operations.

Because our business operations are conducted entirely through our subsidiaries and joint ventures, we are largely dependent on our receipt of distributions and dividends or other payments from our subsidiaries and joint ventures for cash to fund all of our operations and expenses.

Trinseo S.A., and its subsidiaries and the issuers of its outstanding debt, Trinseo Materials Operating S.C.A. and Trinseo Materials Finance, Inc., are each holding companies without business operations. Therefore, our revenues are generated through business conducted through other operating subsidiaries and joint ventures. As a result, our subsidiaries' ability to service their debt or to make future dividend payments or repayments of equity to shareholders is largely dependent on the earnings of our operating subsidiaries and joint ventures and the payment of those earnings to them in the form of dividends, loans or advances and through repayment of loans or advances from us. Payments to us by our operating subsidiaries and joint ventures will be contingent upon our subsidiaries' or joint ventures' earnings and other business considerations. Furthermore, the Credit Agreement governing our Senior Credit Facility and the Indenture for the 2022 Senior Notes include certain restrictions on the ability of our operating subsidiaries to pay dividends or otherwise transfer assets to us. In addition, each of our subsidiaries and joint ventures is a distinct legal entity. Therefore, there may be significant tax and other legal or regulatory developments in the future that may impact the ability of foreign subsidiaries or joint ventures to continue to remit money to us.

Americas Styrenics, which is one of our joint ventures, is among the parties subject to an ongoing government antitrust investigation by the United States Postal Service Office of Inspector General, and the United States Department of Justice, involving the polystyrene market in North America, the results of which could have a material adverse effect on our business, financial condition and results of operations.

In May 2015, Americas Styrenics, our 50%-owned joint venture, received a subpoena from the United States Postal Service Office of Inspector General in coordination with the U.S. Department of Justice (collectively the "Government") requesting documents regarding its involvement and participation in the market for polystyrene. The subpoena received by Americas Styrenics does not seek information regarding the market for styrene monomer. The Government has informed Americas Styrenics that similar subpoenas have been sent to other companies that operate in the polystyrene market.

Under the joint venture agreement, we granted Americas Styrenics the exclusive rights to manufacture and sell polystyrene in North America and South America. Equity earnings attributable to Americas Styrenics was \$135.8 million, \$135.3 million, and \$50.3 million in 2016, 2015, and 2014, respectively. We estimate that the contribution to our equity earnings from Americas Styrenics' polystyrene business was approximately 51% in 2016, 55% in 2015, and approximately 87% in 2014. This translates to a contribution from Americas Styrenics' polystyrene business to our Adjusted EBITDA of approximately 11% in 2016, 15% in 2015, and approximately 17% in 2014.

We understand that Americas Styrenics is fully cooperating with the Government's investigation and has delivered all requested documents in response to the subpoena. Further, Americas Styrenics has informed us that it has completed its own internal investigation and is unaware of any improper activity. We have reviewed the substance of Americas

Styrenics' internal investigation and, based on this information, have no reason to believe any improper activity occurred. Furthermore, we believe that the industry dynamics present in the polystyrene market are consistent with legitimate competitive market activity and not the result of anti-competitive actions or activity.

Notwithstanding our current understanding of the facts, this matter remains open with the Government and there can be no assurance that other facts will not come to light that result in Americas Styrenics being determined to have violated applicable law. As a result, we are unable to make any predictions regarding the ultimate outcome of the investigation. Other than the subpoena, to date there has been no complaint or demand of Americas Styrenics by the Government regarding the matters that are the subject of the investigation. In addition, to date we have not been served with a subpoena in connection with this ongoing investigation nor have we otherwise been contacted by the Government or other enforcement authorities. However, there is no assurance that we won't be served with a subpoena or otherwise become involved in this investigation in the future.

Based on its findings in the investigation, the Government may (i) close the file, (ii) seek a consent decree to remedy issues it believes violate the antitrust laws, or (iii) file suit against Americas Styrenics for violating the antitrust laws, seeking injunctive or monetary relief. If injunctive and/or monetary relief were granted, depending on its scope, it could affect the manner in which Americas Styrenics' business is operated and potentially force changes to Americas Styrenics' business practices or operations. In addition, Americas Styrenics and its executives could be subject to criminal prosecution and if Americas Styrenics is found to have violated one or more laws, it could be subject to a variety of fines, penalties, and related administrative sanctions and private plaintiffs may seek treble damages. Private plaintiffs may emerge and seek recourse against us, merely as a joint venture owner of Americas Styrenics, and if this investigation continues over a long period of time, it could divert the attention of Americas Styrenics and our management from day-to-day operations and impose significant administrative burdens. Any of these consequences could damage Americas Styrenics' and our reputation and impair Americas Styrenics' ability to conduct its business, which could have a material adverse effect on our business, financial condition and results of operations.

We generally do not have long-term contracts with our customers, and the loss of customers could adversely affect our sales and profitability.

With some exceptions, our business is based primarily upon individual sales orders with our customers. As such, our customers could cease buying our products from us at any time, for any reason, with little or no recourse. If multiple customers elected not to purchase products from us, our business prospects, financial condition and results of operations could be adversely affected.

If we are not able to continue the technological innovation and successful commercial introduction of new products, our customers may turn to other producers to meet their requirements.

Our industry and the end markets into which we sell our products experience periodic technological changes and ongoing product improvements. Our customers may introduce new generations of their own products or require new technological and increased performance specifications that would require us to develop customized products. Innovation or other changes in our customers' product performance requirements may also adversely affect the demand for our products. Our future growth will depend on our ability to gauge the direction of the commercial and technological progress in all key end markets, and upon our ability to successfully develop, manufacture and market products in such changing end markets. We need to continue to identify, develop and market innovative products on a timely basis to replace existing products in order to maintain our profit margins and our competitive position. We may not be successful in developing new products and technology that successfully compete with these materials, and our customers may not accept any of our new products. If we fail to keep pace with evolving technological innovations or fail to modify our products in response to our customers' needs, then our business, financial condition and results of operations could be adversely affected as a result of reduced sales of our products.

Our business relies on intellectual property and other proprietary information and our failure to adequately protect or effectively enforce our rights could harm our competitive advantages with respect to the manufacturing of some of our products.

Our success depends to a significant degree upon our ability to protect, preserve and enforce our intellectual property rights, including patents, trademarks, licenses, trade secrets and other proprietary information of our business. However, we may be unable to prevent third parties from using our intellectual property and other proprietary

information without our authorization or independently developing intellectual property and other proprietary information that is similar to or competes with ours, particularly in those countries where the laws do not protect proprietary rights to the same degree as in the United States. Any inability by us to effectively prevent the unauthorized use of our intellectual property and other proprietary information by others could reduce or eliminate any competitive advantage we have developed, cause us to lose sales or otherwise harm our business or goodwill. If it becomes necessary for us to initiate litigation to protect our proprietary rights, any proceedings could be burdensome and costly, and we may not prevail.

We may be unable to determine when third parties are using our intellectual property rights without our authorization, particularly our manufacturing processes. In addition, we cannot be certain that any intellectual property rights that we have licensed to third parties are being used only as authorized by the applicable license agreement. The undetected, unremedied, or unauthorized use of our intellectual property rights or the legitimate development or acquisition of intellectual property that is similar to or competes with ours by third parties could reduce or eliminate the competitive advantage we have as a result of our intellectual property, adversely affecting our financial condition and results of operations.

If we fail to adequately protect our intellectual property and other proprietary information, including our processes, apparatuses, technology, trade secrets, trade names and proprietary manufacturing know how, methods and compounds, through obtaining patent protection, securing trademark registrations and securing our trade secrets through the use of confidentiality agreements of appropriate scope and other means, our competitive advantages over other producers could be materially adversely affected. If we determine to take legal action to protect, defend or enforce our intellectual property rights, any suits or proceedings could result in significant costs and diversion of our resources and our management's attention. We may not prevail in any such suits or proceedings. A failure to protect, defend or enforce our intellectual property rights could have an adverse effect on our financial condition and results of operations.

Our products may infringe the intellectual property rights of others, which may cause us to incur unexpected costs or prevent us from selling our products.

We continually seek to improve our business processes and develop new products and applications. Many of our competitors have a substantial amount of intellectual property that we must continually strive to avoid infringing. Although it is our policy and intention not to infringe valid patents of which we are aware, we cannot provide assurances that our processes and products and other activities do not and will not infringe issued patents (whether present or future) or other intellectual property rights belonging to others. There nonetheless could be third-party patents that cover our products, processes or technologies, and it is possible that we could be liable for infringement of such patents and could be required to take remedial or curative actions to continue our manufacturing and sales activities with respect to one or more products that are found to be infringing. We may also be subject to indemnity claims by our business partners arising out of claims of their alleged infringement of the patents, trademarks and other intellectual property rights of third parties in connection with their use of our products. Intellectual property litigation often is expensive and time-consuming, regardless of the merits of any claim, and our involvement in such litigation could divert our management's attention from operating our business. If we were to discover that any of our processes, technologies or products infringe on the valid intellectual property rights of others, we might determine to obtain licenses from the owners of these rights or to modify our processes or technologies or re-engineer our products in order to avoid infringement. We may not be able to obtain the necessary licenses on acceptable terms, or at all, or be able to modify our processes or technologies or re-engineer our products in a manner that is successful in avoiding infringement. Moreover, if we are sued for infringement and lose, we could be required to pay substantial damages and/or be enjoined from using or selling the infringing products or technology. Any of the foregoing could cause us to incur significant costs and prevent us from selling our products and could have an adverse effect on our financial condition and results of operations.

Data security breaches could compromise sensitive information related to our business, which could adversely affect our business and our reputation.

Cyberattacks or data security breaches could compromise confidential, business critical information or cause a disruption in our operations. We have attractive information assets, including intellectual property, trade secrets and other sensitive, business critical information. We face an ever growing risk of attack from outside our organization (including attack by organized crime, so-called "hacktivists," and state-sponsored actors) using sophisticated technical and non-technical methodologies (including social engineering and "spear phishing" attacks). We also face risks from

internal threats to information security, such as from negligent or dishonest employees or consultants. A successful cyberattack or other breach of security could result in the loss of critical business information and/or could negatively impact operations, which could have a negative impact on our financial results. Furthermore, in addition to using our own systems and infrastructure, we use information systems and infrastructure operated by third-party service providers, including Dow. If our third-party service providers experience an information security breach, depending on the nature of the breach, it could compromise confidential, business critical information or cause a disruption in our operations.

The labor and employment laws in many jurisdictions in which we operate are more restrictive than in the United States. Additionally, we have unionized employees in the United States who may stage work stoppages. Our relationship with our employees could deteriorate, which could have an adverse effect on our operations.

As a manufacturing company, we rely on our employees and good relations with our employees to produce our products and maintain our production processes and productivity. Approximately 85% of our employees are employed outside of the United States. In certain of those countries, such as the member states of the EU, labor and employment laws are more restrictive than in the United States. In many jurisdictions, the laws grant significant job protection to employees, which subject us to employment arrangements that are very similar to collective bargaining agreements.

In addition, as of December 31, 2016, approximately 17% of our employees in the United States are members of a union and subject to a collective bargaining agreement. We are required to consult with and seek the consent or advice of the unions or works' councils that represent our employees for certain of our activities. This requirement could have a significant impact on our flexibility in managing costs and responding to market changes. Furthermore, there can be no assurance that we will be able to negotiate labor agreements with our unionized employees in the future on satisfactory terms. If those employees were to engage in a strike, work stoppage or other slowdown, or if any of our other employees were to become unionized, we could experience a significant disruption of our operations or higher ongoing labor costs, which could have a material adverse effect on our financial condition and results of operations.

As a global business, we are exposed to local business risks in different countries, which could have a material adverse effect on our financial condition or results of operations.

We have significant operations in foreign countries, including manufacturing facilities, R&D facilities, sales personnel and customer support operations. As of December 31, 2016, we operated, or others operated on our behalf, 30 manufacturing plants (which include a total of 75 production units) at 23 sites around the world, including in Colombia, Germany, The Netherlands, Belgium, Finland, Sweden, China, South Korea, Indonesia, Japan, Taiwan, and the United States. Our international operations are subject to risks inherent in doing business in foreign countries, including, but not necessarily limited to:

- new and different legal and regulatory requirements in local jurisdictions;
- uncertainties regarding interpretation and enforcement of laws and regulations;
- variation in political and economic policy of the local governments and social conditions;
- export duties or import quotas;
- domestic and foreign customs and tariffs or other trade barriers;
- potential staffing difficulties and labor disputes;
- managing and obtaining support and distribution for local operations;
- increased costs of transportation or shipping;
- credit risk and financial conditions of local customers and distributors;
- potential difficulties in protecting intellectual property;
- risk of nationalization of private enterprises by foreign governments;
- potential imposition of restrictions on investments;
- potentially adverse tax consequences, including imposition or increase of withholding and other taxes on remittances and other payments by subsidiaries;
- legal restrictions on doing business in or with certain nations, certain parties and/or certain products;
- foreign currency exchange restrictions and fluctuations; and
- local economic, political and social conditions, including the possibility of hyperinflationary conditions and political instability.

We may not be successful in developing and implementing policies and strategies to address the foregoing factors in a timely and effective manner at each location where we do business. Consequently, the occurrence of one or more of the foregoing factors could have a material adverse effect on our international operations or upon our financial condition and results of operations.

Our operations in developing markets could expose us to political, economic and regulatory risks that are greater than those we may face in established markets. For example, we operate in some nations that have experienced significant levels of governmental corruption. Any failure by us to ensure that our employees and agents comply with applicable laws and regulations in foreign jurisdictions could result in substantial civil and criminal penalties or restrictions on our ability to conduct business in certain foreign jurisdictions or reputational damage, and our results of operations and financial condition could be materially and adversely affected.

Risks Related to Our Ordinary Shares

We are a Luxembourg company and, as a result, shareholders may have difficulty effecting service of process or litigation against us or our officers and directors and will not have the same protections afforded to shareholders of a company incorporated in Delaware.

We are organized under the laws of the Grand Duchy of Luxembourg. Many of our assets are located outside the United States and some of our directors and officers reside outside the United States and most of their assets are located outside the United States. As a result, investors may find it more difficult to effect service of process within the United States upon us or these persons or to enforce outside the United States judgments obtained against us or these persons in U.S. courts, including judgments in actions predicated upon the civil liability provisions of the U.S. federal securities laws. Likewise, it may also be difficult for an investor to enforce in U.S. courts judgments obtained against us or these persons in courts located in jurisdictions outside the United States, including actions predicated upon the civil liability provisions of the U.S. federal securities laws. It may also be difficult for an investor to bring an original action in a Luxembourg court predicated upon the civil liability provisions of the U.S. federal securities laws against us or these persons. Luxembourg law does not recognize a shareholder's right to bring a derivative action on behalf of a company.

Our corporate affairs are governed by our articles of association and by the laws of the Grand Duchy of Luxembourg. The rights of our shareholders and the responsibilities of our directors and officers under Luxembourg law are different from those applicable to a corporation incorporated in Delaware, or any other state of the United States. Luxembourg law and regulations in respect of corporate governance matters might not be as protective of minority shareholders as the General Corporation Law of the State of Delaware or other state corporation laws. Therefore, our shareholders may have more difficulty in protecting their interests in connection with actions taken by our directors and officers or our principal shareholders than they would as shareholders of a Delaware corporation or a corporation incorporated in another state of the United States.

Provisions in our organizational documents and Luxembourg law may deter takeover efforts or other actions that could be beneficial to shareholder value.

Our articles of association and Luxembourg law contain provisions that could make it harder for a third party to acquire us, even if doing so might be beneficial to our shareholders. These provisions include a staggered board of directors, the ability of the board of directors to approve a merger or other acquisition and to issue additional ordinary shares without shareholder approval that could be used to dilute a potential hostile acquirer. As a result, you may lose your ability to sell your ordinary shares for a price in excess of the prevailing market price due to these protective measures, and efforts by shareholders to change the direction or management of the company may be unsuccessful.

Pursuant to Luxembourg corporate law, existing shareholders are generally entitled to preemptive subscription rights in the event of capital increases and issues of shares against cash contributions. However, our board of directors is authorized to waive, limit or suppress such pre-emptive subscription rights until May 13, 2019. Furthermore, our shareholders may renew, expand or amend this authorization, which could result in the extension of the waiver beyond the initial five year period, at a future general meeting of shareholders.

Your percentage ownership in us may be diluted by future equity issuances, which could reduce your influence over matters on which shareholders vote.

Our board of directors has the authority, without action or vote of our shareholders, to issue all or any part of our authorized but unissued ordinary shares, including shares issuable upon the exercise of options. Issuances of ordinary shares would reduce your influence over matters on which our shareholders vote and, in the case of issuances of preferred stock, would likely result in your interest in us being subject to the prior rights of holders of that preferred stock.

The Company has a limited history of distributions to shareholders, and is subject to certain conditions under Luxembourg law that may restrict future distributions to shareholders.

The Company has a limited history of distributions to shareholders. Under Luxembourg law, cash dividends must be paid from statutory accounting profits and approved by shareholders. Trinseo S.A. generally does not have statutory accounting profits as a holding company without operations. Additionally, cash distributions may be made to shareholders through the board of directors' authorization of repayments of shareholder equity. These repayments of equity are utilizing Trinseo S.A.'s distributable reserves, which is generally its statutory share premium less minimum legal reserves.

Even if statutory requirements are satisfied to pay dividends or make other cash distributions, the Company's board may choose to retain future earnings, if any, for future operations, expansion and debt repayment. Any decision to declare and pay dividends or make other distributions to shareholders, including the repayment of shareholder equity, in the future will be made at the discretion of our board of directors and will depend on, among other things, our results of operations, financial condition, cash requirements, contractual restrictions and other factors that our board of directors may deem relevant. Even though our board has elected to make quarterly cash distributions to shareholders via repayments of equity, it does not guarantee the board will continue to do so in the future.

Item 1B. *Unresolved Staff Comments*

None.

Item 2. *Properties*

We own and operate 59 production units at 15 sites around the world. In addition, we source products from another 16 production units at 8 joint venture sites. We also own or lease other properties, including office buildings, warehouses, research and development facilities, testing facilities and sales offices.

The following table sets forth a list of our principal offices, production sites and other facilities as of December 31, 2016.

Site Name	Location	Leased/owned	Products/Functions	Business Segments
Corporate Offices				
Berwyn	USA (PA)	Leased	Global operating headquarters	Not applicable
Hong Kong	Hong Kong	Leased	Regional operating center	Not applicable
Horgen	Switzerland	Leased	Regional operating center	Not applicable
Midland	USA (MI)	Leased	Regional operating center	Not applicable
Production Sites				
Boehlen*	Germany	Leased	Styrene monomer	Feedstocks
Dalton	USA (GA)	Owned	Latex	Latex Binders
Hamina	Finland	Owned	Latex	Latex Binders
Hsinchu	Taiwan	Owned	Compounds and blends	Performance Plastics
Merak++	Indonesia	Owned	Latex, Polystyrene	Latex Binders, Basic Plastics
Midland*	USA (MI)	Leased	ABS, Latex, PC, Compounds and blends	Latex Binders, Performance Plastics, Basic Plastics
Norrkoping	Sweden	Owned	Latex	Latex Binders
Rheinmunster*	Germany	Leased	Latex	Latex Binders
Schkopau*	Germany	Leased	ESBR, SSSBR, PBR, Polystyrene	Synthetic Rubber, Basic Plastics
Stade*	Germany	Leased	PC	Basic Plastics
Terneuzen*	The Netherlands	Leased	Compounds and blends, Latex, Styrene monomer, ABS, Polystyrene	Latex Binders, Performance Plastics, Basic Plastics, Feedstocks
Tessenderlo*	Belgium	Leased	Polystyrene	Basic Plastics
Tsing Yi+	Hong Kong	Leased	Polystyrene	Basic Plastics
Ulsan	Korea	Owned	Latex	Latex Binders
Zhangjiagang*	China	Leased	Latex	Latex Binders
R&D Facilities				
Dalton	USA (GA)	Owned	Latex	Latex Binders
Hsinchu	Taiwan	Owned	Performance plastics	Performance Plastics
Midland 1300	USA (MI)	Leased	Latex	Latex Binders
Midland 1604	USA (MI)	Leased	Performance plastics and Latex	Performance Plastics, Latex Binders
Rheinmunster	Germany	Leased	Latex	Latex Binders
Samstagern	Switzerland	Leased	Latex	Latex Binders
Schkopau	Germany	Leased	Synthetic rubber	Synthetic Rubber
Shanghai	China	Leased	Latex	Latex Binders
Terneuzen	The Netherlands	Leased	Performance plastics	Performance Plastics
Tsing Yi	Hong Kong	Leased	Performance plastics	Performance Plastics
Joint Ventures				
<i>Americas Styrenics</i>				
Allyn's Point	USA (CT)	Leased	Polystyrene	Americas Styrenics
Cartegena	Colombia	Owned	Polystyrene	Americas Styrenics
Hanging Rock	USA (OH)	Leased	Polystyrene	Americas Styrenics
Joliet	USA (IL)	Owned	Polystyrene	Americas Styrenics
Marietta	USA (OH)	Owned	Polystyrene	Americas Styrenics
St. James	USA (LA)	Owned	Styrene monomer	Americas Styrenics
Torrance	USA (CA)	Leased	Polystyrene	Americas Styrenics
<i>Sumika Styron Polycarbonate</i>				
Niihama	Japan	Owned	Polycarbonate	Basic Plastics

* Facility co-located with Dow facilities under ground lease agreements. Plant facilities are owned by us.

+ Facility located on property owned by the applicable government.

++ Facility located on property under certification with right to build.

We believe that our properties and equipment are generally in good operating condition and are adequate for our present needs. Production capacity at our sites can vary depending upon product mix and operating conditions.

Our global production facilities are certified to ISO 9001 standards. Our manufacturing facilities have established reliability and maintenance programs and leverage production between sites to maximize efficiency.

Our plants have similar layouts, technology and manufacturing processes, depending upon the product being manufactured. We believe this global uniformity creates a key competitive advantage for us, and helps lower overall operating costs.

Item 3. Legal Proceedings

From time to time we may be subject to various legal claims and proceedings incidental to the normal conduct of business, relating to such matters as product liability, antitrust, competition, waste disposal practices, release of chemicals into the environment and other matters that may arise in the ordinary course of our business. We currently believe that there is no litigation pending that is likely to have a material adverse effect on our business. Regardless of the outcome, legal proceedings can have an adverse impact on us because of defense and settlement costs, diversion of management resources and other factors.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

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

The principal market on which our ordinary shares is traded is the New York Stock Exchange, under the ticker symbol “TSE”. As of February 24, 2017, there were two record holders of our ordinary shares and 48,777,934 ordinary shares issued and 43,958,209 ordinary shares outstanding. By including persons holding shares in broker accounts under street names, however, we estimate that we have approximately 19,450 beneficial holders.

The table below sets forth the market prices and cash distributions declared for each quarter of 2016 and 2015.

	Price Range		Repayments of Equity or Dividends Declared per share
	High	Low	
2016			
Quarter ended March 31, 2016	\$ 39.23	\$ 21.92	\$ —
Quarter ended June 30, 2016	\$ 49.72	\$ 36.19	\$ 0.30
Quarter ended September 30, 2016	\$ 60.02	\$ 41.60	\$ 0.30
Quarter ended December 31, 2016	\$ 62.30	\$ 44.70	\$ 0.30
2015			
Quarter ended March 31, 2015	\$ 20.76	\$ 14.14	\$ —
Quarter ended June 30, 2015	\$ 30.44	\$ 19.42	\$ —
Quarter ended September 30, 2015	\$ 33.69	\$ 23.46	\$ —
Quarter ended December 31, 2015	\$ 32.96	\$ 24.80	\$ —

Any future determination to pay dividends or make other cash distributions to our shareholders will be at the discretion of our board of directors, subject to compliance with covenants in current and future agreements governing our indebtedness and applicable Luxembourg law, and will depend upon our results of operations, financial condition, capital requirements and other factors that our board of directors deems relevant. Further discussion of these restrictions is included in Item 7—*Management’s Discussion and Analysis of Financial Conditions and Results of Operations*.

Performance Graph

The following performance graph reflects the comparative changes in the value from June 12, 2014, the first trading day of our ordinary shares on the NYSE, through December 31, 2016, assuming an initial investment of \$100 and the reinvestment of dividends or other cash distributions, if any, in (1) our ordinary shares, (2) the S&P 500 Index, and (3) the S&P Small Cap 600 Chemicals Index. The share price performance shown in the graph is not necessarily indicative of future price performance.



Purchases of equity securities by the Company and affiliated purchasers

Issuer Purchases of Equity Securities

Period	Total number of shares purchased	Average price paid per share	Total number of shares purchased as part of publicly announced plans or programs	Approximate number of shares that may yet be purchased under the plans or programs
October 1 - October 31, 2016	—	\$ —	—	— (1)
November 1 - November 30, 2016	29,239	\$ 54.42	29,239	2,711,567 (1)
December 1 - December 31, 2016	379,500	\$ 60.01	379,500	2,332,067 (1)
Total	408,739	\$ 59.61	408,739	

(1) The general meeting of our shareholders on June 21, 2016 authorized the Company to repurchase up to 4.5 million ordinary shares at a price per share of not less \$1.00 and not more than \$1,000. This authorization ends on June 21, 2018 or on the date of its renewal by a subsequent general meeting of shareholders. On November 1, 2016 the Company announced that the board of directors had authorized the Company to repurchase, subject to market and other conditions, the remaining shares left under the 2016 share repurchase authorization.

Luxembourg Tax Considerations

Tax Regime Applicable to Capital Gains Realized Upon Disposal of Shares

The following is a summary discussion of the material Luxembourg tax considerations of the acquisition, ownership and disposition of your ordinary shares that may be applicable to you. It is not intended to be, nor should it be construed to be, legal or tax advice. This discussion is based on Luxembourg laws and regulations as they stand on the date of this report and is subject to any change in law or regulations or changes in interpretation or application thereof (and which may possibly have a retroactive effect). Investors should therefore consult their own professional advisers as to the effects of state, local or foreign laws and regulations, including Luxembourg tax law and regulations, to which they may be subject. As used herein, a “Luxembourg individual” means an individual resident in Luxembourg who is subject to personal income tax (impôt sur le revenu) on his or her worldwide income from Luxembourg or foreign sources, and a “Luxembourg corporate holder” means a company (that is, a fully taxable collectivité within the meaning of Article 159 of the Luxembourg Income Tax Law) resident in Luxembourg subject to corporate income tax (impôt sur le revenu des collectivités) on its worldwide income from Luxembourg or foreign sources. For purposes of this discussion, Luxembourg individuals and Luxembourg corporate holders of our ordinary shares are collectively referred to as “Luxembourg Holders.” A “non-Luxembourg Holder” means any investor in our ordinary shares other than a Luxembourg Holder.

Luxembourg individual holders. For Luxembourg individuals holding (together, directly or indirectly, with his or her spouse or civil partner or minor children) 10% or less of the share capital of Trinseo, capital gains will only be taxable if they are realized on a sale of shares, which takes place before their acquisition or within the first six months following their acquisition. The capital gain or liquidation proceeds will be taxed at progressive income tax rates.

For Luxembourg individuals holding (together with his/her spouse or civil partner and minor children) directly or indirectly more than 10% of the capital of Trinseo, capital gains will be taxable at a special rate, if the disposal or liquidation takes place:

- within six months from the acquisition, the capital gain or liquidation proceeds will be taxed at progressive income tax rates (ranging from 0 to 42.0% for 2017).
- after six months from the acquisition, the capital gain or the liquidation proceeds will be taxed at a reduced tax rate corresponding to half of the investor’s global tax rate and EUR 50,000 (doubled for taxpayers filing jointly) of gains realized over a ten-year period are exempt from taxation.

Luxembourg corporate holders. Capital gains realized upon the disposal of shares by a Luxembourg corporate holder will in principle be subject to corporate income tax and municipal business tax. The combined applicable rate (including an unemployment fund contribution) will be 27.08% for the fiscal year ending 2017 for a Luxembourg corporate holder established in Luxembourg-City. An exemption from such taxes may be available to the Luxembourg corporate holder pursuant to Article 166 of the Luxembourg Income Tax law subject to the fulfillment of the conditions set forth therein. The scope of the capital gains exemption may be limited in the cases provided by the Grand Ducal Decree of December 21, 2001.

Non-Luxembourg Holders

An individual non-Luxembourg Holder of shares will only be subject to Luxembourg taxation on capital gains arising upon disposal of such shares if such holder has (together with his or her spouse or civil partner and underage children) directly or indirectly held more than 10% of the capital of Trinseo, at any time during the five years preceding the disposal, and either (i) such holder has been a resident of Luxembourg for tax purposes for at least 15 years and has become a non-resident within the five years preceding the realization of the gain, subject to any applicable tax treaty, or (ii) the disposal of shares occurs within six months from their acquisition (or prior to their actual acquisition), subject to any applicable tax treaty. If we and a U.S. relevant holder are eligible for the benefits of the Convention Between the Government of the Grand Duchy of Luxembourg and the Government of the United States for the Avoidance of Double Taxation and the Prevention of Fiscal Evasion with Respect to Taxes on Income and Capital (the “Luxembourg-U.S. Treaty”), such U.S. relevant holder generally should not be subject to Luxembourg tax on the gain from the disposal of such shares unless such gain is attributable to a permanent establishment of such U.S. relevant holder in Luxembourg.

Subject to any restrictions imposed by the substantially and regularly traded clause in the limitation on benefits article of the Luxembourg-U.S. treaty, we expect to be eligible for the benefits of the Luxembourg-U.S. Treaty.

A corporate non-Luxembourg Holder (that is, a collectivité within the meaning of Article 159 of the Luxembourg Income Tax Law), which has a permanent establishment, a permanent representative or fixed place of business in Luxembourg to which shares would be attributable, will bear corporate income tax and municipal business tax on a gain realized on a disposal of such shares as set forth above for a Luxembourg corporate holder. However, gains realized on the sale of the shares may benefit from the full exemption provided for by Article 166 of the Luxembourg Income Tax Law and by the Grand Ducal Decree of December 21, 2001 subject in each case to fulfillment of the conditions set out therein.

A corporate non-Luxembourg Holder, which has a permanent establishment, permanent representative or fixed place of business in Luxembourg to which the shares would be attributable will not be subject to any Luxembourg tax on a gain realized on a disposal of such shares unless such holder holds, directly or through tax transparent entities, more than 10% of the share capital of Trinseo, and the disposal of shares occurs within six months from their acquisition (or prior to their actual acquisition), subject to any applicable tax treaty. If we and a U.S. corporate holder without a permanent establishment in Luxembourg are eligible for the benefits of the Luxembourg-U.S. Treaty, such U.S. corporate holder generally should not be subject to Luxembourg tax on the gain from the disposal of such shares.

Tax Regime Applicable to Distributions

Withholding Tax. Dividend distributions by Trinseo are subject to a withholding tax of 15%. Distributions by the Company sourced from a reduction of capital as defined in Article 97 (3) of the Luxembourg Income Tax Law including, among others, share premium should not be subject to withholding tax provided that such reduction of capital is motivated by serious business reasons as meant in said provision. We or the applicable paying agent will withhold on a distribution if required by applicable law.

Where a withholding needs to be applied, the rate of the withholding tax may be reduced pursuant to the double tax treaty existing between Luxembourg and the country of residence of the relevant holder, subject to the fulfillment of the conditions set forth therein. If we and a U.S. relevant holder are eligible for the benefits of the Luxembourg-U.S. Treaty, the rate of withholding on distributions generally is 15% or 5% if the U.S. relevant holder is a beneficial owner that owns at least 10% of our voting stock.

No withholding tax applies if the distribution is made to (i) a Luxembourg resident corporate holder (that is, a fully taxable collectivité within the meaning of Article 159 of the Luxembourg Income Tax Law), (ii) a corporation which is resident of a Member State of the European Union and is referred to by article 2 of the Council Directive of July 23, 1990 concerning the common fiscal regime applicable to parent and subsidiary companies of different member states (90/435/EEC), (iii) a corporation or a cooperative resident in Norway, Iceland or Liechtenstein and subject to a tax comparable to corporate income tax as provided by Luxembourg Income Tax Law, (iv) a corporation resident in Switzerland which is subject to corporate income tax in Switzerland without benefiting from an exemption, (v) a corporation subject to a tax comparable to corporate income tax as provided by Luxembourg Income Tax Law which is resident in a country that has concluded a tax treaty with Luxembourg and (vi) a Luxembourg permanent establishment of one of the above-mentioned categories, provided each time that at the date of payment, the holder has held or commits itself to continue to hold directly or through a tax transparent vehicle, during an uninterrupted period of at least twelve months, shares representing at least 10% of the share capital of Trinseo or which had an acquisition price of at least EUR 1,200,000.

Equity Repayment. The repayment of equity, by the Company is not treated as a dividend distribution under Luxembourg law, and therefore is not subject to any withholding tax, provided: (i) the Company has no statutory reserves or profits at the Company level, and (ii) the capital decrease is motivated by sound business reasons. The Company did not have any statutory profits or reserves as of December 31, 2015. In case the Company does not have sound business reasons to provide a repayment of equity, the entire amount repaid will be subject to a 15% withholding tax, unless the conditions for an exemption or a reduction from the withholding tax on dividends set forth above are met.

Luxembourg Holders

Dividend and liquidation proceeds are in principle taxable at the general income tax rates indicated above. A partial dividend exemption may be available to Luxembourg Holders pursuant to Article 115.15a of the Luxembourg

Income Tax law or a full dividend exemption may be available to a Luxembourg corporate holder pursuant to Article 166 of the Luxembourg Income Tax law, subject to the fulfillment of the conditions set forth therein.

Non-Luxembourg Holders

Non-Luxembourg holders of the shares who have neither a permanent establishment, permanent representative nor a fixed place of business in Luxembourg to which the shares would be attributable are not liable for any Luxembourg tax on dividends paid on the shares, other than a potential withholding tax as described above.

Net Wealth Tax

Luxembourg Holders

Luxembourg net wealth tax will not be levied on a Luxembourg Holder with respect to the shares held unless the Luxembourg Holder is an entity subject to net wealth tax in Luxembourg.

Net wealth tax is levied annually at the rate of 0.5% on the net wealth of enterprises resident in Luxembourg, as determined for net wealth tax purposes. The shares may be exempt from net wealth tax subject to the conditions set forth by Article 60 of the Law of October 16, 1934 on the valuation of assets (Bewertungsgesetz), as amended.

Non-Luxembourg Holders

Luxembourg net wealth tax will not be levied on a non-Luxembourg Holder with respect to the shares held unless the shares are attributable to an enterprise or part thereof which is carried on through a permanent establishment or a permanent representative in Luxembourg.

Stamp and Registration Taxes

No registration tax or stamp duty will be payable by a holder of shares in Luxembourg solely upon the disposal of shares or by sale or exchange.

Item 6. Selected Financial Data

The following table sets forth our selected historical financial and operating data and other information. The historical results of operations data for the years ended December 31, 2016, 2015, and 2014, and the historical balance sheet data as of December 31, 2016 and 2015 presented below were derived from our audited consolidated financial statements and the related notes thereto included elsewhere within this Annual Report. The historical results of operations data for the years ended December 31, 2013 and 2012 and the historical balance sheet data as of December 31, 2014, 2013, and 2012 were derived from our audited financial statements and the related notes thereto not included within this Annual Report. Our historical results are not necessarily indicative of the results to be expected for any future periods.

You should read the information contained in this table in conjunction with Item 7—*Management's Discussion and Analysis of Financial Condition and Results of Operations* and the audited financial statements and the related notes thereto included elsewhere in this Annual Report.

Definitions of capitalized terms not defined herein appear in the notes to our consolidated financial statements.

(in millions, except per share data)	Year Ended December 31,				
	2016	2015	2014	2013	2012
Statement of Operations Data:					
Net sales ⁽¹⁾	\$ 3,716.6	\$ 3,971.9	\$ 5,128.0	\$ 5,307.4	\$ 5,451.9
Cost of sales ⁽¹⁾	3,129.0	3,502.8	4,830.6	4,949.4	5,115.2
Gross profit	587.6	469.1	297.4	358.0	336.7
Selling, general and administrative expenses	241.5	208.0	232.6	216.9	182.0
Equity in earnings of unconsolidated affiliates	144.7	140.2	47.7	39.1	27.1
Operating income	490.8	401.3	112.5	180.2	181.8
Interest expense, net	75.0	93.2	124.9	132.0	110.0
Loss on extinguishment of long-term debt ⁽²⁾	—	95.2	7.4	20.7	—
Other expense (income), net	10.5	9.1	27.8	27.9	24.0
Income (loss) before income taxes	405.3	203.8	(47.6)	(0.4)	47.8
Provision for income taxes	87.0	70.2	19.7	21.8	17.5
Net income (loss)	\$ 318.3	\$ 133.6	\$ (67.3)	\$ (22.2)	\$ 30.3
Weighted average shares— basic	46.5	48.8	43.5	37.3	16.1
Net income (loss) per share— basic	\$ 6.84	\$ 2.74	\$ (1.55)	\$ (0.60)	\$ 1.88
Weighted average shares— diluted	47.5	49.0	43.5	37.3	16.1
Net income (loss) per share— diluted	\$ 6.70	\$ 2.73	\$ (1.55)	\$ (0.60)	\$ 1.88
Repayments of equity per share	\$ 0.90	\$ —	\$ —	\$ —	\$ —

(in millions)	Year Ended December 31,				
	2016	2015	2014	2013	2012
Other Financial Data:					
Depreciation and amortization	\$ 96.4	\$ 96.8	\$ 103.7	\$ 95.2	\$ 85.6
Capital expenditures, net of subsidy ⁽³⁾	123.9	107.1	98.6	54.8	112.4
Balance Sheet Data:					
Cash and cash equivalents	\$ 465.1	\$ 431.3	\$ 220.8	\$ 196.5	\$ 236.4
Working capital ⁽⁴⁾	890.7	839.8	748.7	810.2	778.1
Total assets ⁽⁵⁾	2,409.5	2,258.9	2,356.1	2,574.8	2,665.7
Debt ⁽⁵⁾	1,187.4	1,207.8	1,202.2	1,336.4	1,453.6
Total liabilities ⁽⁵⁾	1,964.4	1,869.9	2,035.3	2,231.6	2,374.0
Total shareholders' equity	445.1	389.0	320.9	343.2	291.7

- (1) Net sales and cost of sales increase or decrease based on fluctuations in raw material prices. Consistent with industry practice, and as permitted under agreements with many of our customers, raw material price changes are generally passed through to customers by means of corresponding price changes.
- (2) For the year ended December 31, 2015, the loss on extinguishment of debt of \$95.2 million related to the Company's debt refinancing in May 2015, and was comprised of both a call premium and the write-off of unamortized deferred financing fees. For the year ended December 31, 2014, the loss on extinguishment of debt related to the July 2014 redemption of \$132.5 million in aggregate principal amount of the 2019 Senior Notes, using a portion of the proceeds from our initial public offering. For the year ended December 31, 2013, the loss on extinguishment of debt related to the January 2013 amendment of our 2018 Senior Secured Credit Facility and the repayment of \$1,239.0 million of outstanding term loans.
- (3) Represents capital expenditures, net of government subsidies received for SSBR expansion of \$2.2 million, \$18.8 million and \$6.1 million for the years ended December 31, 2015, 2013 and 2012, respectively. No government subsidies were received in the years ended December 31, 2016 and 2014. During the year ended December 31, 2016, the Company completed the upgrade of its legacy enterprise resource planning ("ERP") environment to the latest version of SAP, resulting in capitalized software of \$57.4 million. The majority of the capital spending for this project occurred in 2016. For the year ended December 31, 2014, capital expenditures included approximately \$26.1

million for the reacquisition of production capacity rights at the Company's rubber production facility in Schkopau, Germany.

- (4) Working capital is defined as current assets minus current liabilities.
- (5) In April 2015, the Financial Accounting Standards Board ("FASB") issued guidance that requires deferred financing fees related to a recognized debt liability be presented on the consolidated balance sheets as a direct reduction of the carrying value of that debt liability, consistent with debt discounts. The recognition and measurement guidance for deferred financing fees are not affected. The Company adopted this guidance effective January 1, 2016. Balances as of December 31, 2015 presented herein have been retrospectively adjusted to reflect this adoption, with resulting impacts to the captions "Total assets" and "Total liabilities". Balances presented for all periods within the "Debt" caption above reflect gross debt balances outstanding at each period end, and do not reflect a reduction for the reclassification of unamortized deferred financing fees noted above.

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

The following discussion summarizes the significant factors affecting the operating results, financial condition, liquidity and cash flows of our Company as of and for the periods presented below. The following discussion and analysis should be read in conjunction with Item 6 — “Selected Financial Data” and the audited consolidated financial statements and the accompanying notes thereto, included elsewhere within this Annual Report. The statements in this discussion regarding industry outlook, our expectations regarding our future performance, liquidity and capital resources and all other non-historical statements in this discussion are forward-looking statements and are based on the beliefs of our management, as well as assumptions made by, and information currently available to, our management. Actual results could differ materially from those discussed in or implied by forward-looking statements as a result of various factors, including those discussed below and elsewhere within this Annual Report, particularly in Item 1A—“Risk Factors.” Definitions of capitalized terms not defined herein appear in the notes to our consolidated financial statements.

2016 Highlights

We had strong performance in fiscal year 2016, with record net income of \$318.3 million and Adjusted EBITDA of \$610.9 million. This included continued steady improvement within our Performance Materials division, as well as record results from our Basic Plastics & Feedstocks division. We continued to focus efforts on investing in growth areas, reducing costs through streamlining of our portfolio and asset footprint, generating cash, and improving our net leverage and reducing interest expense. Refer to “Non-GAAP Performance Measures” below for further discussion of our use of non-GAAP measures in evaluating our performance. Other highlights of 2016 are described below.

New Segmentation

Effective October 1, 2016, the Company realigned its reporting segments to reflect the new model under which the business will be managed and results will be reviewed by the chief executive officer, who is the Company’s chief operating decision maker. This change in segments is being made to provide increased clarity and understanding around the drivers of profitability and cash flow of the Company. The previous Basic Plastics & Feedstocks segment was split into three new segments: Basic Plastics, which includes polystyrene, copolymers, and polycarbonate; Feedstocks, which represents the Company’s styrene monomer business; and Americas Styrenics, which reflects the equity earnings from its 50%-owned styrenics joint venture. In addition, certain highly differentiated ABS supplied into Performance Plastics markets, which was previously included in the results of Basic Plastics & Feedstocks, is now included in Performance Plastics. Finally, the Latex segment was renamed to Latex Binders.

Secondary Offerings

During the year ended December 31, 2016, Bain Capital Everest Manager Holding SCA (the “former Parent”) sold a combined 37,269,567 ordinary shares by means of several secondary offerings pursuant to the Company’s shelf registration statement filed with the SEC. As a result, as of December 31, 2016, the former Parent no longer holds any ownership interest in the Company. Concurrently with the completion of the first of these offerings in March 2016, the Company repurchased 1,600,000 of the ordinary shares that were sold by the former Parent, resulting in an aggregate purchase price of \$57.0 million.

Additional Share Repurchases and Repayments of Equity

During the year ended December 31, 2016, under existing authority from the Company’s board of directors, the Company purchased 2,864,870 ordinary shares from its shareholders through a combination of open market transactions for an aggregate purchase price of \$156.7 million (with \$3.4 million of additional repurchases not yet settled accrued on the consolidated balance sheet as of December 31, 2016). Additionally, beginning in June 2016, the Company’s board of directors began declaring quarterly repayments of equity of \$0.30 per ordinary share to its shareholders. During the year ended December 31, 2016, the declarations for repayments of equity had an aggregate value of \$40.6 million.

Livorno Plant Restructuring

In August 2016, the Company announced its plan to cease manufacturing activities at its latex binders manufacturing facility in Livorno, Italy. This is a result of declining demand for graphical paper and is expected to

provide improved asset utilization, as well as cost reductions within the Company's European latex binders business. Production at the facility ceased in October 2016, with decommissioning activities beginning in 2016 and expected to occur throughout 2017. Total charges of \$20.0 million were incurred during the year ended December 31, 2016 related to this restructuring.

Divestiture of Brazil Businesses

During the second quarter of 2016, the Company signed a definitive agreement to sell its primary operating entity in Brazil, which includes both a latex binders and automotive business. The sale closed on October 1, 2016. As a result, during the year ended December 31, 2016, the Company recorded an impairment charge for the estimated loss on sale of approximately \$15.1 million as well as \$0.7 million of restructuring charges. Refer to Notes 3 and 20 in the consolidated financial statements for further information. We do not expect this divestiture to have a material impact on the Company's ongoing financial position or results of operations.

Appointment of Chief Financial Officer

In May 2016, the Company announced the appointment of Barry Niziolek as Executive Vice President and Chief Financial Officer of Trinseo, effective June 13, 2016.

Factors Affecting Our Operating Results

The following discussion sets forth certain components of our statements of operations as well as factors that impact those items.

Net sales

We generate revenue from the sale of our products across all major geographic areas. Our net sales include total sales less estimates for returns and price allowances. Price allowances include discounts for prompt payment as well as volume-based incentives.

Our overall net sales are generally impacted by the following factors:

- fluctuations in overall economic activity within the geographic markets in which we operate;
- fluctuations in raw material input costs, noting that the selling prices of our products are generally derived, in part, from the current or forecasted costs of our key raw materials, based on either spot pricing or a predetermined lag period, which are then passed through to our customers;
- underlying growth in one or more of our core end markets, either worldwide or in particular geographies in which we operate;
- changes in the level of competition faced by our products, including the substitution by customers of alternative products to ours and the launch of new products by competitors;
- the type of products used within existing customer applications, or the development of new applications requiring products similar to ours;
- the "mix" of products sold, including the proportion of new or improved products and their pricing relative to existing products;
- changes in product sales prices (including volume discounts and cash discounts for prompt payment);
- our ability to successfully develop and launch new products and applications; and
- fluctuations in foreign exchange rates.

While the factors described above impact net sales in each of our segments, the impact of these factors can differ for each segment, as described below. For more information about risks relating to our business refer to Item 1A—*Risk Factors*.

Cost of sales

Our cost of sales consists principally of the following:

- *Production Materials Costs.* The costs of the materials we use in production are the largest element of our overall cost of sales. We seek to use our substantial volumes and global geographic scope to obtain the most favorable terms we can, but our production material costs are affected by global and local market conditions.
- *Employee Costs.* These employee costs include the salary costs and benefit charges for employees involved in our manufacturing operations. These costs generally increase on an aggregate basis as production volumes increase, but may decline as a percent of net sales as a result of economies of scale associated with higher production volumes.
- *Sustaining Engineering Activity Costs.* These costs relate to modifications of existing products for use by new customers in familiar applications.
- *Depreciation and Amortization Expense.* Property, plant, equipment and definite-lived intangible assets are stated at cost and depreciated on a straight-line basis over their estimated useful lives.
- *Other.* Our remaining cost of sales consists of:
 - customer-related development costs;
 - freight costs;
 - warehousing expenses;
 - purchasing costs; and
 - other general manufacturing expenses, such as expenses for utilities and energy consumption.

The main factors that influence our cost of sales as a percent of net sales include:

- changes in the price of raw materials, and timing of corresponding price changes to our customers, which impact our sales margins;
- production volumes;
- the implementation of cost control measures aimed at improving productivity, reductions of fixed production costs, refinements in inventory management and purchasing cost of raw materials; and
- the impact of FIFO method inventory treatment.

Selling, general and administrative expenses

Our selling, general and administrative (“SG&A”) expenses consist of all expenditures incurred in connection with the sale and marketing of our products, as well as administrative overhead costs, including:

- salary and benefit costs for sales personnel and administrative staff, including stock-based compensation expense. Expenses relating to our sales personnel generally increase or decrease principally with changes in sales volume due to the need to increase or decrease sales personnel to meet changes in demand. Expenses relating to administrative personnel generally do not increase or decrease directly with changes in sales volume;
- other administrative expenses, including expenses related to logistics, information systems and legal and accounting services;
- general advertising expenses;
- research and development expenses; and
- other selling expenses, such as expenses incurred in connection with travel and communications.

Changes in SG&A expense as a percent of net sales have historically been impacted by a number of factors, including:

- changes in sales volume, as higher volumes enable us to spread the fixed portion of our administrative expense over higher sales;
- changes in the mix of products we sell, as some products may require more customer support and sales effort than others;
- changes in our customer base, as new customers may require different levels of sales and marketing attention;
- new product launches in existing and new markets, as these launches typically involve more intense sales activity before they are integrated into customer applications;
- customer credit issues requiring increases to the allowance for doubtful accounts; and
- the implementation of cost control measures, including costs incurred in conjunction with restructuring activities, aimed at improving productivity and overall profitability (refer to Note 20 in the consolidated financial statements for details of restructuring activities in the periods presented herein).

Interest expense, net

Interest expense, net consists primarily of interest expense on institutional borrowings and other financing obligations. Interest expense, net also includes the amortization of deferred financing fees and debt discount associated with our financing agreements offset by interest income primarily associated with cash-on-hand. Factors affecting interest expense include fluctuations in the market interest rate, our borrowing activities and our outstanding debt balances.

Provision for income taxes

We and our subsidiaries are subject to income tax in the various jurisdictions in which we operate. While the extent of our future tax liability is uncertain, changes to the debt and equity capitalization of our subsidiaries and the realignment of the functions performed and risks assumed by the various subsidiaries are among the factors that will determine the future book and taxable income of the respective subsidiary and the Company as a whole.

Results of Operations

Results of Operations for the Years Ended December 31, 2016, 2015 and 2014

The table below sets forth our historical results of operations, and these results as a percentage of net sales for the periods indicated:

(in millions)	Year Ended December 31,					
	2016	Percentage	2015	Percentage	2014	Percentage
Net sales	\$ 3,716.6	100.0 %	\$ 3,971.9	100.0 %	\$ 5,128.0	100.0 %
Cost of sales	3,129.0	84.2 %	3,502.8	88.2 %	4,830.6	94.2 %
Gross profit	587.6	15.8 %	469.1	11.8 %	297.4	5.8 %
Selling, general and administrative expenses	241.5	6.5 %	208.0	5.2 %	232.6	4.5 %
Equity in earnings of unconsolidated affiliates	144.7	3.9 %	140.2	3.5 %	47.7	0.9 %
Operating income	490.8	13.2 %	401.3	10.1 %	112.5	2.2 %
Interest expense, net	75.0	2.0 %	93.2	2.3 %	124.9	2.4 %
Loss on extinguishment of long-term debt	—	— %	95.2	2.4 %	7.4	0.1 %
Other expense, net	10.5	0.3 %	9.1	0.2 %	27.8	0.5 %
Income (loss) before income taxes	405.3	10.9 %	203.8	5.2 %	(47.6)	(0.8)%
Provision for income taxes	87.0	2.3 %	70.2	1.8 %	19.7	0.4 %
Net income (loss)	<u>\$ 318.3</u>	<u>8.6 %</u>	<u>\$ 133.6</u>	<u>3.4 %</u>	<u>\$ (67.3)</u>	<u>(1.2)%</u>

2016 vs. 2015

Net Sales

Of the 6.4% decrease in net sales, 5.0% was due to lower selling prices primarily due to the pass through of lower raw material costs, particularly lower styrene and butadiene costs to customers across our segments. Also driving this reduction in net sales was a decrease of 1.0% due to sales volume, primarily within Performance Plastics and Basic Plastics, and a decrease of 0.4% due to an unfavorable currency impact across our segments, as the euro weakened in comparison to the U.S. dollar on a year-to-date basis.

Cost of Sales

Of the 10.7% decrease in cost of sales, 8.6% was attributable to lower prices for raw materials, primarily butadiene and styrene monomer, while an additional 1.0% of the decrease was due to lower sales volume primarily within Performance Plastics and Basic Plastics. Also contributing to the decrease was a 0.6% impact from the reduction in fixed costs due to prior year plant maintenance activities and a 0.4% decrease due to a favorable currency impact across our segments, as the euro weakened in comparison to the U.S. dollar on a year-to-date basis.

Gross Profit

The increase in gross profit was primarily attributable to higher margins across our segments, especially in styrene, styrenic polymers, and PC within Feedstocks and Basic Plastics. Partially offsetting this increase was an unfavorable volume impact, primarily within Performance Plastics and Basic Plastics, as well as an unfavorable currency impact as the euro weakened in comparison to the U.S. dollar on a year-to-date basis.

Selling, General and Administrative Expenses

The majority of the increase in SG&A expenses was driven by \$15.8 million of increased restructuring charges, primarily related to the Company's decision to cease manufacturing activities at our latex binders facility in Livorno, Italy. In addition, \$8.4 million of the increase was related to an increase in stock-based compensation expense, which included \$2.9 million of one-time accelerated expense as a result of the complete liquidation of the former Parent's

ownership interest in the Company through secondary offerings. Refer to Notes 20 and 17, respectively, in the consolidated financial statements for further information. Also driving this change were increased employee benefit costs, costs from additional resources supporting growth initiatives, and certain costs incurred to support secondary offerings of the former Parent (refer to Note 18 in the consolidated financial statements).

Equity in Earnings of Unconsolidated Affiliates

Equity earnings increased slightly in 2016, as equity earnings from Americas Styrenics increased by \$0.5 million, from \$135.3 million in 2015 to \$135.8 million in 2016, and equity earnings from Sumika Styron Polycarbonate increased by \$4.0 million, from \$4.9 million in 2015 to \$8.9 million in 2016. The improvement in results from Sumika Styron Polycarbonate was driven primarily by improved PC market conditions.

On January 31, 2017, the Company completed the sale of its 50% share in Sumika Styron Polycarbonate to Sumitomo Chemical Company Limited. Refer to Note 24 in the consolidated financial statements for further information.

Interest Expense, Net

The decrease in interest expense, net was primarily attributable to the impact of the debt refinancing executed in May 2015, which reduced applicable interest rates. Refer to Note 10 in the consolidated financial statements for further information.

Loss on Extinguishment of Long-Term Debt

Loss on extinguishment of long-term debt was \$95.2 million for the year ended December 31, 2015 related to the Company's debt refinancing in May 2015. This amount was comprised of a \$68.6 million call premium paid to retire the Company's 2019 Senior Notes and a \$25.9 million write-off of unamortized deferred financing fees related to these notes, as well as the write-off of \$0.7 million of unamortized deferred financing fees related to the termination of the Company's 2018 Revolving Facility.

Other Expense, net

Other expense, net for the year ended December 31, 2016 was \$10.5 million, driven by an impairment charge for the estimated loss on sale of its latex binders and automotive businesses in Brazil of approximately \$15.1 million. Refer to Note 3 in the consolidated financial statements for further information. Additionally, net foreign exchange transaction losses for the period were \$1.8 million. Included in these net losses of \$1.8 million were foreign exchange transaction losses of \$5.5 million, primarily driven by the remeasurement of our euro denominated payables due to the relative changes in rates between the U.S. dollar and the euro during the period, offset by \$3.7 million in gains from our foreign exchange forward contracts. Partially offsetting these net losses was \$6.4 million of other income, which primarily related to the effective settlement of certain value-added tax positions during the period.

Other expense, net for the year ended December 31, 2015 was \$9.1 million, which consisted primarily of net foreign exchange transaction losses of approximately \$10.4 million. These net foreign exchange transactions losses were comprised of foreign exchange transaction gains of \$6.1 million primarily driven by the remeasurement of our euro denominated payables due to the relative changes in rates between the U.S. dollar and the euro during the period, more than offset by losses of \$16.5 million recorded during the period related to the Company's foreign exchange forward contracts. Partially offsetting these net foreign exchange transactions losses was other miscellaneous income of \$1.3 million.

Provision for Income Taxes

Provision for income taxes for 2016 totaled \$87.0 million resulting in an effective tax rate of 21.5%. Provision for income taxes for 2015 totaled \$70.2 million resulting in an effective tax rate of 34.4%. The increase in provision for income taxes was primarily driven by the \$201.5 million increase in income before income taxes, from \$203.8 million for the year ended December 31, 2015 to \$405.3 million for the year ended December 31, 2016.

This increase in the provision for income taxes was partially offset by the impact of a higher proportion of income before taxes in 2016 being attributable to non-U.S. jurisdictions, particularly in Europe, where the statutory income tax rates are lower than the U.S. statutory income tax rate.

Additionally, this increase in the provision for income taxes in 2016 was offset by a net reduction of losses generated within companies which are not anticipated to provide a tax benefit to the Company in the future. These losses are primarily generated within our holding companies incorporated in Luxembourg and our former primary operating company incorporated in Brazil. For the year ended December 31, 2016, these losses totaled approximately \$65.1 million and included an impairment charge of \$15.1 million for the estimated loss on the sale of Trinseo Brazil. Refer to Note 3 in the consolidated financial statements for further information.

For the year ended December 31, 2015, these losses totaled approximately \$84.7 million and included payments made in our Luxembourg entities of \$19.0 million related to a portion of the fees associated with the call premium paid to retire the Company's 2019 Senior Notes and \$5.6 million related to the write off of the related unamortized deferred financing fees (see Note 10 in the consolidated financial statements for further discussion). Also included in these losses was non-deductible interest of \$28.1 million and stock-based compensation expense.

In addition, for the year end December 31, 2015, the provision for income taxes was unfavorably impacted by the recognition of a valuation allowance of \$7.3 million on the net deferred tax asset of one of its China subsidiaries during the fourth quarter, as this entity was in a three year cumulative loss position as of December 31, 2015.

2015 vs. 2014

Net Sales

Of the 22.5% decrease in net sales, 17.3% was due to lower selling prices primarily due to the pass through of lower butadiene costs to our customers in Latex Binders and Synthetic Rubber and lower styrene monomer costs to our customers in Latex Binders, Feedstocks, and Basic Plastics. In addition, 7.6% of the decrease was related to an unfavorable currency impact across our segments, as the euro weakened in comparison to the U.S. dollar on a year-to-date basis. Partially offsetting these decreases was a 2.4% increase due to higher sales volumes in Feedstocks, Latex Binders, Synthetic Rubber, and Performance Plastics.

Cost of Sales

Of the 27.5% decrease in cost of sales, 22.5% was attributable to lower prices for raw materials, primarily butadiene and styrene monomer, while an additional 7.1% of the decrease was due to a favorable currency impact across our segments, as the euro weakened in comparison to the U.S. dollar on a year-to-date basis. Partially offsetting these decreases was a 2.1% increase due to higher sales volumes in Feedstocks, Latex Binders, Synthetic Rubber, and Performance Plastics.

Gross Profit

The increase in gross profit was primarily attributable to higher styrene monomer and styrenic polymer margins as well as higher polycarbonate margins due to improved market dynamics in addition to our polycarbonate restructuring efforts. These impacts were partially offset by an unfavorable currency impact, as the euro weakened in comparison to the U.S. dollar on a year-to-date basis.

Selling, General and Administrative Expenses

The decrease in SG&A expenses was primarily related to \$23.3 million in termination fees incurred in the second quarter of 2014 related to the advisory agreement with Bain Capital (the "Advisory Agreement") which we terminated upon consummation of the initial public offering (the "IPO") in June 2014. In addition, the Company incurred lower restructuring charges during the year ended December 31, 2015 of \$8.2 million, compared to charges of \$14.1 million during the year ended December 31, 2014. Refer to Note 20 in the consolidated financial statements for further information. These decreases were partially offset by increased costs related to other employee benefit costs.

Equity in Earnings of Unconsolidated Affiliates

The increase in equity earnings was primarily attributable to the equity earnings from Americas Styrenics, which increased to \$135.3 million in 2015 from \$50.3 million in 2014, due to stronger operating performance driven by higher styrene and polystyrene margins as well as higher volumes of styrene monomer sold. Sumika Styron Polycarbonate noted equity earnings of \$4.9 million for 2015 compared to equity losses of \$2.5 million in 2014.

Interest Expense, Net

The decrease in interest expense, net was primarily attributable to the debt refinancing in May 2015. Refer to Note 10 in the consolidated financial statements for further information.

Loss on Extinguishment of Long-Term Debt

Loss on extinguishment of long-term debt was \$95.2 million for the year ended December 31, 2015, related to the debt refinancing in May 2015. This amount was comprised of a \$68.6 million call premium paid to retire the Company's 2019 Senior Notes and a \$25.9 million write-off of unamortized deferred financing fees related to these notes, as well as the write-off of \$0.7 million of unamortized deferred financing fees related to the termination of the Company's 2018 Revolving Facility.

Loss on extinguishment of long-term debt was \$7.4 million for the year ended December 31, 2014, related to the redemption of \$132.5 million in aggregate principal amount of the 2019 Senior Notes in July 2014, using proceeds from the Company's IPO. This loss was comprised of a \$4.0 million call premium and a \$3.4 million write-off of related unamortized deferred financing fees.

Other Expense, net

Other expense, net for the year ended December 31, 2015 was \$9.1 million, which consisted primarily of net foreign exchange transaction losses of approximately \$10.4 million. These net foreign exchange transactions losses were comprised of foreign exchange transaction gains of \$6.1 million primarily driven by the remeasurement of our euro denominated payables due to the strengthening of the U.S. dollar against the euro during the period, more than offset by losses of \$16.5 million recorded during the period related to the Company's foreign exchange forward contracts. Partially offsetting these net foreign exchange transactions losses was other miscellaneous income of \$1.3 million.

Other expense, net for the year ended December 31, 2014 was \$27.8 million, which included a \$32.5 million payment made to Dow in connection with the termination of an option agreement between certain of the Company's affiliates and Dow pursuant to which Dow was granted an option to purchase 50% of the issued and outstanding interests in a joint venture to be formed by Dow and the Company's affiliates with respect to the SB Latex business ("Latex JV Option Agreement") in May of 2014. Refer to Note 18 in the consolidated financial statements for further information. This was slightly offset by net foreign exchange transaction gains of \$4.2 million and other income. These net foreign exchange transaction gains were comprised of foreign exchange transaction gains of \$32.4 million primarily driven by the remeasurement of our euro denominated payables due to the strengthening of the U.S. dollar against the euro during the period. Separately, beginning in the third quarter of 2014, the Company entered into foreign exchange forward contracts and recorded related losses of approximately \$28.2 million, largely offsetting the above described gains.

Provision for Income Taxes

Provision for income taxes for 2015 totaled \$70.2 million resulting in an effective tax rate of 34.4%. Provision for income taxes for 2014 totaled \$19.7 million resulting in a negative effective tax rate of 41.4%. The increase in provision for income taxes was primarily driven by the \$251.5 million increase in income before income taxes, from a loss of \$47.6 million for the year ended December 31, 2014 to \$203.9 million of income for the year ended December 31, 2015.

These increases in the provision for income taxes in 2015 were offset by a reduction of losses generated within our holding companies incorporated in Luxembourg, which are not anticipated to provide a tax benefit to the Company in the future. For the year ended December 31, 2015, these losses totaled approximately \$84.7 million. Included in these losses were payments made during the year ended December 31, 2015 of \$19.0 million related to a portion of the fees associated with the call premium paid to retire the Company's 2019 Senior Notes and \$5.6 million related to the write off of the related unamortized deferred financing fees (refer to Note 10 in the consolidated financial statements). Also

included in these losses was non-deductible interest expense of \$28.1 million and stock-based compensation expense. Additionally, the overall increase in the provision for income taxes during the year was offset by the impact of a higher proportion of income in 2015 being attributable to non-U.S. jurisdictions, particularly in Europe, where the statutory income tax rates are lower than the U.S. statutory income tax rate.

For the year ended December 31, 2014, losses primarily within our holding companies incorporated in Luxembourg, which were not anticipated to provide a tax benefit to the Company in the future, were approximately \$134.1 million. Included in these losses were payments made during the year ended December 31, 2014 of \$32.5 million related to an agreement with Dow to terminate the Latex JV Option Agreement and a portion of the fees related to the termination of the Advisory Agreement with Bain Capital of approximately \$18.6 million (refer to Note 18 in the consolidated financial statements). Also included in these losses was non-deductible interest of \$38.6 million and stock-based compensation expense.

In addition to the above, there were certain other one-time items impacting the provision for income taxes for the years ended December 31, 2015 and 2014, respectively.

For the year end December 31, 2015, the provision for income taxes was also unfavorably impacted by the recognition of a valuation allowance of \$7.3 million on the net deferred tax asset of one of its China subsidiaries during the fourth quarter, as this entity was in a three year cumulative loss position as of December 31, 2015. While the Company intends to realize the net operating loss carryforward before expiration due to forecasted profitability in this subsidiary in future years, it was unable to overcome the negative evidence of recent cumulative operating losses. Therefore, the Company could not assert it would more likely than not be able to realize its deferred tax asset as of December 31, 2015. If in the future, this subsidiary generates sufficient profitability such that the evaluation of recoverability of the deferred tax asset changes, the valuation allowance could be reversed.

For the year ended December 31, 2014, a tax benefit was recognized, as the Company effectively settled its 2010 and 2011 audits with the IRS and received a refund of \$3.2 million in July 2014. As a result, the Company recorded a previously unrecognized tax benefit in the amount of \$2.7 million, including penalties and interest, relating to its 2011 tax return filing. No similar benefits were recorded for the year ended December 31, 2015.

Selected Segment Information

Effective October 1, 2016, the Company realigned its reporting segments to reflect the new model under which the business will be managed and results will be reviewed by the chief executive officer, who is the Company's chief operating decision maker. The Company's reportable segments are as follows: Latex Binders, Synthetic Rubber, Performance Plastics, Basic Plastics, Feedstocks, and Americas Styrenics. In conjunction with the segment realignment, the Company also changed its primary measure of segment operating performance to Adjusted EBITDA. Refer to Item 1—*Business* for a description of our segments, including a detailed overview, products and end uses, and competition and customers.

The following sections describe net sales, Adjusted EBITDA, and Adjusted EBITDA margin by segment for the years ended December 31, 2016, 2015, and 2014, which have been recast to reflect the above changes. Inter-segment sales have been eliminated. Refer to Note 19 in the consolidated financial statements for further information regarding the segment realignment and change in segment operating performance measure, as well as for a detailed definition of Adjusted EBITDA and a reconciliation of income (loss) before income taxes to segment Adjusted EBITDA.

Latex Binders Segment

(in millions)	Year Ended			Percentage Change	
	December 31,			2016 vs. 2015	2015 vs. 2014
	2016	2015	2014		
Net sales	\$ 925.3	\$ 966.2	\$ 1,261.1	(4.2)%	(23.4)%
Adjusted EBITDA	\$ 94.3	\$ 79.0	\$ 97.2	19.4 %	(18.7)%
Adjusted EBITDA margin	10.2 %	8.2 %	7.7 %		

2016 vs. 2015

Of the 4.2% decrease in net sales, 4.1% was due to lower selling prices, primarily due to the pass through of lower butadiene and styrene costs to our customers, and 0.3% was due to an unfavorable currency impact as the euro weakened in comparison to the U.S. dollar on a year-to-date basis. These decreases were partially offset by a 0.2% increase due to higher sales volume to the Asia paper and carpet markets.

The increase in Adjusted EBITDA was driven by margin improvements of \$12.2 million during the period, primarily due to price increases in North America and freight and utility savings, particularly in Asia. Additionally, fixed cost improvements contributed to 3.3% of the increase, which includes the impact of the sale of our business in Brazil. Refer to Note 3 in the consolidated financial statements for further information.

2015 vs. 2014

Of the 23.4% decrease in net sales, 21.0% was due lower selling prices primarily due to the pass through of lower butadiene and styrene costs to our customers and 5.6% was due to an unfavorable currency impact as the euro weakened in comparison to the U.S. dollar on a year-to-date basis. These decreases were slightly offset by a 3.3% increase from higher sales volume driven by higher sales to the Europe paper and carpet markets.

The decrease in Adjusted EBITDA was driven by a 13.5% decrease due to lower margins, primarily in Europe and Asia, and a 3.8% decrease due to unfavorable currency impact as the euro weakened in comparison to the U.S. dollar on a year-to-date basis. In addition, 9.1% of the decrease was due to increased fixed costs. Partially offsetting these decreases was a 7.8% increase in sales volume primarily related to increased sales to the Europe paper and carpet markets.

Synthetic Rubber Segment

(in millions)	Year Ended			Percentage Change	
	December 31,			2016 vs. 2015	2015 vs. 2014
	2016	2015	2014		
Net sales	\$ 450.7	\$ 474.6	\$ 634.0	(5.0)%	(25.1)%
Adjusted EBITDA	\$ 110.9	\$ 93.0	\$ 137.0	19.2 %	(32.1)%
Adjusted EBITDA margin	24.6 %	19.6 %	21.6 %		

2016 vs. 2015

Of the 5.0% decrease in net sales, 5.1% was due to lower selling prices, primarily resulting from the pass through of lower butadiene and styrene costs to customers, and 0.6% of the decrease was driven by an unfavorable currency impact as the euro weakened in comparison to the U.S. dollar on a year-to-date basis. Partially offsetting these decreases was a 0.7% increase due to increased sales volume, as higher customer demand for SSBR and other products was partially offset by lower sales of Ni-PBR, as production decreased due to Nd-PBR plant trials.

The increase in Adjusted EBITDA was primarily driven by improved fixed costs, which resulted in 11.1% of the increase, as the prior year included lower fixed cost absorption and higher maintenance costs due primarily to a planned turnaround. Additionally, improved margins contributed to 3.4% of the increase and higher sales volume contributed to 5.1% of the increase, which was primarily related to higher demand and availability of SSBR.

2015 vs. 2014

Of the 25.1% decrease in net sales, 19.7% was due to lower selling prices primarily resulting from the pass through of lower butadiene and styrene costs to customers and 11.6% was due to an unfavorable currency impact as the euro weakened in comparison to the U.S. dollar on a year-to-date basis. These decreases were slightly offset by a 6.2% increase from higher sales volume resulting from higher sales of SSBR to tire producers.

The decrease in Adjusted EBITDA was driven by a 25.6% decrease due to lower margins, including impacts from the timing of raw material costs, and an unfavorable currency impact of 7.7 % as the euro weakened in comparison to the U.S. dollar on a year-to-date basis. In addition, 8.4% of the decrease was driven by higher fixed costs due primarily to

higher planned maintenance expense in the current year as well as higher employee benefit costs. Partially offsetting these decreases was a 9.5% increase due to sales volume driven by higher SSBR sales.

Performance Plastics Segment

(in millions)	Year Ended			Percentage Change	
	December 31,			2016 vs. 2015	2015 vs. 2014
	2016	2015	2014		
Net sales	\$ 693.4	\$ 742.8	\$ 821.1	(6.7)%	(9.5)%
Adjusted EBITDA	\$ 136.2	\$ 107.6	\$ 85.4	26.6 %	26.0 %
Adjusted EBITDA margin	19.6 %	14.5 %	10.4 %		

2016 vs. 2015

Of the 6.7% decrease in net sales, 3.7% was due to lower selling prices, primarily related to the pass through of lower raw material costs to our customers, and 2.7% was due to decreased sales volume, driven by lower sales to the consumer electronics market in Asia. In addition, 0.3% of the decrease was driven by an unfavorable currency impact as the euro weakened in comparison to the U.S. dollar on a year-to-date basis.

The increase in Adjusted EBITDA was driven by a 25.0% increase due to higher margins, including favorable raw material timing, and a 6.4% increase due to improved fixed costs, which includes the impact of the sale of our business in Brazil (refer to Note 3 in the consolidated financial statements for further information). These increases were partially offset by a 4.6% decrease driven by lower sales volume, primarily caused by lower sales to the consumer electronics market in Asia, which were partially offset by higher sales to the automotive market.

2015 vs. 2014

Of the 9.5% decrease in net sales, 6.2% was due to lower selling prices primarily related to the pass through of lower raw material costs to our customers and 5.6% was due to an unfavorable currency impact as the euro weakened in comparison to the U.S. dollar on a year-to-date basis. These decreases were partially offset by a 2.2% increase in sales volume, primarily related to the consumer electronics market in Asia as well as the automotive market in North America.

The increase in Adjusted EBITDA was driven by an increase in sales volume, primarily related to the consumer electronics market in Asia and the automotive market in North America, as well as higher margins due to lower raw material costs, which contributed to 43.1% of the increase. Slightly offsetting this increase was an 11.2% decrease due to increased fixed costs, including higher employee benefit costs.

Basic Plastics Segment

(in millions)	Year Ended			Percentage Change	
	December 31,			2016 vs. 2015	2015 vs. 2014
	2016	2015	2014		
Net sales	\$ 1,352.7	\$ 1,478.1	\$ 1,978.1	(8.5)%	(25.3)%
Adjusted EBITDA	\$ 148.2	\$ 115.6	\$ (15.2)	28.2 %	860.5 %
Adjusted EBITDA margin	11.0 %	7.8 %	(0.8)%		

2016 vs. 2015

Of the 8.5% decrease in net sales, 6.3% was due to lower selling prices driven by the pass through of lower styrene costs to customers, and 1.8% of the decrease was due lower sales volume, primarily related to lower polystyrene sales in Europe and Asia. In addition, 0.4% of the decrease was driven by an unfavorable currency impact as the euro weakened in comparison to the U.S. dollar on a year-to-date basis.

The increase in Adjusted EBITDA was driven by a 27.9% increase due to higher margins in styrenic polymers and PC, and a 3.5% increase related to equity earnings from our joint venture, Sumika Styron Polycarbonate, driven primarily by improved PC market conditions as well as favorable raw material timing. Partially offsetting these increases was a 3.7% decrease due to lower sales volume, primarily related to Europe and Asia polystyrene sales.

On January 31, 2017, the Company completed the sale of its 50% share in Sumika Styron Polycarbonate to Sumitomo Chemical Company Limited for total sales proceeds of ¥4.9 billion (approximately \$43.2 million). As a result, the Company will record an estimated gain on sale of approximately \$9.0 million in the first quarter of 2017. In addition, the parties have agreed to continue long-term supply of polycarbonate resin from Sumika Styron Polycarbonate to the Company's Performance Plastics businesses.

2015 vs. 2014

Of the 25.3% decrease in net sales, 16.4% was driven by decreases in selling prices due primarily to the pass through of lower styrene costs to customers and 8.3% was due to unfavorable currency impact as the euro weakened in comparison to the U.S. dollar on a year-to-date basis.

The increase in Adjusted EBITDA was due primarily to higher margins in styrenic polymers as well as in polycarbonate as a result of our restructuring efforts and improved market conditions. In addition, increased equity earnings from our polycarbonate joint venture Sumika Styron Polycarbonate of \$7.4 million contributed to 48.7% of the increase, primarily driven by improved polycarbonate market conditions. Partially offsetting these increases was a 107.9% unfavorable currency impact as the euro weakened in comparison to the U.S. dollar on a year-to-date basis.

Feedstocks Segment

(in millions)	Year Ended			Percentage Change	
	December 31,			2016 vs. 2015	2015 vs. 2014
	2016	2015	2014		
Net sales	\$ 294.5	\$ 310.2	\$ 433.7	(5.1)%	(28.5)%
Adjusted EBITDA	\$ 80.2	\$ 51.3	\$ (20.5)	56.3 %	350.2 %
Adjusted EBITDA margin	27.2 %	16.5 %	(4.7)%		

2016 vs. 2015

Of the 5.1% decrease in net sales, 5.1% of the decrease was due to lower selling prices, primarily driven by the pass through of lower styrene costs to customers, and 0.4% of the decrease was driven by an unfavorable currency impact as the euro weakened in comparison to the U.S. dollar on a year-to-date basis. Partially offsetting these decreases was a 0.5% increase in sales volume.

The increase in Adjusted EBITDA was driven by a 50.3% increase due to higher margins in styrene, and a 6.0% increase due to improved fixed costs.

2015 vs. 2014

Of the 28.5% decrease in net sales, 29.0% was driven by decreases in selling prices due primarily to the pass through of lower styrene costs to customers and 8.4% was due to unfavorable currency impact as the euro weakened in comparison to the U.S. dollar on a year-to-date basis. Partially offsetting these decreases was a 9.0% increase in sales volume primarily related to higher sales of styrene monomer.

The increase in Adjusted EBITDA was primarily due to higher styrene monomer margins as a result of improved market conditions, including some unplanned styrene production outages across the industry. Partially offsetting this

increase were decreases due to higher fixed costs and an unfavorable currency impact as the euro weakened in comparison to the U.S. dollar on a year-to-date basis.

Americas Styrenics Segment

(in millions)	Year Ended			Percentage Change	
	December 31,			2016 vs. 2015	2015 vs. 2014
	2016	2015	2014		
Adjusted EBITDA*	\$ 135.8	\$ 135.3	\$ 50.3	0.4 %	169.0 %

*The results of this segment are comprised entirely of earnings from Americas Styrenics, our equity method investment. As such, Adjusted EBITDA related to this segment is included within "Equity in earnings of unconsolidated affiliates" in the consolidated statements of operations.

2016 vs. 2015

The slight increase in Adjusted EBITDA was due to increased equity earnings from our styrenics joint venture Americas Styrenics, as higher styrene margins and polystyrene volume were offset by lower polystyrene margins and the impacts of the second quarter planned styrene production outage.

In February 2017, Americas Styrenics announced that it expects a planned first quarter styrene outage at its St. James, LA, facility to extend into the second quarter of 2017 in order to complete repairs on critical equipment. This outage extension is expected to result in an unfavorable first quarter 2017 impact of \$15.0 million to the Adjusted EBITDA of our Americas Styrenics segment, as compared to the fourth quarter of 2016, and it is not expected to significantly impact Americas Styrenics' downstream polystyrene production.

2015 vs. 2014

The increase in Adjusted EBITDA was due to increased equity earnings from our styrenics joint venture Americas Styrenics, primarily driven by higher styrene margins, in part due to unplanned styrene production outages across the industry, and polystyrene margins as well as higher volumes of styrene monomer sold.

Non-GAAP Performance Measures

We present Adjusted EBITDA as a non-GAAP financial performance measure, which we define as income from continuing operations before interest expense, net; provision for income taxes; depreciation and amortization expense; loss on extinguishment of long-term debt; asset impairment charges; gains or losses on the dispositions of businesses and assets; restructuring and other items. In doing so, we are providing management, investors, and credit rating agencies with a stronger indicator of our ongoing performance and business trends, removing the impact of transactions and events that we would not consider a part of our core operations.

There are limitations to using the financial performance measures such as Adjusted EBITDA. This performance measure is not intended to represent net income or other measures of financial performance. As such, it should not be used as an alternative to net income as an indicator of operating performance. Other companies in our industry may define Adjusted EBITDA differently than we do. As a result, it may be difficult to use this or similarly-named financial measures that other companies may use, to compare the performance of those companies to our performance. We compensate for these limitations by providing a reconciliation of this performance measure to our net income, which is determined in accordance with GAAP.

Adjusted EBITDA is calculated as follows for the years ended December 31, 2016, 2015, and 2014, respectively:

(in millions)	Year Ended		
	December 31,		
	2016	2015	2014
Net income (loss)	\$ 318.3	\$ 133.6	\$ (67.3)
Interest expense, net	75.0	93.2	124.9
Provision for income taxes	87.0	70.2	19.7
Depreciation and amortization	96.4	96.8	103.7
EBITDA ^(a)	\$ 576.7	\$ 393.8	\$ 181.0
Loss on extinguishment of long-term debt	—	95.2	7.4
Net loss (gain) on disposition of businesses and assets ^(b)	15.1	—	(0.6)
Restructuring and other charges ^(c)	23.5	0.8	10.0
Fees paid pursuant to advisory agreement ^(d)	—	—	25.4
Other items ^(e)	(4.4)	2.2	38.4
Adjusted EBITDA	\$ 610.9	\$ 492.0	\$ 261.6

- (a) EBITDA is a non-GAAP financial performance measure that we refer to in making operating decisions because we believe it provides our management as well as our investors and credit agencies with meaningful information regarding the Company's operational performance. We believe the use of EBITDA as a metric assists our board of directors, management and investors in comparing our operating performance on a consistent basis. Other companies in our industry may define EBITDA differently than we do. As a result, it may be difficult to use EBITDA, or similarly-named financial measures that other companies may use, to compare the performance of those companies to our performance. We compensate for these limitations by providing reconciliations of our EBITDA results to our net income, which is determined in accordance with GAAP.
- (b) During the year ended December 31, 2016, the Company recorded impairment charges for the loss on sale of its primary operating entity in Brazil, which includes both latex binders and automotive businesses. Refer to Note 3 in the consolidated financial statements for further information.
- (c) Restructuring and other charges for the year ended December 31, 2016 relate primarily to \$20.0 million in charges incurred in connection with the decision to cease manufacturing activities at our latex binders manufacturing facility in Livorno, Italy. The remaining restructuring charges for 2016 relate to the Company's decision to divest our operations in Brazil as well as the closure of our Allyn's Point latex binders manufacturing facility. Restructuring and other charges for the year ended December 31, 2015 relate primarily to the polycarbonate restructuring within our Basic Plastics segment and employee termination benefit charges incurred in connection with the Allyn's Point shutdown within our latex binders business. Restructuring and other charges for the year ended December 31, 2014 was incurred primarily in connection with the shutdown of our latex binders manufacturing plant in Altona, Australia and the restructuring within our Basic Plastics segment.
- Accelerated depreciation charges incurred as a part of the Allyn's Point shutdown announced in September 2015 and the 2014 restructuring within our Basic Plastics segment are included within the "Depreciation and amortization" caption, and therefore are not included as a separate adjustment within this caption. Refer to Note 20 in the consolidated financial statements for further information.
- (d) Represents fees paid under the terms of our Advisory Agreement with Bain Capital. For the year ended December 31, 2014, this includes a charge of \$23.3 million for fees incurred in connection with the termination of the Advisory Agreement, pursuant to its terms, upon consummation of the Company's IPO in June 2014. Refer to Note 18 in the consolidated financial statements for further information.
- (e) Other items for the year ended December 31, 2016 include other income of \$6.9 million from the effective settlement of certain value-added tax positions, offset by \$2.5 million of fees incurred in conjunction with the Company's secondary offerings completed during the year. Other items incurred for the years ended December 31, 2015 and 2014 primarily consist of costs related to the process of changing our corporate name from Styron to Trinseo. For the year ended December 31, 2014, these costs also include a one-time \$32.5 million termination payment made to Dow in connection with the termination of our Latex JV Option Agreement. Refer to Note 18 in the consolidated financial statements for further information.

Liquidity and Capital Resources

Cash Flows

The table below summarizes our primary sources and uses of cash for the years ended December 31, 2016, 2015, and 2014. We have derived the summarized cash flow information from our audited financial statements.

(in millions)	Year Ended December 31,		
	2016	2015	2014
Net cash provided by (used in):			
Operating activities	\$ 403.7	\$ 353.2	\$ 117.2
Investing activities	(117.3)	(106.7)	(92.6)
Financing activities	(247.5)	(26.2)	8.1
Effect of exchange rates on cash	(5.0)	(9.8)	(8.4)
Net change in cash and cash equivalents	<u>\$ 33.9</u>	<u>\$ 210.5</u>	<u>\$ 24.3</u>

Operating Activities

Net cash provided by operating activities during the year ended December 31, 2016 totaled \$403.7 million, driven predominantly by improved net income for the period. Also driving cash flow from operating activities for the period was \$130.0 million in dividends from our 50%-owned joint venture, Americas Styrenics.

Net cash used in operating assets and liabilities for the year ended December 31, 2016 totaled \$69.9 million, the most significant drivers of which were increases in accounts receivable of \$96.4 million and inventories of \$51.0 million, respectively, offset by an increase in accounts payable and other current liabilities of \$57.1 million. The increase in accounts receivable was primarily due to higher sales and lower collections, due to timing, during the fourth quarter of 2016 compared to the same period in 2015. The increase in inventory was primarily due to increases in raw material prices in the fourth quarter of 2016 as compared to the same period in 2015. The increase in accounts payable and other current liabilities was primarily driven by increases in raw material prices, as noted above, as well as timing of vendor payments.

Net cash provided by operating activities during the year ended December 31, 2015 totaled \$353.2 million, driven predominantly by earnings for the period. Also driving our cash from operating activities for the period was \$125.0 million in dividends from our joint venture, Americas Styrenics. These increases were noted despite several significant decreases to operating cash flows, which included \$81.7 million in interest payments made on our 2019 Senior Notes prior to their May 2015 retirement as well as a \$68.6 million call premium paid to retire those notes. Refer to Note 10 in the consolidated financial statements for further information.

Net cash provided by operating assets and liabilities for the year ended December 31, 2015 totaled \$103.9 million, the most significant components of which were decreases in inventories of \$97.2 million and decreases in accounts receivable of \$65.1 million, offset by a decrease in accounts payable and other current liabilities of \$71.9 million. Inventory decreased due to higher volume sold during the fourth quarter of 2015 when compared to the fourth quarter of 2014, as well as significant decreases in raw materials prices when comparing the periods. The decrease in accounts receivable is primarily due to lower sales and higher collections during the fourth quarter of 2015, compared to the fourth quarter of 2014, primarily driven by decreasing raw material prices. The decrease in accounts payable and other current liabilities is primarily due to timing of payments as well as decreases in prices for raw materials purchases.

Net cash provided by operating activities during the year ended December 31, 2014 totaled \$117.2 million, with net cash provided by operating assets and liabilities totaling \$61.1 million. The most significant components of the changes in operating assets and liabilities for the year ended December 31, 2014 of \$61.1 million was a decrease in accounts receivable of \$68.5 million and a decrease in inventories of \$22.6 million, offset by a decrease in other liabilities of \$22.0 million. The decrease in accounts receivable is primarily due to lower sales and higher collections during the fourth quarter of 2014, compared to the fourth quarter of 2013, primarily driven by decreasing raw material prices. Our other liabilities decreased mainly due to reductions in normal operating costs. Our operating cash flow for the year ended December 31, 2014 was negatively impacted by two significant one-time cash payments in the second quarter of 2014 totaling approximately \$55.8 million related to the termination of our Latex JV Option Agreement with Dow and

our Advisory Agreement with Bain Capital. Refer to Note 18 of the consolidated financial statements for further information.

Investing Activities

Net cash used in investing activities for the year ended December 31, 2016 totaled \$117.3 million, driven by capital expenditures of \$123.9 million during the period, a significant portion of which related to our project to upgrade our legacy ERP environment to the latest version of SAP. Partially offsetting these capital expenditures were \$1.8 million in proceeds received from the sale of our businesses in Brazil (refer to Note 3 in the consolidated financial statements) and dividends received from Sumika Styron Polycarbonate during the period, \$4.8 million of which were classified as investing activities in the consolidated statement of cash flows, with the remaining \$1.4 million classified as operating activities. Note that in January 2017, the Company completed the sale of its 50% share in Sumika Styron Polycarbonate to Sumitomo Chemical Company Limited for total sales proceeds of ¥4.9 billion (approximately \$43.2 million). Refer to Note 24 in the consolidated financial statements for further information

Net cash used in investing activities for the year ended December 31, 2015 totaled \$106.7 million, consisting primarily of capital expenditures of \$107.1 million during the period, net of proceeds received from a government subsidy of \$2.2 million related to our capital expansion project at our rubber facility in Schkopau, Germany.

Net cash used in investing activities for the year ended December 31, 2014 totaled \$92.6 million consisting primarily of capital expenditures of \$98.6 million, of which approximately \$26.1 million (€19.0 million) was related to the Company's acquisition of production capacity rights from JSR at its rubber production facility in Schkopau, Germany. These investing activities were partially offset by cash proceeds of \$6.3 million from the sale of a portion of land at our manufacturing site in Livorno, Italy.

Financing Activities

Net cash used in financing activities during the year ended December 31, 2016 totaled \$247.5 million. This activity was primarily driven by \$215.1 million of payments related to the repurchase of ordinary shares during the period and \$27.3 million in repayments of equity on ordinary shares (refer to Note 12 to the consolidated financial statements), as well as \$5.0 million of principal payments related to our 2021 Term Loan B.

Net cash used in financing activities during the year ended December 31, 2015 totaled \$26.2 million. The most significant activity during the period related to the May 2015 debt refinancing, which included net proceeds of \$1,215.4 million from the issuance of our 2021 Term Loan B and our 2022 Senior Notes, offset by the retirement of our existing 2019 Senior Notes totaling \$1,192.5 million and deferred financing fees paid in conjunction with the refinancing of \$28.2 million. Also during the period, we had net repayments of short-term borrowings of \$18.4 million, which largely consisted of borrowings under our short-term revolving credit facility through our subsidiary in China. On a limited basis, we continued to utilize our Accounts Receivable Securitization Facility to fund our working capital requirements. For the year ended December 31, 2015, we had borrowings from and repayments of our Accounts Receivable Securitization Facility of \$25.0 million.

Net cash provided by financing activities during the year ended December 31, 2014 totaled \$8.1 million. During the period, the Company completed the IPO of 11,500,000 ordinary shares at a price of \$19.00 per share. As a result, the Company received net cash proceeds from the issuance of ordinary shares of \$198.1 million, which was net of underwriting discounts as well as advisory, accounting, and legal expenses directly related to the offering. In July 2014, using proceeds from the Company's IPO, the Company redeemed \$132.5 million in aggregate principal amount of the 2019 Senior Notes. In addition, we had net repayments of short-term borrowings of \$56.9 million, which largely consisted of borrowings under our short-term revolving credit facility through our subsidiary in China. We also continued to utilize our Accounts Receivable Securitization Facility to fund our working capital requirements. For the year ended December 31, 2014, we had borrowings from our Accounts Receivable Securitization Facility of \$308.6 million and repayments of \$309.2 million, resulting in net repayments of \$0.6 million due to changes in foreign currency exchange rates, as a portion of our borrowings under the Accounts Receivable Securitization Facility originate in euros.

Free Cash Flow

We use Free Cash Flow as a non-GAAP measure to evaluate and discuss the Company's liquidity position and results. Free Cash Flow is defined as cash from operating activities, less capital expenditures. We believe that Free Cash

Flow provides an important indicator of the Company's ongoing ability to generate cash through core operations, as it excludes the cash impacts of various financing transactions as well as cash flows from business combinations that are not considered organic in nature. We also believe that Free Cash Flow provides management and investors with a useful analytical indicator of our ability to service our indebtedness, make repayments of equity (when declared), and meet our ongoing cash obligations.

Free Cash Flow is not intended to represent cash flows from operations as defined by GAAP, and therefore, should not be used as an alternative for that measure. Other companies in our industry may define Free Cash Flow differently than we do. As a result, it may be difficult to use this or similarly-named financial measures that other companies may use, to compare the liquidity and cash generation of those companies to our own. We compensate for these limitations by providing a reconciliation to cash provided by operating activities, which is determined in accordance with GAAP.

(in millions)	Year Ended		
	December 31,		
	2016	2015	2014
Cash provided by operating activities	\$ 403.7	\$ 353.2	\$ 117.2
Capital expenditures	(123.9)	(109.3)	(98.6)
Free cash flow	<u>\$ 279.8</u>	<u>\$ 243.9</u>	<u>\$ 18.6</u>

Capital Resources, Indebtedness and Liquidity

We require cash principally for day-to-day operations, to finance capital investments and other initiatives, to purchase materials and support other working capital requirements, to service our outstanding indebtedness, and to fund repayments of equity to our shareholders, if and when the Company elects to declare them. Our sources of liquidity include cash on hand, cash flow from operations and amounts available under the Senior Credit Facility and the Accounts Receivable Securitization Facility (discussed further below).

As of December 31, 2016 and 2015, we had \$1,187.4 million and \$1,207.8 million, respectively, in outstanding indebtedness and \$890.7 million and \$839.8 million, respectively, in working capital. In addition, as of December 31, 2016 and 2015, we had \$88.8 million and \$73.7 million, respectively, of foreign cash and cash equivalents on our consolidated balance sheets, all of which is readily convertible into other foreign currencies, including the U.S. dollar. Our intention is not to permanently reinvest our foreign cash and cash equivalents. Accordingly, we record deferred income tax liabilities related to the unremitted earnings of our subsidiaries.

Refer to Note 10 in the consolidated financial statements for a detailed description of the Company's debt structure, borrowing rates, and expected future payment obligations.

The following table outlines our outstanding indebtedness as of December 31, 2016 and 2015 and the associated interest expense, including amortization of deferred financing fees and debt discounts, and effective interest rates for

such borrowings as of and for the years ended December 31, 2016 and 2015. Note that the effective interest rates below exclude the impact of deferred financing fee amortization.

(dollars in millions)	As of and for the Year Ended December 31, 2016			As of and for the Year Ended December 31, 2015		
	Balance	Effective Interest Rate	Interest Expense	Balance	Effective Interest Rate	Interest Expense
2018 Senior Secured Credit Facility						
2018 Revolving Facility	\$ —	—	\$ —	\$ —	—	\$ 1.6
Senior Credit Facility						
2021 Term Loan B	491.5	4.3 %	23.3	496.4	4.3 %	15.4
2020 Revolving Facility	—	—	3.3	—	—	2.3
2019 Senior Notes	—	—	—	—	8.8 %	40.4
2022 Senior Notes						
USD Notes	300.0	6.8 %	21.1	300.0	6.8 %	13.8
Euro Notes	394.3	6.4 %	27.4	409.5	6.4 %	17.9
Accounts Receivable Securitization Facility	—	—	3.3	—	2.7 %	4.1
Other indebtedness	1.6	4.8 %	0.1	1.9	2.5 %	0.1
Total	<u>\$ 1,187.4</u>		<u>\$ 78.5</u>	<u>\$ 1,207.8</u>		<u>\$ 95.6</u>

Our Senior Credit Facility includes the 2020 Revolving Facility, which matures in May 2020, and has a borrowing capacity of \$325.0 million. As of December 31, 2016, the Company had no outstanding borrowings, and had \$309.1 million (net of \$15.9 million outstanding letters of credit) of funds available for borrowings under the 2020 Revolving Facility. Further, we note that, as of December 31, 2016, the Borrowers are required to pay a quarterly commitment fee in respect of any unused commitments under the 2020 Revolving Facility equal to 0.375% per annum.

Also included in our Senior Credit Facility is our \$500.0 million 2021 Term Loan B (maturing in November 2021), which requires scheduled quarterly payments in amounts equal to 0.25% of the original principal. During the year ended December 31, 2016, the Company made principal payments of \$5.0 million on the 2021 Term Loan B, with an additional \$5.0 million of scheduled future payments classified as current debt on the Company's consolidated balance sheet as of December 31, 2016.

Our 2022 Senior Notes (which include \$300.0 million aggregate principal amount of 6.750% USD Notes and €375.0 million aggregate principal amount of 6.375% Euro Notes) are issued under the Indenture and mature on May 1, 2022. Interest on the 2022 Senior Notes is payable semi-annually on May 1 and November 1 of each year, commencing on November 1, 2015. The 2022 Senior Notes may be redeemed prior to their maturity at the option of the Company under certain circumstances at specific redemption prices. Refer to Note 10 in the consolidated financial statements for further information.

We also continue to maintain our Accounts Receivable Securitization Facility set to mature in May 2019, under which our borrowing capacity is \$200.0 million. As of December 31, 2016, there were no amounts outstanding under the Accounts Receivable Securitization Facility, with approximately \$126.5 million of funds available for borrowing under this facility, based on the pool of eligible accounts receivable

The Senior Credit Facility and Indenture contain certain customary affirmative, negative and financial covenants. As of December 31, 2016, the Company was in compliance with all of these debt covenant requirements. Refer to Note 10 in the consolidated financial statements for further information on the details of these covenant requirements.

Our ability to raise additional financing and our borrowing costs may be impacted by short- and long-term debt ratings assigned by independent rating agencies, which are based, in significant part, on our performance as measured by certain credit metrics such as interest coverage and leverage ratios.

We and our subsidiaries, affiliates or significant direct or indirect shareholders may from time to time seek to retire or purchase our outstanding debt through cash purchases in the open market, privately negotiated transactions, exchange transactions or otherwise. Such repurchases or exchanges, if any, will depend on prevailing market conditions, our liquidity requirements, contractual restrictions and other factors. The amounts involved may be material.

Trinseo Materials Operating S.C.A. and Trinseo Materials Finance, Inc. (the Issuers of our 2022 Senior Notes and Borrowers under our Senior Credit Facility) are dependent upon the cash generation and receipt of distributions and dividends or other payments from our subsidiaries and joint ventures in order to satisfy their debt obligations. There are no known significant restrictions by third parties on the ability of subsidiaries of the Company to disburse or dividend funds to the Issuers and the Borrowers in order to satisfy these obligations. However, as the Company's subsidiaries are located in a variety of jurisdictions, the Company can give no assurances that its subsidiaries will not face transfer restrictions in the future due to regulatory or other reasons beyond our control.

As noted above, during the year ended December 31, 2016, the Company continued to generate strong cash flows from operations. However, we can make no assurances that, in the future, our business will generate sufficient cash flow from operations or that future borrowings will be available to us under the Senior Credit Facility in an amount sufficient to enable us to pay our indebtedness, or to fund our other liquidity needs. In addition, our current indebtedness may limit our ability to procure additional financing in the future. As of December 31, 2016 and 2015, we were in compliance with all the covenants and default provisions under our debt agreements.

The Senior Credit Facility and Indenture also limit the ability of the Borrowers and Issuers, respectively, to pay dividends or make other distributions to Trinseo S.A., which could then be used to make distributions to shareholders. As discussed in Note 12 to the consolidated financial statements, during the year ended December 31, 2016, the Company's board of directors began declaring quarterly repayments of equity of \$0.30 per ordinary share to its shareholders for an aggregate value of \$40.6 million. These repayments of equity are within the available capacity under the terms of the restrictive covenants contained in the Senior Credit Facility and Indenture. Further, significant additional capacity continues to be available under the terms of these covenants to support expected future repayments of equity to shareholders, should the Company continue to declare them.

We believe that funds provided by operations, our existing cash and cash equivalent balances, borrowings available under our 2020 Revolving Facility and borrowings available under our Accounts Receivable Securitization Facility will be adequate to meet planned operating and capital expenditures for at least the next 12 months under current operating conditions.

Derivative Instruments

The Company's ongoing global business operations expose it to fluctuating foreign exchange rates. To manage this risk, the Company periodically enters into derivative financial instruments such as foreign exchange forward contracts. A brief summary of these derivative financial instrument programs is described below; however, refer to Note 11 of the consolidated financial statements for further information. The Company does not hold or enter into financial instruments for trading or speculative purposes.

Foreign Exchange Forward Contracts

Certain subsidiaries have assets and liabilities denominated in currencies other than their respective functional currencies, which creates foreign exchange risk. Our principal strategy in managing exposure to changes in foreign currency exchange rates is to naturally hedge the foreign currency-denominated liabilities on our consolidated balance sheets against corresponding assets of the same currency such that any changes in liabilities due to fluctuations in exchange rates are offset by changes in their corresponding foreign currency assets. In order to further reduce our exposure, the Company also uses foreign exchange forward contracts to economically hedge the impact of the variability in exchange rates on our assets and liabilities denominated in certain foreign currencies. These derivative contracts are not designated for hedge accounting treatment.

Foreign Exchange Cash Flow Hedges

The Company also enters into forward contracts with the objective of managing the currency risk associated with forecasted U.S. dollar-denominated raw materials purchases by one of its subsidiaries whose functional currency is the euro. By entering into these forward contracts, which are designated as cash flow hedges, the Company buys a designated amount of U.S. dollars and sells euros at the prevailing market rate to mitigate the risk associated with the fluctuations in the euro-to-U.S. dollar foreign currency exchange rates.

Net Investment Hedge

The Company's outstanding debt includes €375.0 million of Euro Notes (discussed above). As of December 31, 2016, the Company has designated a portion (€280.0 million) of the principal amount of these Euro Notes as a hedge of the foreign currency exposure of the Issuers' net investment in certain European subsidiaries.

Contractual Obligations and Commercial Commitments

The following table reflects our contractual obligations as of December 31, 2016. Amounts we pay in future periods may vary from those reflected in the table (in millions):

Contractual Obligations as of December 31, 2016	Payments due by year						
	2017	2018	2019	2020	2021	Thereafter	Total
Purchase commitments ⁽¹⁾	\$ 1,420.4	\$ 1,177.5	\$ 800.7	\$ 860.0	\$ 5.4	\$ —	\$ 4,264.0
Long-term Indebtedness ⁽²⁾	5.0	5.0	5.0	5.0	472.5	694.3	1,186.8
Interest payments on long-term debt ⁽³⁾	66.5	66.4	66.1	65.9	62.6	18.5	346.0
Pension and other postretirement benefits ⁽⁴⁾	4.4	20.0	4.6	5.6	5.1	41.3	81.0
Minimum operating lease commitments and other obligations ⁽⁵⁾	11.0	9.4	8.3	5.9	3.8	17.1	55.5
Uncertain tax positions, including interest and penalties ⁽⁶⁾	—	—	—	—	—	14.8	14.8
Total	\$ 1,507.3	\$ 1,278.3	\$ 884.7	\$ 942.4	\$ 549.4	\$ 786.0	\$ 5,948.1

- (1) We have certain raw material purchase contracts where we are required to purchase certain minimum volumes at the then prevailing market prices. These commitments range from 1 to 5 years. In certain raw material purchase contracts, we have the right to purchase less than required minimums and pay a liquidated damages fee, or, in case of a permanent plant shutdown, to terminate the contracts. In such cases these obligations would be less than the obligations shown in the table above.
- (2) As a part of the May 2015 refinancing, we redeemed our existing 2019 Senior Notes, replacing those borrowings with a \$500.0 million 2021 Term Loan B due November 2021, \$300.0 million in USD Notes and €375.0 million in Euro Notes, both due May 2022. The Euro Notes displayed in the table above were translated using the December 31, 2016 spot exchange rate. The table above excludes other debt outstanding as of December 31, 2016 totaling \$1.6 million.
- (3) Includes estimated interest on the 2021 Term Loan B, USD Notes, and Euro Notes. Interest on the 2021 Term Loan B is payable quarterly. Interest on the USD Notes and Euro Notes is payable semi-annually on May 1st and November 1st of each year. For the 2021 Term Loan B, the expected interest payments included in the table above assume that the LIBO rate continues to be below the 1.00% floor as described in the Senior Credit Facility. For the Euro Notes, the expected interest payments included in the table above were translated using the December 31, 2016 spot exchange rate. Refer to Item 7A—*Quantitative and Qualitative Disclosures about Market Risk* for further discussion of interest rate and foreign currency risks. Estimated interest payments do not include the 2020 Revolving Facility or Accounts Receivable Securitization Facility as amounts outstanding under these facilities vary due to periodic borrowings and repayments. There are no amounts outstanding under either facility as of December 31, 2016.
- (4) Includes minimum contributions required to be made to the funded pension plans and expected benefit payments to the employees for unfunded pension plans. With respect to our minimum funding requirements under our pension obligations, we may elect to make contributions in excess of the minimum funding requirements in response to investment performance or changes in interest rates or when we believe that it is financially advantageous to do so and based on our other cash requirements. Our minimum funding requirements after 2016 will depend on several factors, including investment performance and interest rates. Our minimum funding requirements may also be affected by changes in applicable legal requirements. We also have payments due with respect to our postretirement benefit obligations, which we do not fund in advance. Rather, payments are made as costs are incurred by covered retirees. We expect benefit payments related to our postretirement benefit obligations to be \$3.1 million through 2026. The payments identified above as subsequent to 2021 represent estimated pension and postretirement

payments from 2022 through 2026. Also included in the above is a \$15.5 million expected benefit obligation for payments estimated to be payable in 2018 under the Company's non-qualified supplemental employee retirement plan. Refer to Note 16 in the consolidated financial statements for further information.

- (5) Excludes certain estimated future commitments under agreements with Dow, including the SAR MOSA, under which Dow provides administrative and operational services to us, and the 25-year SAR SSAs, under which Dow provides utilities and site services to certain of our facilities co-located with Dow. For more information regarding these agreements, refer to Item 1—*Business— Our Relationship with Dow*.

The services provided pursuant to the SAR MOSA generally are priced per function, and we have the ability to terminate the services or any portion thereof, for convenience any time after June 1, 2015, subject to payment of termination charges. Services which are “highly integrated” follow a different process for evaluation and termination. In addition, either party may terminate for cause, which includes a bankruptcy, liquidation or similar proceeding by the other party, for material breach which is not cured, or by Dow in the event of our failure to pay for the services thereunder. In the event of a change of control, as defined in the agreement, Dow has the right to terminate the SAR MOSA. As of December 31, 2016, we estimate our minimum obligation under the SAR MOSA to be approximately \$22.6 million. Utilizing current year known costs and assuming that we continue with this agreement through its completion on December 31, 2020, we estimate our contractual obligations for the SAR MOSA to be approximately \$47.0 million annually for 2017 through 2020.

Additionally, the SAR SSAs may be terminated at any time by agreement of the parties, or, by either party, for cause, including a bankruptcy, liquidation or similar proceeding by the other party, or under certain circumstances for a material breach which is not cured. We may also terminate for convenience any services that Dow has agreed to provide to us that are identified in any site services agreement as “terminable” with 12 months prior notice to Dow, dependent upon whether the service is highly integrated into Dow operations. Highly integrated services are agreed to be nonterminable. With respect to “nonterminable” services that Dow has agreed to provide to us, such as electricity and steam, we generally cannot terminate such services prior to the termination date unless we experience a production unit shut down for which we provide Dow with 15-months prior notice, or upon payment of a shutdown fee. Upon expiration or termination, we would be obligated to pay a monthly fee to Dow, which obligation extends for a period of 45 (in the case of expiration) to 60 months (in the case of termination) following the respective event of each site services agreement. The agreements under which Dow receives services from us may be terminated under the same circumstances and conditions. Utilizing current year known costs and assuming that we continue with these agreements, we estimate our contractual obligations for the SAR SSAs to be approximately \$173.9 million annually for 2017 through 2021, and a total of \$2,864.3 million thereafter through June 2038.

Refer to Note 18 in the consolidated financial statements for further information.

- (6) Due to uncertainties in the timing of the effective settlement of tax positions with the respective taxing authorities, we are unable to determine the timing of payments related to its uncertain tax positions, including interest and penalties. Amounts are therefore reflected in “Thereafter”.

Critical Accounting Policies and Estimates

Our discussion and analysis of results of operations and financial condition are based upon our financial statements, which have been prepared in accordance with GAAP. The preparation of these financial statements requires us to make estimates and judgments that affect the amounts reported. We base these estimates and judgments on historical experiences and assumptions believed to be reasonable under the circumstances. Actual results could vary from our estimates under different conditions. Our significant accounting policies, which may be affected by our estimates and assumptions, are more fully described in Note 2 in the consolidated financial statements. An accounting policy is deemed to be critical if it requires an accounting estimate to be made based on assumptions about matters that are highly uncertain at the time the estimate is made, and if different estimates that reasonably could have been used, or changes in the accounting estimates that are reasonably likely to occur periodically, could materially impact the financial statements. The following critical accounting policies reflect our most significant estimates and assumptions used in the preparation of the consolidated financial statements.

Pension Plans and Postretirement Benefits

We have various company-sponsored retirement plans covering substantially all employees. We also provide certain health care and life insurance benefits to retired employees mainly in the United States. Prior to the divestiture of our latex binders and automotive businesses in Brazil (refer to Note 3 in the consolidated financial statements), we also provided health care and life insurance benefits to retired employees in Brazil. The U.S.-based plan provides health care benefits, including hospital, physicians' services, drug and major medical expense coverage, and life insurance benefits. We recognize the underfunded or overfunded status of a defined benefit pension or postretirement plan as an asset or liability in our consolidated balance sheets and recognize changes in the funded status in the year in which the changes occur through accumulated other comprehensive income ("AOCI"), which is a component of shareholders' equity.

A settlement is a transaction that is an irrevocable action that relieves the employer (or the plan) of primary responsibility for a pension or postretirement benefit obligation, and that eliminates significant risks related to the obligation and the assets used to effect the settlement. The Company does not record settlement gains or losses during interim periods when the cost of all settlements in a year is less than or equal to the sum of the service cost and interest cost components of net periodic pension cost for the plan in that year.

Pension benefits associated with these plans are generally based on each participant's years of service, compensation, and age at retirement or termination. The discount rate is an important element of expense and liability measurement. We evaluate our assumptions at least once each year, or as facts and circumstances dictate, and make changes as conditions warrant.

We determine the discount rate used to measure plan liabilities as of the December 31 measurement date for the pension and postretirement benefit plans. The discount rate reflects the current rate at which the associated liabilities could be effectively settled at the end of the year. We set our rate to reflect the yield of a portfolio of high quality, fixed-income debt instruments that would produce cash flows sufficient in timing and amount to settle projected future benefits. Using this methodology, we determined a weighted-average discount rate of 1.65% for pension and 4.16% for postretirement benefits to be appropriate as of December 31, 2016.

In 2016, we changed the method used to estimate the future service and interest cost components of net periodic benefit cost for our defined benefit pension and other postretirement benefit plans. Historically, we estimated the future service and interest cost components using a single weighted-average discount rate derived from the yield curve that was used to measure the benefit obligation at the beginning of the period. For 2017 and beyond, we have elected to use a full yield curve approach in the estimation of these components of benefit cost by applying the specific spot rates along the yield curve used in the determination of the benefit obligation to the relevant projected cash flows. We have made this change to improve the correlation between projected benefit cash flows and the corresponding yield curve spot rates and to provide a more precise measurement of service and interest costs. This change does not affect the measurement of our total benefit obligations, as the change in the service cost and interest cost is entirely offset in the actuarial loss reported. We have accounted for this as a change in estimate and, accordingly, will apply it prospectively, beginning in the first quarter of 2017.

The weighted-average discount rates that we used to measure service cost for pension and postretirement plans during 2017 were 1.63% and 4.18%, respectively. The weighted-average discount rates that we used to measure interest cost for pension and postretirement plans during 2017 were 1.42% and 3.81%, respectively. Had we not changed our estimation approach, we would have utilized the liability discount rates mentioned above (1.65% for pension and 4.16% for postretirement benefits) to determine future service and interest cost. The expected reductions in service cost and interest cost for 2017 associated with this change are not expected to be material to the consolidated financial statements.

We determine the expected long-term rate of return on assets by performing a detailed analysis of historical and expected returns based on the underlying assets, which generally are insurance contracts. We also consider our historical experience with the pension fund asset performance. The expected return of each asset class is derived from a forecasted future return confirmed by current and historical experience. The weighted-average long-term rate of return assumptions used for determining net periodic pension expense were 1.79% and 1.73% for 2016 and 2015, respectively. The increase was primarily due to higher interest rates during 2016 on certain assets with guaranteed returns. Future actual pension expense will depend on the performance of the underlying assets and changes in future discount rates, among other factors.

Holding all other factors constant, a 0.25 percentage point increase (decrease) in the discount rate used to determine net periodic cost would decrease (increase) 2016 pension expense by approximately \$2.0 million and \$(1.9) million, respectively. Holding all other factors constant, a 0.25 percentage point increase (decrease) in the long-term rate of return on assets used to determine net periodic cost would decrease (increase) 2016 pension expense by approximately \$0.3 million and \$(0.3) million, respectively.

Plan assets are invested primarily in insurance contracts that provide for guaranteed returns. As of December 31, 2016 and 2015, respectively, plan assets totaled \$114.2 million and \$100.5 million. Investments in the pension plan insurance are valued utilizing unobservable inputs, which are contractually determined based on cash surrender values, returns, fees, and the present value of the future cash flows of the contracts, and are classified as Level 3 investments.

Stock-Based Compensation

2014 Omnibus Incentive Plan

In connection with the IPO, the Company's board of directors approved and adopted the Trinseo S.A. 2014 Omnibus Incentive Plan ("2014 Omnibus Plan"), under which 4.5 million ordinary shares is the maximum number that may be delivered upon satisfaction of awards granted. Following the IPO, all equity-based awards granted by the Company have been granted under the 2014 Omnibus Plan, which provides for awards of stock options, share appreciation rights, restricted stock, unrestricted stock, stock units, performance awards, cash awards and other awards convertible into or otherwise based ordinary shares of the Company. Since the IPO, the board of directors of the Company has approved equity award grants for certain directors, executives, and employees, including restricted share units (or RSUs) and options to purchase shares (or options awards).

Compensation costs for the RSUs are measured at the grant date based on the fair value of the award and are recognized ratably as expense over the applicable vesting term. Prior to November 2016, dividend and dividend equivalents did not accumulate on unvested RSUs. In November 2016, the board of directors approved an amendment to all outstanding RSUs, entitling each award holder to an amount equal to any cash dividend or repayment of equity paid by the Company upon one ordinary share for each RSU held by the award holder ("dividend equivalents"). The dividend equivalents earned on the RSUs only include dividends or repayments of equity paid after this amendment and the award holders have no right to receive the dividend equivalents unless and until the associated RSUs vest. The dividend equivalents will be payable in cash and will not accrue interest. The impact of this amendment is immaterial to the consolidated financial statements.

The fair value of RSUs is equal to the fair market value of the Company's ordinary shares based on the closing price on the date of grant.

Compensation cost for the option awards is measured at the date of grant date based on the fair value of the award and is recognized as expense over the appropriate service period utilizing graded vesting. The fair value for option awards is computed using the Black-Scholes pricing model, whose significant inputs and assumptions are determined as of the date of grant. Determining the fair value of the option awards requires considerable judgment, including estimating the expected term of option awards and the expected volatility of the price of the Company's ordinary shares.

Since the Company's equity interests were privately held prior to the IPO in June 2014, there is limited publicly traded history of the Company's ordinary shares. Until such time that the Company can determine expected volatility based solely on the publicly traded history of its ordinary shares, expected volatility used in the Black-Scholes model for option awards granted is based on a combination of the Company's historical volatility and similar companies' stock that are publicly traded. The expected term of option awards represents the period of time that option awards granted are expected to be outstanding. For all grants of option awards presented herein, the simplified method was used to calculate the expected term, given the Company's limited historical exercise data. The risk-free interest rate for the periods within the expected term of option awards is based on the U.S. Treasury yield curve in effect at the time of grant. The dividend yield is estimated based on historical and expected dividend activity.

Effective April 1, 2016, the Company adopted new accounting guidance that simplifies several aspects of accounting for share-based payments. Among other things, as part of this adoption, the Company made an accounting policy election to recognize forfeitures as incurred, rather than estimating the forfeitures in advance. The impact of this change was applied utilizing a modified retrospective approach, with an adjustment of \$0.9 million recorded during the

year ended December 31, 2016 to decrease opening retained earnings and increase opening additional paid-in-capital. All other impacts of this adoption were not material to the Company's financial position and results of operations.

Restricted Stock Awards issued by the former Parent

From 2010 through 2013, the former Parent granted various time-based and performance-based restricted stock awards to certain key members of management. Any related compensation associated with these awards is allocated to the Company from the former Parent. With the adoption of the Company's 2014 Omnibus Plan, discussed above, restricted stock awards have not been issued by the former Parent on behalf of the Company.

During 2016, the former Parent completed the sale of its ordinary shares of the Company through secondary offerings, and as a result, no longer holds any ownership interest in the Company. Refer to Note 12 in the consolidated financial statements for further information. Given that the former Parent sold its interest in the substantive assets of the Company, under the terms of the related securityholder agreements, vesting of all outstanding restricted stock awards was fully accelerated into the year ended December 31, 2016. No additional expense is expected in future periods related to these awards.

Asset Impairments

As of December 31, 2016, net property, plant and equipment, net identifiable finite-lived intangible assets, and goodwill totaled \$513.8 million, \$177.3 million, and \$29.5 million, respectively. Management makes estimates and assumptions in preparing the consolidated financial statements for which actual results will emerge over long periods of time. This includes the recoverability of long-lived assets employed in the business. These estimates and assumptions are closely monitored by management and periodically adjusted as circumstances warrant. For instance, expected asset lives may be shortened or impairment may be recorded based on a change in the expected use of the asset or performance of the related asset group.

We evaluate long-lived assets and identifiable finite-lived intangible assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset or asset grouping may not be recoverable. When undiscounted future cash flows are not expected to be sufficient to recover an asset's carrying value, the asset is written down to its fair value based on a discounted cash flow analysis utilizing market participant assumptions.

In August 2016, we announced our plan to cease manufacturing activities at the Company's latex binders manufacturing facility in Livorno, Italy. As a result, we determined that the long-lived assets at this facility, which included land and depreciable long-lived assets, should be assessed for impairment. This assessment indicated that the carrying value of the asset group was not recoverable when compared to the expected undiscounted cash flows from the operation and eventual disposition of these assets. The fair value of the depreciable assets was determined under the income approach, utilizing a discounted cash flow model. The key assumption in this model was cash flow projections, which were determined to be nil, as the plant ceased manufacturing operations in October 2016. The fair value of the land was determined utilizing a combination of the market and income approaches, utilizing key inputs such as recent comparable market transactions, expected date of sale, and discount rate. Based upon this assessment, for the year ended December 31, 2016, we recorded an impairment loss of approximately \$13.7 million. The amount was included in "Selling, general and administrative expenses" in the consolidated statement of operations and was allocated entirely to the Latex Binders segment.

Through December 31, 2016, we have continued to assess the recoverability of certain assets, and concluded there are no additional events or circumstances identified by management that would indicate these assets are not recoverable. However, the current environment is subject to changing market conditions and requires significant management judgment to identify the potential impact to our assessment. If we are not able to achieve certain actions or our future operating results do not meet our expectations, it is possible that impairment charges may need to be recorded on one or more of our operating facilities.

Long-lived assets to be disposed of by sale are classified as held-for-sale and are reported at the lower of carrying amount or fair value less cost to sell, and depreciation is ceased. Long-lived assets to be disposed of in a manner other than by sale are classified as held-and-used until they are disposed.

Our goodwill impairment testing is performed annually as of October 1st at a reporting unit level. We perform more frequent impairment tests when events or changes in circumstances indicate that the fair value of a reporting unit

has more likely than not declined below its carrying value. As of our annual assessment date of October 1, 2016, which reflects our new segmentation discussed above, each of our reporting units had fair values that substantially exceeded the carrying value of their net assets, indicating that no impairment of goodwill is warranted.

An impairment loss generally would be recognized when the carrying amount of the reporting unit's net assets exceeds the estimated fair value of the reporting unit. The estimated fair value of a reporting unit is determined using a market approach and an income approach (under the discounted cash flow method). When supportable, the Company employs the qualitative assessment of goodwill impairment prescribed by ASC 350. As of December 31, 2016, our \$29.5 million in total goodwill is allocated to our reportable segments as follows: \$11.5 million to Latex Binders, \$8.2 million to Synthetic Rubber, \$4.2 million to Performance Plastics, and \$5.6 million to Basic Plastics, with no amounts allocated to the Feedstocks or Americas Styrenics segments.

Factors which could result in future impairment charges, among others, include changes in worldwide economic conditions, changes in technology, changes in competitive conditions and customer preferences, and fluctuations in foreign currency exchange rates. These factors are discussed in Item 7A—*Quantitative and Qualitative Disclosures about Market Risk* and Item 1A—*Risk Factors* included in this Annual Report.

Income Taxes

We account for income taxes using the asset and liability method. Under this method, deferred tax assets and liabilities are recognized for the future tax consequences of temporary differences between the carrying amounts and tax bases of assets and liabilities using enacted rates. The effect of a change in tax rates on deferred taxes is recognized in income in the period that includes the enactment date. Deferred taxes are provided on the outside basis differences and unremitted earnings of subsidiaries outside of Luxembourg. All undistributed earnings of foreign subsidiaries and affiliates are expected to be repatriated as of December 31, 2016. Based on the evaluation of available evidence, both positive and negative, we recognize future tax benefits, such as net operating loss carryforwards and tax credit carryforwards, to the extent that realizing these benefits is considered to be more likely than not.

As of December 31, 2016, we had deferred tax assets of \$70.3 million, after valuation allowances of \$112.6 million. In evaluating the ability to realize the deferred tax assets, we rely on, in order of increasing subjectivity, taxable income in prior carryback years, the future reversals of existing taxable temporary differences, tax planning strategies and forecasted taxable income using historical and projected future operating results.

As of December 31, 2016, we had deferred tax assets for tax loss carryforward of approximately \$404.6 million, \$47.3 million of which is subject to expiration in the years between 2017 and 2021. We continue to evaluate our historical and projected operating results for several legal entities for which we maintain valuation allowances on net deferred tax assets.

We are subject to income taxes in Luxembourg, the United States and numerous foreign jurisdictions, and are subject to audit within these jurisdictions. Therefore, in the ordinary course of business there is inherent uncertainty in quantifying our income tax positions. The tax provision includes amounts considered sufficient to pay assessments that may result from examinations of prior year tax returns; however, the amount ultimately paid upon resolution of issues raised may differ from the amounts accrued. Since significant judgment is required to assess the future tax consequences of events that have been recognized in our financial statements or tax returns, the ultimate resolution of these events could result in adjustments to our financial statements and such adjustments could be material. Therefore, we consider such estimates to be critical in preparation of our financial statements.

The financial statement effect of an uncertain income tax position is recognized when it is more likely than not, based on the technical merits, that the position will be sustained upon examination. Accruals are recorded for other tax contingencies when it is probable that a liability to a taxing authority has been incurred and the amount of the contingency can be reasonably estimated. Uncertain income tax positions have been recorded in "Other noncurrent obligations" in the consolidated balance sheets for the periods presented.

Management judgment is required in determining our provision for income taxes, our deferred tax assets and liabilities, and any valuation allowance recorded against our deferred tax assets. The valuation allowance is based on our estimates of future taxable income and the period over which we expect the deferred tax assets to be recovered. Our assessment of future taxable income is based on historical experience and current and anticipated market and economic conditions and trends. In the event that actual results differ from these estimates or we adjust our estimates in the future, we may need to adjust our valuation allowance, which could materially impact our financial position and results of operations.

Off-balance Sheet Arrangements

We do not have any off-balance sheet arrangements.

Recent Accounting Pronouncements

We describe the impact of recent accounting pronouncements in Note 2 to the consolidated financial statements, included elsewhere within this Annual Report.

Item 7A. *Quantitative and Qualitative Disclosures About Market Risk*

We are exposed to changes in interest rates and foreign currency exchange rates because we finance certain operations through fixed and variable rate debt instruments and denominate our transactions in a variety of foreign currencies. We are also exposed to changes in the prices of certain commodities that we use in production. Changes in these rates and commodity prices may have an impact on future cash flow and earnings. We manage these risks through normal operating and financing activities and, when deemed appropriate, through the use of derivative financial instruments. We do not enter into financial instruments for trading or speculative purposes.

By using derivative instruments, we are subject to credit and market risk. The fair market value of the derivative instruments is determined by using valuation models whose inputs are derived using market observable inputs, including interest rate yield curves, as well as foreign exchange and commodity spot and forward rates, and reflects the asset or liability position as of the end of each reporting period. When the fair value of a derivative contract is positive, the counterparty owes us, thus creating a receivable risk for us. We are exposed to counterparty credit risk in the event of non-performance by counterparties to our derivative agreements. We minimize counterparty credit (or repayment) risk by entering into transactions with major financial institutions of investment grade credit rating.

Our exposure to market risk is not hedged in a manner that completely eliminates the effects of changing market conditions on earnings or cash flow.

Interest Rate Risk

Given the Company's debt structure (refer to Note 10 in the consolidated financial statements), we have certain exposure to changes in interest rates.

The 2021 Term Loan B bears an interest rate of LIBOR plus 3.25%, subject to a 1.00% LIBOR floor. Based on weighted-average outstanding borrowings under the 2021 Term Loan B throughout the year ended December 31, 2016, an increase in 100 basis points in the LIBO rate would have resulted in approximately \$3.7 million of additional interest expense for the period.

Loans under the 2020 Revolving Facility, at the Borrowers' option, may be maintained as (a) LIBO rate loans, which bear interest at a rate per annum equal to the LIBO rate plus the applicable margin (as defined in the Credit Agreement), if applicable, or (b) base rate loans which shall bear interest at a rate per annum equal to the base rate plus the applicable margin (as defined in the Credit Agreement). As of December 31, 2016, the Borrowers are required to pay a quarterly commitment fee in respect of any unused commitments under the 2020 Revolving Facility equal to 0.375% per annum. As of and throughout the year ended December 31, 2016, we had no variable rate debt issued under our 2020 Revolving Facility. As such, we incurred no variable rate interest related to this facility during the year ended December 31, 2016.

Our Accounts Receivable Securitization Facility is subject to interest charges against both the amount of outstanding borrowings as well as the amount of available, but undrawn commitments under the facility. Fixed interest charges on outstanding borrowings for this facility are 2.6% plus variable commercial paper rates which vary by month and by currency, as outstanding balances can be denominated in euro and U.S. dollar. Fixed interest charges on available, but undrawn commitments for this facility are 1.4%. As of and throughout the year ended December 31, 2016, we had no variable rate debt issued under our Accounts Receivable Securitization Facility. As such, we incurred no variable rate interest related to this facility during the year ended December 31, 2016.

Foreign Currency Risks

The Company's ongoing business operations expose it to foreign currency risks, including fluctuating foreign exchange rates. Our primary foreign currency exposure is to the U.S. dollar to euro, noting that approximately 60% of our net sales were generated in Europe for the year ended December 31, 2016. To a lesser degree, we are also exposed to other currencies, including the Chinese yuan, Swiss franc, and Indonesian rupiah. To manage these risks, the Company periodically enters into derivative financial instruments such as foreign exchange forward contracts.

Certain subsidiaries have assets and liabilities denominated in currencies other than their respective functional currencies, which creates foreign exchange risk. Our principal strategy in managing exposure to changes in foreign currency exchange rates is to naturally hedge the foreign currency-denominated liabilities on our consolidated balance sheets against corresponding assets of the same currency such that any changes in liabilities due to fluctuations in exchange rates are offset by changes in their corresponding foreign currency assets. In order to further reduce our exposure, we also use foreign exchange forward contracts to economically hedge the impact of the variability in exchange rates on our assets and liabilities denominated in certain foreign currencies. These derivative contracts are not designated for hedge accounting treatment.

The Company also enters into forward contracts with the objective of managing the currency risk associated with forecasted U.S. dollar-denominated raw materials purchases by one of its subsidiaries whose functional currency is the euro. By entering into these forward contracts, which are designated as cash flow hedges, the Company buys a designated amount of U.S. dollars and sells euros at the prevailing market rate to mitigate the risk associated with the fluctuations in the euro-to-U.S. dollar foreign currency exchange rates. The qualifying hedge contracts are marked-to-market at each reporting date and any unrealized gains or losses are included in AOCI to the extent effective, and reclassified to cost of sales in the period during which the transaction affects earnings or it becomes probable that the forecasted transaction will not occur.

We have legal entities consolidated in our financial statements that have functional currencies other than U.S. dollar, our reporting currency. As a result of currencies fluctuating against the U.S. dollar, currency translation gains and losses are recorded in other comprehensive income, primarily as a result of the remeasurement of our euro functional legal entities as of December 31, 2016 and 2015.

Commodity Price Risk

We purchase certain raw materials such as benzene, ethylene, butadiene, BPA and styrene under short- and long-term supply contracts. The purchase prices are generally determined based on prevailing market conditions. We mitigate against the instability of commodity prices by passing higher raw material costs through to our customers by raising our prices or including provisions in our contracts that allow us to increase prices in such a circumstance or by including pricing formulas which utilize commodity indices. While the Company may experience some volatility in earnings and cash flows due to the lag in passing through raw material costs, we do not believe these temporary lags create a material risk to us over the next year. Nevertheless, even when raw material costs may be passed on easily to our customers, during periods of high volatility customers without minimum purchase requirements with us may choose to delay purchases of our materials or, in some cases, substitute purchases of our materials with less costly products.

We do not currently enter into derivative financial instruments for trading or speculative purposes to manage our commodity price risk relating to our raw material contracts.

Item 8. *Financial Statements and Supplementary Data*

The financial statements and supplementary data required by Regulation S-X are included in Item 15- *Exhibits, Financial Statements Schedules* contained in Part IV of this Annual Report.

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

None.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Our management is responsible for establishing and maintaining disclosure controls and procedures designed to provide reasonable assurance that information required to be disclosed by us in our reports that we file or submit under the Exchange Act (as defined in Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934, as amended) is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosures. Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of the Company's disclosure controls and procedures as of December 31, 2016. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures as of the end of the period covered by this Annual Report were effective to provide the reasonable level of assurance described above.

Management's Annual Report on Internal Control over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of the Company's financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles.

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 policies and procedures may deteriorate.

Management conducted an assessment of the Company's internal control over financial reporting as of December 31, 2016 based on the framework in Internal Control—Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on the assessment, management concluded that, as of December 31, 2016, the Company's internal control over financial reporting is effective.

The effectiveness of the Company's internal control over financial reporting as of December 31, 2016 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears herein.

Changes in Internal Control over Financial Reporting

In 2015, the Company began a two-year project to upgrade our legacy ERP environment to an updated version of SAP through a phased implementation approach. As of December 31, 2016, we have completed this migration, including our North America, Asia Pacific, and European operations. In connection with this implementation, we have updated the processes that constitute our internal control over financial reporting, as necessary, to accommodate related changes to our business processes. The Company believes we have maintained appropriate internal controls during this phased implementation.

There have been no other changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) of the Exchange Act) that occurred during the quarter ended December 31, 2016 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

None.

Part III**Item 10. Directors, Executive Officers and Corporate Governance**

The information required by this Item 10 is incorporated herein by reference from the sections captioned “Election of Directors,” “Corporate Governance,” “Stock Ownership Information,” and “Section 16(a) Beneficial Ownership Reporting Compliance” of the Company’s definitive proxy statement for the 2017 annual general meeting of shareholders to be filed with the Securities and Exchange Commission pursuant to Regulation 14A under the Securities Exchange Act of 1934 (the “2017 Proxy Statement”).

Code of Ethics

The Company has adopted a Code of Business Conduct applicable to all of our directors, officers and employees, and a Code of Ethics for Senior Financial Employees applicable to our principal executive, financial and accounting officers, and all persons performing similar functions. A copy of each of those Codes is available on the Company’s corporate website at www.trinseo.com under Investor Relations—Corporate Governance—Ethics and Compliance. If we make any substantive amendments to these Codes, or grant any waivers, including any implicit waivers from the provisions of these Codes, we will make a disclosure on our website or in a report on Form 8-K. Our Code of Business of Conduct is supported by a number of subsidiary policies which are specifically referenced in the Code, and several of which are also available on our corporate website. Our website and the information contained on that site, or accessible through that site, are not incorporated into and are not a part of this Annual Report.

Item 11. Executive Compensation

The information required by this Item 11 will be contained in our 2017 Proxy Statement and is incorporated by reference herein.

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

The information required by this Item 12 will be contained in our 2017 Proxy Statement and is incorporated by reference herein.

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

The information required by this Item 13 will be contained in our 2017 Proxy Statement and is incorporated by reference herein.

Item 14. Principal Accounting Fees and Services

The information required by this Item 14 will be contained in our 2017 Proxy Statement and is incorporated by reference herein.

Part IV

Item 15. Exhibits, Financial Statement Schedules

(a) The following documents are filed as part of this report:

1. Financial statements:

Report of Independent Registered Public Accounting Firm	F-2
Consolidated Balance Sheets as of December 31, 2016 and 2015	F-3
Consolidated Statements of Operations for the years ended December 31, 2016, 2015, and 2014	F-4
Consolidated Statements of Comprehensive Income (Loss) for the years ended December 31, 2016, 2015, and 2014	F-5
Consolidated Statements of Shareholders' Equity for the years ended December 31, 2016, 2015, and 2014	F-6
Consolidated Statements of Cash Flows for the years ended December 31, 2016, 2015, and 2014	F-7
Notes to Consolidated Financial Statements for the years ended December 31, 2016, 2015, and 2014	F-8
Financial Statement Schedule – Schedule II. Valuation and Qualifying Accounts	F-56

Americas Styrenics LLC

Audited Consolidated Financial Statements

Report of Independent Registered Public Accounting Firm	F-57
Consolidated Balance Sheets as of December 31, 2016 and 2015	F-58
Consolidated Statements of Comprehensive Income for the years ended December 31, 2016, 2015, and 2014	F-59
Consolidated Statements of Members' Equity for the years ended December 31, 2016, 2015, and 2014	F-60
Consolidated Statements of Cash Flows for the years ended December 31, 2016, 2015, and 2014	F-61
Notes to Consolidated Financial Statements for the years ended December 31, 2016, 2015, and 2014	F-62

2. Exhibits, as listed in the exhibit index to this report.

SIGNATURES

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

Date: March 1, 2017

TRINSEO S.A.

By: /s/ Christopher D. Pappas
 Name: Christopher D. Pappas
 Title: President and Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1934, this report has been signed by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Christopher D. Pappas</u> Christopher D. Pappas	President and Chief Executive Officer (Principal Executive Officer)	March 1, 2017
<u>/s/ Barry J. Niziolek</u> Barry J. Niziolek	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	March 1, 2017
<u>/s/ Ryan J. Leib</u> Ryan J. Leib	Corporate Controller (Principal Accounting Officer)	March 1, 2017
<u>/s/ Jeffrey J. Cote</u> Jeffrey J. Cote	Director	March 1, 2017
<u>/s/ Pierre-Marie De Leener</u> Pierre-Marie De Leener	Director	March 1, 2017
<u>/s/ Philip R. Martens</u> Philip R. Martens	Director	March 1, 2017
<u>/s/ Donald T. Misheff</u> Donald T. Misheff	Director	March 1, 2017
<u>/s/ Michel G. Plantevin</u> Michel G. Plantevin	Director	March 1, 2017
<u>/s/ Ruth Springham</u> Ruth Springham	Director	March 1, 2017
<u>/s/ Stephen F. Thomas</u> Stephen F. Thomas	Director	March 1, 2017
<u>/s/ Stephen M. Zide</u> Stephen M. Zide	Director	March 1, 2017

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Americas Styrenics LLC*

Audited Consolidated Financial Statements

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* The audited financial statements of Americas Styrenics LLC as of December 31, 2016 and 2015 and for the years ended December 31, 2016, 2015 and 2014 have been included in this Annual Report in accordance with the requirements of Rule 3-09 of Regulation S-X.

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Trinseo S.A.

In our opinion, based on our audits and the report of other auditors, the accompanying consolidated balance sheets and the related consolidated statements of operations, of comprehensive income (loss), of shareholders' equity and of cash flows present fairly, in all material respects, the financial position of Trinseo S.A. and its subsidiaries at December 31, 2016 and December 31, 2015, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2016 in conformity with accounting principles generally accepted in the United States of America. In addition, in our opinion, the financial statement schedule listed in the accompanying index presents fairly, in all material respects, the information set forth therein when read in conjunction with the related consolidated financial statements. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for these financial statements and financial statement schedule, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Annual Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on these financial statements, the financial statement schedule, and on the Company's internal control over financial reporting based on our audits (which were integrated audits in 2016 and 2015). We did not audit the financial statements of Americas Styrenics LLC, a 50-percent-owned equity investment of Trinseo S.A. as of December 31, 2016 and December 31, 2015 or for the years then ended. Trinseo S.A.'s consolidated financial statements reflect an investment in unconsolidated affiliates for Americas Styrenics LLC of \$149.7 million as of December 31, 2016 and \$143.9 million as of December 31, 2015 and includes equity in the earnings of unconsolidated affiliates for Americas Styrenics LLC of \$135.8 million for the year ended December 31, 2016 and \$135.3 million for the year ended December 31, 2015. The financial statements of Americas Styrenics LLC were audited by other auditors whose report thereon has been furnished to us, and our opinion on the December 31, 2016 and December 31, 2015 consolidated financial statements expressed herein, insofar as it relates to the amounts included for Americas Styrenics LLC, is based solely on the report of the other auditors. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. 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 and the report of other auditors provide a reasonable basis for our opinions.

As discussed in Note 2 to the consolidated financial statements, the Company changed the manner in which it classifies deferred financing fees in 2016.

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.

/s/ PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP
Philadelphia, Pennsylvania
March 1, 2017

TRINSEO S.A.
Consolidated Balance Sheets
(In thousands, except per share data)

	December 31,	
	2016	2015
Assets		
Current assets		
Cash and cash equivalents	\$ 465,114	\$ 431,261
Accounts receivable, net of allowance	564,428	494,556
Inventories	385,345	353,097
Other current assets	17,999	10,120
Total current assets	<u>1,432,886</u>	<u>1,289,034</u>
Investments in unconsolidated affiliates	191,418	182,836
Property, plant and equipment, net	513,757	518,751
Other assets		
Goodwill	29,485	31,064
Other intangible assets, net	177,345	158,218
Deferred income tax assets—noncurrent	40,187	51,395
Deferred charges and other assets	24,412	27,596
Total other assets	<u>271,429</u>	<u>268,273</u>
Total assets	<u>\$ 2,409,490</u>	<u>\$ 2,258,894</u>
Liabilities and shareholders' equity		
Current liabilities		
Short-term borrowings and current portion of long-term debt	\$ 5,000	\$ 5,000
Accounts payable	378,029	324,629
Income taxes payable	23,784	20,804
Accrued expenses and other current liabilities	135,357	98,836
Total current liabilities	<u>542,170</u>	<u>449,269</u>
Noncurrent liabilities		
Long-term debt, net of unamortized deferred financing fees	1,160,369	1,177,120
Deferred income tax liabilities—noncurrent	24,844	25,764
Other noncurrent obligations	237,054	217,727
Total noncurrent liabilities	<u>1,422,267</u>	<u>1,420,611</u>
Commitments and contingencies (Note 15)		
Shareholders' equity		
Ordinary shares, \$0.01 nominal value, 50,000,000 shares authorized (December 31, 2016: 48,778 shares issued and 44,301 shares outstanding; December 31, 2015: 48,778 shares issued and outstanding)	488	488
Additional paid-in-capital	573,662	556,532
Treasury shares, at cost (December 31, 2016: 4,477 shares; December 31, 2015: zero shares)	(217,483)	—
Retained earnings (accumulated deficit)	258,540	(18,289)
Accumulated other comprehensive loss	<u>(170,154)</u>	<u>(149,717)</u>
Total shareholders' equity	445,053	389,014
Total liabilities and shareholders' equity	<u>\$ 2,409,490</u>	<u>\$ 2,258,894</u>

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

TRINSEO S.A.

Consolidated Statements of Operations
(In thousands, except per share data)

	Year Ended December 31,		
	2016	2015	2014
Net sales	\$ 3,716,640	\$ 3,971,902	\$ 5,127,961
Cost of sales	3,129,014	3,502,800	4,830,640
Gross profit	587,626	469,102	297,321
Selling, general and administrative expenses	241,543	207,964	232,586
Equity in earnings of unconsolidated affiliates	144,733	140,178	47,749
Operating income	490,816	401,316	112,484
Interest expense, net	74,968	93,197	124,923
Loss on extinguishment of long-term debt	—	95,150	7,390
Other expense, net	10,539	9,113	27,784
Income (loss) before income taxes	405,309	203,856	(47,613)
Provision for income taxes	86,997	70,209	19,719
Net income (loss)	\$ 318,312	\$ 133,647	\$ (67,332)
Weighted average shares- basic	46,510	48,774	43,476
Net income (loss) per share- basic	\$ 6.84	\$ 2.74	\$ (1.55)
Weighted average shares- diluted	47,478	48,970	43,476
Net income (loss) per share- diluted	\$ 6.70	\$ 2.73	\$ (1.55)
Repayments of equity per share	\$ 0.90	\$ —	\$ —

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

TRINSEO S.A.

Consolidated Statements of Comprehensive Income (Loss)
(In thousands, unless otherwise stated)

	<u>Year Ended December 31,</u>		
	<u>2016</u>	<u>2015</u>	<u>2014</u>
Net income (loss)	\$ 318,312	\$ 133,647	\$ (67,332)
Other comprehensive income (loss), net of tax (tax amounts shown in millions below for 2016, 2015, and 2014, respectively):			
Cumulative translation adjustments	(9,802)	(91,365)	(133,901)
Net gain on foreign exchange cash flow hedges	6,703	5,569	—
Pension and other postretirement benefit plans:			
Prior service credit arising during period (net of tax of \$0, \$0.2, and \$3.2)	—	3,222	9,529
Net gain (loss) arising during period (net of tax of \$(7.3), \$2.8, and \$(15.1))	(20,596)	4,716	(42,442)
Amounts reclassified from accumulated other comprehensive income (loss)	3,258	3,358	3,219
Total other comprehensive loss, net of tax	<u>(20,437)</u>	<u>(74,500)</u>	<u>(163,595)</u>
Comprehensive income (loss)	<u>\$ 297,875</u>	<u>\$ 59,147</u>	<u>\$ (230,927)</u>

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

TRINSEO S.A.

Consolidated Statements of Shareholders' Equity
(In thousands, except per share data)

	Shares		Shareholders' Equity						Total
	Ordinary Shares Outstanding	Treasury Shares	Ordinary Shares	Additional Paid-In Capital	Treasury Shares	Accumulated Other Comprehensive Income (Loss)	Retained Earnings (Accumulated Deficit)		
Balance at December 31, 2013	37,270	—	\$ 373	\$ 339,055	\$ —	\$ 88,378	\$ (84,604)	\$ 343,202	
Issuance of ordinary shares (Note 12)	11,500	—	115	197,974	—	—	—	198,089	
Net loss	—	—	—	—	—	—	(67,332)	(67,332)	
Other comprehensive loss	—	—	—	—	—	(163,595)	—	(163,595)	
Stock-based compensation activity	—	—	—	10,501	—	—	—	10,501	
Balance at December 31, 2014	48,770	—	\$ 488	\$ 547,530	\$ —	\$ (75,217)	\$ (151,936)	\$ 320,865	
Net income	—	—	—	—	—	—	133,647	133,647	
Other comprehensive loss	—	—	—	—	—	(74,500)	—	(74,500)	
Stock-based compensation activity	8	—	—	9,002	—	—	—	9,002	
Balance at December 31, 2015	48,778	—	\$ 488	\$ 556,532	\$ —	\$ (149,717)	\$ (18,289)	\$ 389,014	
Adoption of new accounting standard ⁽¹⁾	—	—	—	915	—	—	(915)	—	
Net income	—	—	—	—	—	—	318,312	318,312	
Other comprehensive loss	—	—	—	—	—	(20,437)	—	(20,437)	
Stock-based compensation activity	27	(27)	—	16,215	961	—	—	17,176	
Purchase of treasury shares	(4,504)	4,504	—	—	(218,444)	—	—	(218,444)	
Repayments of equity on ordinary shares (\$0.90 per share)	—	—	—	—	—	—	(40,568)	(40,568)	
Balance at December 31, 2016	44,301	4,477	\$ 488	\$ 573,662	\$ (217,483)	\$ (170,154)	\$ 258,540	\$ 445,053	

(1) Refer to Notes 2 and 17 for discussion of adoption of Accounting Standards Update 2016-09.

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

TRINSEO S.A.
Consolidated Statements of Cash Flows
(In thousands)

	Year Ended December 31,		
	2016	2015	2014
Cash flows from operating activities			
Net income (loss)	\$ 318,312	\$ 133,647	\$ (67,332)
Adjustments to reconcile net income (loss) to net cash provided by operating activities			
Depreciation and amortization	96,459	96,752	103,706
Amortization of deferred financing fees and issuance discount	5,817	7,662	9,937
Deferred income tax	16,088	(77)	4,833
Stock-based compensation expense	17,061	9,002	10,501
Earnings of unconsolidated affiliates, net of dividends	(13,391)	(15,182)	(12,750)
Unrealized net losses (gains) on foreign exchange forward contracts	3,192	(8,953)	4,554
Contingent gain on sale of business	—	—	(623)
Loss on extinguishment of debt	—	95,150	7,390
Prepayment penalty on long-term debt	—	(68,603)	(3,975)
Loss on sale of businesses and other assets	14,928	—	(116)
Impairment charges	15,113	—	—
Changes in assets and liabilities			
Accounts receivable	(96,398)	65,123	68,483
Inventories	(50,966)	97,151	22,605
Accounts payable and other current liabilities	57,115	(71,907)	(5,697)
Income taxes payable	3,784	12,019	259
Other assets, net	5,394	3,166	(2,527)
Other liabilities, net	11,150	(1,701)	(22,027)
Cash provided by operating activities	<u>403,658</u>	<u>353,249</u>	<u>117,221</u>
Cash flows from investing activities			
Capital expenditures	(123,873)	(109,267)	(98,606)
Proceeds from capital expenditures subsidy	—	2,191	—
Proceeds from the sale of businesses and other assets	1,974	818	6,257
Payment for working capital adjustment from sale of business	—	—	(700)
Distributions from unconsolidated affiliates	4,809	—	978
Increase in restricted cash	(204)	(413)	(533)
Cash used in investing activities	<u>(117,294)</u>	<u>(106,671)</u>	<u>(92,604)</u>
Cash flows from financing activities			
Proceeds from initial public offering, net of offering costs	—	—	198,087
Deferred financing fees	—	(28,197)	—
Short-term borrowings, net	(253)	(18,396)	(56,901)
Repayments of term loans	(5,000)	(2,500)	—
Purchase of treasury shares	(215,083)	—	—
Repayments of equity on ordinary shares	(27,316)	—	—
Proceeds from exercise of option awards	214	—	—
Withholding taxes paid on restricted share units	(98)	—	—
Net proceeds from issuance of 2021 Term Loan B	—	498,750	—
Net proceeds from issuance of 2022 Senior Notes	—	716,625	—
Repayments of 2019 Senior Notes	—	(1,192,500)	(132,500)
Proceeds from Accounts Receivable Securitization Facility	—	25,000	308,638
Repayments of Accounts Receivable Securitization Facility	—	(25,000)	(309,205)
Cash provided by (used in) financing activities	<u>(247,536)</u>	<u>(26,218)</u>	<u>8,119</u>
Effect of exchange rates on cash	(4,975)	(9,885)	(8,453)
Net change in cash and cash equivalents	33,853	210,475	24,283
Cash and cash equivalents—beginning of period	431,261	220,786	196,503
Cash and cash equivalents—end of period	<u>\$ 465,114</u>	<u>\$ 431,261</u>	<u>\$ 220,786</u>
Supplemental disclosure of cash flow information			
Cash paid for income taxes, net of refunds	\$ 66,623	\$ 58,151	\$ 5,097
Cash paid for interest, net of amounts capitalized	\$ 69,357	\$ 121,229	\$ 119,820
Accrual for property, plant and equipment	\$ 35,581	\$ 14,205	\$ 18,245

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

TRINSEO S.A.

Notes to Consolidated Financial Statements (Dollars in thousands, unless otherwise stated)

NOTE 1—ORGANIZATION AND BUSINESS ACTIVITIES

Organization

On June 3, 2010, Bain Capital Everest Manager Holding SCA, an affiliate of Bain Capital to which we refer to as the former Parent, was formed through investment funds advised or managed by Bain Capital. Dow Europe Holding B.V. (together with The Dow Chemical Company, “Dow”) retained an indirect ownership interest in the former Parent. Trinseo S.A. (“Trinseo”, and together with its subsidiaries, the “Company”) was also formed on June 3, 2010, incorporated under the existing laws of the Grand Duchy of Luxembourg. At that time, all ordinary shares of Trinseo were owned by the former Parent. On June 17, 2010, Trinseo acquired 100% of the former Styron business from Dow (the “Acquisition”), at which time, the Company commenced operations.

On June 17, 2014, Trinseo completed an IPO of 11,500,000 ordinary shares. During 2016, the former Parent divested its entire ownership in the Company in a series of secondary offerings to the market. Refer to Note 12 for more information.

Business Activities

The Company is a leading global materials company engaged in the manufacturing and marketing of synthetic rubber, latex binders, and plastics, including various specialty and technologically differentiated products. The Company develops synthetic rubber, latex binders, and plastics products that are incorporated into a wide range of products throughout the world, including tires and other products for automotive applications, carpet and artificial turf backing, coated paper and packaging board, food packaging, appliances, medical devices, consumer electronics and construction applications, among others.

The Company’s operations are located in Europe, North America, and Asia Pacific, supplemented by two joint ventures, Americas Styrenics, a styrenics joint venture with Chevron Phillips Chemical Company LP, and Sumika Styron Polycarbonate, a polycarbonate joint venture with Sumitomo Chemical Company Limited. Refer to Note 4 for further information regarding our investments in these unconsolidated affiliates.

The Company has significant manufacturing and production operations around the world, which allow service to its global customer base. As of December 31, 2016, the Company’s production facilities included 30 manufacturing plants (which included a total of 75 production units) at 23 sites across 12 countries, including joint ventures and contract manufacturers. Additionally, as of December 31, 2016, the Company operated 10 research and development (R&D) facilities globally, including mini plants, development centers and pilot coaters.

Company Realignment

Through September 30, 2016, the chief executive officer, who is the Company’s chief operating decision maker, managed the Company’s operations under two divisions, Performance Materials and Basic Plastics & Feedstocks, which included the following four reportable segments: Latex, Synthetic Rubber, Performance Plastics, and Basic Plastics & Feedstocks.

Effective October 1, 2016, the Company realigned its reporting segments to reflect the new model under which the business will be managed and results will be reviewed by the chief executive officer. The previous Basic Plastics & Feedstocks segment was split into three new segments: Basic Plastics, Feedstocks, and Americas Styrenics. In addition, ABS supplied into Performance Plastics markets, which was previously included in the results of Basic Plastics & Feedstocks, is now included in Performance Plastics. Finally, the Latex segment was renamed to Latex Binders. These consolidated financial statements and related notes thereto have been retroactively adjusted to reflect this change in reporting segments. Refer to Note 19 for further information.

NOTE 2—BASIS OF PRESENTATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation and Principles of Consolidation

The accompanying consolidated financial statements as of December 31, 2016 and 2015 and for each of the three years in the period ended December 31, 2016 are prepared in accordance with accounting principles generally accepted in the United States of America (“GAAP”). The consolidated financial statements of the Company contain the accounts of all entities that are controlled and variable interest entities (“VIEs”) for which the Company is the primary beneficiary. A VIE is defined as a legal entity that has equity investors that do not have sufficient equity at risk for the entity to support its activities without additional subordinated financial support or, as a group, the holders of the equity at risk lack (i) the power to direct the entity’s activities or (ii) the obligation to absorb the expected losses or the right to receive the expected residual returns of the entity. A VIE is required to be consolidated by a company if that company is the primary beneficiary. Refer to Note 10 for further discussion of the Company’s Accounts Receivable Securitization Facility, which qualifies as a VIE and is consolidated within the Company’s financial statements.

All intercompany balances and transactions are eliminated. Joint ventures over which the Company has the ability to exercise significant influence that are not consolidated are accounted for by the equity method.

Certain prior year amounts have been reclassified to conform to the current year presentation. These reclassifications did not have a material impact on the Company’s financial position or results. Refer to Notes 8, 10, and 19 for further information.

Use of Estimates in Financial Statement Preparation

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. Actual amounts could differ from these estimates.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to concentrations of credit risk consist principally of cash equivalents and accounts receivable. The Company uses major financial institutions with high credit ratings to engage in transactions involving cash equivalents. The Company minimizes credit risk in its receivables by selling products to a diversified portfolio of customers in a variety of markets located throughout the world.

The Company performs ongoing evaluations of its customers’ credit and generally does not require collateral. The Company maintains an allowance for doubtful accounts for losses resulting from the inability of specific customers to meet their financial obligations, representing our best estimate of probable credit losses in existing trade accounts receivable. A specific reserve for doubtful receivables is recorded against the amount due from these customers. For all other customers, the Company recognizes reserves for doubtful receivables based on historical experience.

Financial Instruments

The carrying amounts of the Company’s financial instruments, including cash and cash equivalents, accounts receivable, accounts payable and accrued and other current liabilities, approximate fair value due to their generally short maturities.

The estimated fair value of the Company’s 2021 Term Loan B and 2022 Senior Notes (both of which are defined in Note 10) are determined using level 2 inputs within the fair value hierarchy. Refer to Note 13 for the fair value of these debt instruments. When outstanding, the estimated fair values of borrowings under the Company’s 2020 Revolving Facility and Accounts Receivable Securitization Facility (both of which are defined in Note 10) are determined using level 2 inputs within the fair value hierarchy. The carrying amounts of borrowings under the 2020 Revolving Facility and Accounts Receivable Securitization Facility approximate fair value as these borrowings bear interest based on prevailing variable market rates.

At times, the Company manages its exposure to changes in foreign currency exchange rates, where possible, by entering into foreign exchange forward contracts. When outstanding, all derivatives, whether designated in hedging relationships or not, are required to be recorded on the consolidated balance sheets at fair value. The fair value of the derivatives is determined from sources independent of the Company, including the financial institutions which are party

to the derivative instruments. The fair value of derivatives also considers the credit default risk of the paying party. If the derivative is designated as a fair value hedge, the changes in the fair value of the derivative and the hedged item will be recognized in earnings. If the derivative is designated as a cash flow hedge, the effective portion of the change in the fair value of the derivative will be recorded in other comprehensive income and will be recognized in the consolidated statements of operations when the hedged item affects earnings.

As of December 31, 2016 and 2015, the Company had certain foreign exchange forward contracts outstanding that were not designated for hedge accounting treatment. As such, the settlements and changes in fair value of underlying instruments are recognized in "Other expense, net" in the consolidated statements of operations. For the year ended December 31, 2016, the Company recognized gains related to these forward contracts of \$3.7 million, while for the years ended December 31, 2015 and 2014 the Company recognized losses related to these forward contracts of \$16.5 million and \$28.2 million, respectively.

As of December 31, 2016 and 2015, the Company also had foreign exchange forward contracts which are designated as cash flow hedges. As such, the qualifying hedge contracts are marked-to-market at each reporting date and any unrealized gains or losses are included in accumulated other comprehensive income to the extent effective, and reclassified to cost of sales in the period during which the transaction affects earnings or it becomes probable that the forecasted transaction will not occur.

Forward contracts are entered into with a limited number of counterparties, each of which allows for net settlement of all contracts through a single payment in a single currency in the event of a default on or termination of any one contract. The Company records these foreign exchange forward contracts on a net basis, by counterparty within the consolidated balance sheets.

The Company presents the cash receipts and payments from hedging activities in the same category as the cash flows from the items subject to hedging relationships. As the items subject to economic hedging relationships are the Company's operating assets and liabilities, the related cash flows are classified within operating activities in the consolidated statements of cash flows.

Foreign Currency Translation

For the majority of the Company's subsidiaries, the local currency has been identified as the functional currency. For remaining subsidiaries, the U.S. dollar has been identified as the functional currency due to the significant influence of the U.S. dollar on their operations. Gains and losses resulting from the translation of various functional currencies into U.S. dollars are not recorded within the consolidated statements of operations. Rather, they are recorded within the cumulative translation adjustment account as a separate component of shareholders' equity (accumulated other comprehensive income) in the consolidated balance sheets. The Company translates asset and liability balances at exchange rates in effect at the end of the period and income and expense transactions at the average exchange rates in effect during the period. Gains and losses resulting from foreign currency transactions are recorded within the consolidated statements of operations.

For the year ended December 31, 2016, the Company recognized net foreign exchange transaction losses of \$5.5 million, while for the years ended December 31, 2015 and 2014 the Company recognized net foreign exchange transaction gains of \$6.1 million and \$32.4 million, respectively. These amounts exclude the impacts of foreign exchange forward contracts discussed above. Gains and losses on net foreign exchange transactions are recorded within "Other expense, net" in the consolidated statements of operations.

Environmental Matters

Accruals for environmental matters are recorded when it is considered probable that a liability has been incurred and the amount of the liability can be reasonably estimated, based on current law and existing technologies. These accruals are adjusted periodically as assessment and remediation efforts progress, or as additional technical or legal information become available. Accruals for environmental liabilities are recorded within "Other noncurrent obligations" in the consolidated balance sheets at undiscounted amounts. As of December 31, 2016 and 2015, there were no accruals for environmental liabilities recorded.

Environmental costs are capitalized in recognition of legal asset retirement obligations resulting from the acquisition, construction or normal operation of a long-lived asset. Any costs related to environmental contamination

treatment and clean-ups are charged to expense. Estimated future incremental operations, maintenance and management costs directly related to remediation are accrued when such costs are probable and reasonably estimable.

Cash and Cash Equivalents

Cash and cash equivalents generally include time deposits or highly liquid investments with original maturities of three months or less and no material liquidity fee or redemption gate restrictions.

Inventories

Inventories are stated at the lower of cost or market, with cost being determined on the first-in, first-out (“FIFO”) method. The Company periodically reviews its inventory for excess or obsolete inventory, and will write-down the excess or obsolete inventory value to its net realizable value, if applicable.

Property, Plant and Equipment

Property, plant and equipment are carried at cost less accumulated depreciation and less impairment, if applicable, and are depreciated over their estimated useful lives using the straight-line method.

Expenditures for maintenance and repairs are charged against income as incurred. Expenditures that significantly increase asset value, extend useful asset lives or adapt property to a new or different use are capitalized. These expenditures include planned major maintenance activity or turnaround activities that increase our manufacturing plants’ output and improve production efficiency as compared to pre-turnaround operations. As of December 31, 2016 and 2015, \$9.2 million and \$7.6 million, respectively, of the Company’s net costs related to turnaround activities were capitalized within “Deferred charges and other assets” in the consolidated balance sheets, and are being amortized over the period until the next scheduled turnaround.

The Company periodically evaluates actual experience to determine whether events and circumstances have occurred that may warrant revision of the estimated useful lives of property, plant and equipment. Engineering and other costs directly related to the construction of property, plant and equipment are capitalized as construction in progress until construction is complete and such property, plant and equipment is ready and available to perform its specifically assigned function. Upon retirement or other disposal, the asset cost and related accumulated depreciation are removed from the accounts and the net amount, less any proceeds, is charged or credited to income. The Company also capitalizes interest as a component of the cost of capital assets constructed for its own use.

Impairment and Disposal of Long-Lived Assets

The Company evaluates long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset or asset group may not be recoverable. When undiscounted future cash flows are not expected to be sufficient to recover an asset’s carrying amount, the asset is written down to its fair value based on a discounted cash flow analysis utilizing market participant assumptions. Refer to Note 13 for further information.

Long-lived assets to be disposed of by sale are classified as held-for-sale and are reported at the lower of carrying amount or fair value less cost to sell, and depreciation is ceased. Long-lived assets to be disposed of in a manner other than by sale are classified as held-and-used until they are disposed.

Goodwill and Other Intangible Assets

The Company records goodwill when the purchase price of a business acquisition exceeds the estimated fair value of net identified tangible and intangible assets acquired. Goodwill is tested for impairment at the reporting unit level annually, or more frequently when events or changes in circumstances indicate that the fair value of a reporting unit has more likely than not declined below its carrying value. The Company utilizes a market approach and an income approach (under the discounted cash flow method) to calculate the fair value of its reporting units. When supportable, the Company employs the qualitative assessment of goodwill impairment prescribed by ASC 350. The annual impairment assessment is completed using a measurement date of October 1st. No goodwill impairment losses were recorded in the years ended December 31, 2016, 2015, and 2014.

Finite-lived intangible assets, such as our intellectual property, manufacturing capacity rights, and computer software for internal use are amortized on a straight-line basis over their estimated useful life and are reviewed for impairment or obsolescence if events or changes in circumstances indicate that their carrying amount may not be recoverable. If impaired, intangible assets are written down to fair value based on discounted cash flows. No intangible asset impairment losses were recorded in the years ended December 31, 2016, 2015, and 2014.

Deferred Financing Fees

With the adoption of new guidance from the FASB, capitalized fees and costs incurred in connection with the Company's recognized debt liabilities are presented in the consolidated balance sheets as a direct reduction from the carrying value of those debt liabilities, consistent with debt discounts. In accordance with this guidance, deferred financing fees related to the Company's revolving debt facilities remain included within "Deferred charges and other assets" in the consolidated balance sheets. See "- *Recent Accounting Guidance*" below for further discussion of the impact of adopting this guidance.

For the 2021 Term Loan B and 2022 Senior Notes (and the 2019 Senior Notes, prior to their repayment in May 2015), deferred financing fees are amortized over the term of the agreement using the effective interest method, while for the 2020 Revolving Facility and the Accounts Receivable Securitization Facility, deferred financing fees are amortized using the straight-line method over the term of the respective facility. Amortization of deferred financing fees is recorded in "Interest expense, net" within the consolidated statements of operations.

Investments in Unconsolidated Affiliates

Investments in unconsolidated affiliates in which the Company has the ability to exercise significant influence (generally, 20% to 50%-owned companies) are accounted for using the equity method. Investments are evaluated for impairment whenever events or changes in circumstances indicate that the carrying amount of the investment may not be recoverable. An impairment loss is recorded whenever a decline in fair value of an investment in an unconsolidated affiliate below its carrying amount is determined to be other-than-temporary.

Sales

Sales are recognized when the revenue is realized or realizable and the earnings process is complete, which occurs when risk and title to the product transfers to the customer, typically at the time shipment is made. As such, title to the product generally passes when the product is delivered to the freight carrier. Standard terms of delivery are included in contracts of sale, order confirmation documents and invoices. Freight costs and any directly related costs of transporting finished product to customers are recorded as "Cost of sales" in the consolidated statements of operations. Taxes on sales are excluded from net sales.

Sales are recorded net of estimates for returns and price allowances, including discounts for prompt payment and volume-based incentives.

Cost of Sales

The Company classifies the costs of manufacturing and distributing its products as cost of sales. Manufacturing costs include raw materials, utilities, packaging and fixed manufacturing costs associated with production. Fixed manufacturing costs include such items as plant site operating costs and overhead, production planning, depreciation and amortization, repairs and maintenance, environmental, and engineering costs. Distribution costs include shipping and handling costs.

Selling, General and Administrative Expenses

Selling, general and administrative, or SG&A, expenses are charged to expense as incurred. SG&A expenses are the cost of services performed by the marketing and sales functions (including sales managers, field sellers, marketing research, marketing communications and promotion and advertising materials) and by administrative functions (including product management, R&D, business management, customer invoicing, and human resources). R&D expenses include the cost of services performed by the R&D function, including technical service and development, process research including pilot plant operations, and product development.

Total R&D costs included in SG&A expenses were approximately \$51.0 million, \$51.9 million and \$53.4 million for the years ended December 31, 2016, 2015, and 2014, respectively.

The Company expenses promotional and advertising costs as incurred to SG&A expenses. Total promotional and advertising expenses were approximately \$3.0 million, \$3.5 million and \$2.9 million for the years ended December 31, 2016, 2015, and 2014, respectively.

The Company also includes restructuring charges within SG&A expenses. Total restructuring charges were \$23.9 million, \$8.2 million and \$14.1 million for the years ended December 31, 2016, 2015, and 2014, respectively. Refer to Note 20 for further information.

Pension and Postretirement Benefits Plans

The Company has several defined benefit plans, under which participants earn a retirement benefit based upon a formula set forth in the plan. The Company also provides certain health care and life insurance benefits to retired employees mainly in the United States. Prior to the divestiture of our latex binders and automotive businesses in Brazil (refer to Note 3) we also provided health care and life insurance benefits to retired employees in Brazil. The U.S.-based plan provides health care benefits, including hospital, physicians' services, drug and major medical expense coverage, and life insurance benefits.

Accounting for defined benefit pension plans and other postretirement benefit plans, and any curtailments and settlements thereof, requires various assumptions, including, but not limited to, discount rates, expected rates of return on plan assets and future compensation growth rates. The Company evaluates these assumptions at least once each year, or as facts and circumstances dictate, and makes changes as conditions warrant.

In 2016, the Company changed the method used to estimate the future service and interest cost components of net periodic benefit cost for our defined benefit pension and other postretirement benefit plans. As a result, beginning in 2017, the Company will employ a full yield curve approach in the estimation of these components of benefit cost by applying the specific spot rates along the yield curve used in the determination of the benefit obligation to the relevant projected cash flows.

A settlement is a transaction that is an irrevocable action that relieves the employer (or the plan) of primary responsibility for a pension or postretirement benefit obligation, and that eliminates significant risks related to the obligation and the assets used to effect the settlement. When a settlement occurs, the Company does not record settlement gains or losses during interim periods when the cost of all settlements in a year is less than or equal to the sum of the service cost and interest cost components of net periodic pension cost for the plan in that year.

Income Taxes

The provision for income taxes is determined using the asset and liability approach of accounting for income taxes. Under this approach, deferred taxes represent the future tax consequences expected to occur when the reported amounts of assets and liabilities are recovered or paid. The provision for income taxes represents income taxes paid or payable for the current year plus the change in deferred taxes during the year. Deferred taxes result from differences between the financial and tax basis of the Company's assets and liabilities and are adjusted for changes in tax rates and tax laws when changes are enacted. For each tax jurisdiction in which the Company operates, deferred tax assets and liabilities are offset against one another and are presented as a single noncurrent amount within the consolidated balance sheets.

Valuation allowances are recorded to reduce deferred tax assets when it is more likely than not that a tax benefit will not be realized. Provision is made for income taxes on unremitted earnings of subsidiaries and affiliates, unless such earnings are deemed to be indefinitely invested.

The Company recognizes the financial statement effects of uncertain income tax positions when it is more likely than not, based on the technical merits, that the position will be sustained upon examination. The Company accrues for other tax contingencies when it is probable that a liability to a taxing authority has been incurred and the amount of the contingency can be reasonably estimated. Interest accrued related to unrecognized tax and income tax related penalties are included in the provision for income taxes. The current portion of uncertain income taxes positions is recorded in "Income taxes payable" while the long-term portion is recorded in "Other noncurrent obligations" in the consolidated balance sheets.

Stock-based Compensation

Refer to Note 17 for detailed discussion regarding the Company's stock-based compensation award programs. Stock-based compensation expense recognized in our consolidated financial statements is based on awards that are ultimately expected to vest. In connection with the IPO, the Company's board of directors approved the 2014 Omnibus Plan. Since that time, certain equity grants have been awarded, comprised of RSUs and options awards (defined in Note 17).

Compensation costs for the RSUs are measured at the grant date based on the fair value of the award and are recognized ratably as expense over the applicable vesting term. Prior to November 2016, dividend and dividend equivalents did not accumulate on unvested RSUs. In November 2016, the board of directors approved an amendment to all outstanding RSUs, entitling each award holder to an amount equal to any cash dividend or repayment of equity paid by the Company upon one ordinary share for each RSU held by the award holder ("dividend equivalents"). The dividend equivalents earned on the RSUs only include dividends or repayments of equity paid after this amendment and the award holders have no right to receive the dividend equivalents unless and until the associated RSUs vest. The dividend equivalents will be payable in cash and will not accrue interest.

The fair value of RSUs is equal to the fair market value of the Company's ordinary shares based on the closing price on the date of grant.

Compensation cost for the option awards is measured at the grant date based on the fair value of the award and is recognized as expense over the appropriate service period utilizing graded vesting. The fair value for option awards is computed using the Black-Scholes pricing model, whose inputs and assumptions are determined as of the date of grant.

Effective April 1, 2016, the Company adopted new accounting guidance that simplifies several aspects of accounting for share-based payments. Among other things, as part of this adoption, the Company made an accounting policy election to recognize forfeitures as incurred, rather than estimating the forfeitures in advance. Refer to discussion below for further information.

Treasury Shares

The Company may, from time to time, repurchase its ordinary shares at prevailing market rates. Share repurchases are recorded at cost within "Treasury shares" within shareholders equity in the consolidated balance sheets. It is the Company's policy that, as RSUs vest or option awards are exercised, ordinary shares will be issued from the existing pool of treasury shares on a first-in-first-out basis. Refer to Note 12 for discussion of share repurchases during the year ended December 31, 2016 and to Note 17 for details of vesting of RSUs and exercises of option awards.

Recent Accounting Guidance

In May 2014, the FASB and the International Accounting Standards Board ("IASB") jointly issued guidance which clarifies the principles for recognizing revenue and develops a common revenue standard for GAAP and International Financial Reporting Standards ("IFRS"). The core principle of the guidance is that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. Additionally, the FASB has issued certain clarifying updates to this guidance, which the Company will consider as part of our adoption. The Company expects to adopt this guidance for annual and interim periods beginning after December 31, 2017 by applying the modified retrospective transition approach. While our adoption efforts have progressed significantly, we have not yet reached a final conclusion on the expected impacts of adopting this new standard on our consolidated financial statements and disclosures, as well as on our underlying business processes and information technology systems.

In April 2015, the FASB issued guidance that requires deferred financing fees related to a recognized debt liability be presented in the consolidated balance sheet as a direct deduction from the carrying value of that debt liability, consistent with debt discounts. The recognition and measurement guidance for deferred financing fees are not affected. The Company adopted this guidance effective January 1, 2016. Balances as of December 31, 2015 presented herein have been retrospectively adjusted, with \$25.7 million of unamortized deferred financing fees being reclassified from "Deferred charges and other assets" and netted against "Long-term debt, net of unamortized deferred financing fees" in the consolidated balance sheet. In accordance with this guidance, unamortized deferred financing fees related to the

Company's revolving debt facilities were not reclassified as a reduction of long-term debt, and remain included within "Deferred charges and other assets" in the consolidated balance sheets.

In July 2015, the FASB issued guidance which simplifies the subsequent measurement of inventory by replacing the lower of cost or market test with a lower of cost or net realizable value ("NRV") test. NRV is calculated as the estimated selling price less reasonably predictable costs of completion, disposal and transportation. This pronouncement is effective for fiscal years, and for interim periods within those fiscal years, beginning after December 15, 2016, and prospective adoption is required. The impact of adopting this guidance will not be material to the Company's financial position and results of operations.

In February 2016, the FASB issued guidance related to leases that outlines a comprehensive lease accounting model and supersedes the current lease guidance. The new guidance requires lessees to recognize on the consolidated balance sheets lease liabilities and corresponding right-of-use assets for all leases with terms of greater than 12 months. It also changes the definition of a lease and expands the disclosure requirements of lease arrangements. This new guidance is effective for public companies for annual and interim periods beginning after December 15, 2018, with early adoption permitted. The new guidance must be adopted using a modified retrospective transition, and provides for certain practical expedients. The Company is in the process of assessing the impact on its consolidated financial statements from the adoption of the new guidance. However, as we are the lessee under various real estate, railcar, and other equipment leases, which we currently account for as operating leases, we anticipate an increase in the recognition of right-of-use assets and lease liabilities as a result of this adoption.

In March 2016, the FASB issued guidance that simplifies several aspects of accounting for share-based payments. The Company adopted this guidance effective April 1, 2016. Under this guidance, excess tax benefits associated with share-based payment awards are recognized in the consolidated statements of operations when the awards vest or settle, rather than in shareholders' equity, and all tax-related cash flows resulting from share-based payments are reported as operating activities on the consolidated statements of cash flows. In addition, this guidance modified the minimum statutory withholding requirements to allow entities to withhold an amount up to the employees' maximum individual tax rate in the relevant jurisdiction without triggering liability classification of the award, while also clarifying that all cash payments made to taxing authorities on employees' behalf for withheld shares are to be reported as financing activities on the consolidated statements of cash flows. The adoption of these changes did not materially impact the Company's financial position and result of operations. Additionally, as part of this adoption, the Company made an accounting policy election to recognize forfeitures as incurred, rather than estimating the forfeitures in advance. The impact of this change was applied utilizing a modified retrospective approach, with an adjustment of \$0.9 million recorded during the year ended December 31, 2016 to decrease opening retained earnings and increase opening additional paid-in-capital.

In August 2016, the FASB issued guidance that aims to eliminate diversity in practice for how certain cash receipts and payments are presented and classified in the consolidated statements of cash flows. This guidance is effective for public companies for annual and interim periods beginning after December 15, 2017, with early adoption permitted. This guidance must be adopted using a retrospective approach, and provides for certain practical expedients. Additionally, the FASB has issued further guidance related to the presentation of restricted cash on the consolidated statements of cash flows. The Company is currently assessing the timing and related impact of adopting this guidance on its consolidated statements of cash flows.

In January 2017, the FASB issued guidance that revises the definition of a business in order to assist in determining whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. Under the new guidance, fewer transactions are expected to be accounted for as business combinations. This guidance is effective for public companies for annual and interim periods beginning after December 15, 2017, with early adoption permitted. We expect this adoption could affect conclusions reached for future transactions in several areas, including acquisitions and disposals.

In January 2017, the FASB issued guidance to simplify the accounting for goodwill impairment by removing Step 2 of the test, which requires a hypothetical purchase price allocation. As a result, a goodwill impairment will now be the amount by which a reporting unit's carrying value exceeds its fair value, not to exceed the carrying amount of goodwill. This guidance is effective for calendar year-end public companies beginning in 2020, with early adoption permitted for impairment tests performed after January 1, 2017. The impact of adopting this guidance is not expected to be material to the Company's financial position and results of operations.

NOTE 3—ACQUISITIONS AND DIVESTITURES

The Acquisition

The Company accounted for the Acquisition (as discussed in Note 1) under the purchase method of accounting, whereby the purchase price paid, net of working capital adjustments, was allocated to the acquired assets and liabilities at fair value.

As part of the Acquisition, the Company has been indemnified for various tax matters, including income tax and value add taxes, as well as legal liabilities which have been incurred prior to the Acquisition. Conversely, certain tax matters which the Company has benefitted from are subject to reimbursement by Trinseo to Dow. These amounts have been estimated and provisional amounts have been recorded based on the information known during the measurement period; however, these amounts remain subject to change based on the completion of our annual statutory filings, tax authority review as well as a final resolution with Dow on amounts due to and due from the Company. Management believes the Company's estimates and assumptions are reasonable under the circumstances, however, settlement negotiations or changes in estimates around pre-acquisition indemnifications could result in a material impact on the consolidated financial statements.

Livorno Land Sale

In April 2014, the Company completed the sale of a portion of land at its manufacturing site in Livorno, Italy for a purchase price of €4.95 million (approximately \$6.8 million). As a result, the Company recorded a gain on sale of \$0.1 million within "Other expense, net" in the consolidated statements of operations for the year ended December 31, 2014.

Divestiture of Brazil Business

During the second quarter of 2016, the Company signed a definitive agreement to sell Trinseo do Brasil Comercio de Produtos Quimicos Ltda. ("Trinseo Brazil"), its primary operating entity in Brazil which includes both a latex binders and automotive business. Under the agreement of sale, which closed on October 1, 2016, Trinseo Brazil was sold to a single counterparty, for a selling price that is subject to certain contingent consideration payments, which could be paid by the buyer over a 5-year period subsequent to the closing date, based on the results of the Trinseo Brazil latex binders business during that time.

As a result of this agreement, during the year ended December 31, 2016, the Company recorded impairment charges for the estimated loss on sale of approximately \$15.1 million within "Other expense, net" in the consolidated statement of operations. The \$15.1 million charge primarily relates to the unrecoverable net book value of property, plant and equipment along with certain working capital balances, and also includes \$0.4 million of goodwill written off with the sale (entirely attributable to the Latex Binders segment). This charge has been allocated as \$9.4 million, \$4.9 million, and \$0.7 million to the Performance Plastics segment, Latex Binders segment, and Corporate, respectively. This loss on sale has been recorded as an estimate based on available information and is subject to change through post-closing settlement activities that remain ongoing. Through December 31, 2016, the Company has received \$1.8 million in proceeds from the sale of these businesses, with approximately \$1.8 million of additional purchase price estimated to be received in 2017.

The results of operations associated with the latex binders and automotive businesses of Trinseo Brazil were not classified as discontinued operations as the decision to divest these businesses does not represent a strategic shift that has, or will have, a major effect on the Company's financial position or results of operations.

NOTE 4—INVESTMENTS IN UNCONSOLIDATED AFFILIATES

The Company is supplemented by two joint ventures: Americas Styrenics, a styrenics joint venture with Chevron Phillips Chemical Company LP, and Sumika Styron Polycarbonate, a polycarbonate joint venture with Sumitomo Chemical Company Limited. The results of Americas Styrenics are included within its own reporting segment, and the results of Sumika Styron Polycarbonate are included with the Basic Plastics reporting segment.

As of December 31, 2016 and 2015, respectively, the Company's investment in Americas Styrenics was \$149.7 million and \$143.9 million, which was \$71.2 million and \$91.9 million less than the Company's 50% share of Americas Styrenics' underlying net assets. These amounts represent the difference between the book value of assets contributed to the joint venture at the time of formation (May 1, 2008) and the Company's 50% share of the total recorded value of the joint venture's assets and certain adjustments to conform with the Company's accounting policies. This difference is being amortized over a weighted average remaining useful life of the contributed assets of approximately 3.86 years as of December 31, 2016. The Company received dividends from Americas Styrenics of \$130.0 million, \$125.0 million, and \$35.0 million for the years ended December 31, 2016, 2015, and 2014, respectively.

As of December 31, 2016 and 2015, respectively, the Company's investment in Sumika Styron Polycarbonate was \$41.8 million and \$39.0 million, which was \$18.5 million and \$19.8 million greater than the Company's 50% share of Sumika Styron Polycarbonate's underlying net assets. These amounts primarily represent the fair value of certain identifiable assets which have not been recorded on the historical financial statements of Sumika Styron Polycarbonate. This difference is being amortized over the remaining useful life of the contributed assets of 8.75 years as of December 31, 2016. The Company received dividends of \$6.2 million and \$1.0 million for the years ended December 31, 2016 and 2014, respectively. The Company received no dividends from Sumika Styron Polycarbonate for the year ended December 31, 2015.

Equity in earnings from unconsolidated affiliates was \$144.7 million, \$140.2 million and \$47.7 million for the years ended December 31, 2016, 2015, and 2014, respectively.

Both Americas Styrenics and Sumika Styron Polycarbonate are privately held companies; therefore, quoted market prices for their stock are not available. The summarized financial information of the Company's unconsolidated affiliates is shown below:

	December 31,	
	2016	2015
Current assets	\$ 457,867	\$ 455,186
Noncurrent assets	269,642	293,322
Total assets	\$ 727,509	\$ 748,508
Current liabilities	\$ 207,831	\$ 188,874
Noncurrent liabilities	31,433	49,841
Total liabilities	\$ 239,264	\$ 238,715

	Year Ended December 31,		
	2016	2015	2014
Sales	\$ 1,649,409	\$ 1,753,511	\$ 2,161,232
Gross profit	\$ 318,535	\$ 318,073	\$ 117,667
Net income	\$ 249,158	\$ 250,113	\$ 52,957

Sales to unconsolidated affiliates for the years ended December 31, 2016, 2015, and 2014 were \$4.2 million, \$2.5 million and \$6.5 million, respectively. Purchases from unconsolidated affiliates were \$157.4 million, \$178.4 million and \$290.3 million for the years ended December 31, 2016, 2015 and 2014, respectively.

As of December 31, 2016 and 2015, respectively, \$0.7 million and \$1.0 million due from unconsolidated affiliates was included in "Accounts receivable, net of allowance" and \$16.3 million and \$15.4 million due to unconsolidated affiliates was included in "Accounts payable" in the consolidated balance sheets.

On January 31, 2017, the Company completed the sale of its 50% share in Sumika Styron Polycarbonate to Sumitomo Chemical Company Limited. Refer to Note 24 for further information.

NOTE 5—ACCOUNTS RECEIVABLE

Accounts receivable consisted of the following:

	December 31,	
	2016	2015
Trade receivables	\$ 479,261	\$ 407,535
Non-income tax receivables	55,238	61,990
Other receivables	33,067	27,448
Less: allowance for doubtful accounts	(3,138)	(2,417)
Total	\$ 564,428	\$ 494,556

The allowance for doubtful accounts was approximately \$3.1 million and \$2.4 million as of December 31, 2016 and 2015, respectively. For the years ended December 31, 2016, 2015, and 2014, respectively, the Company recognized bad debt expense of \$1.0 million, \$0.3 million, and \$1.1 million.

NOTE 6—INVENTORIES

Inventories consisted of the following:

	December 31,	
	2016	2015
Finished goods	\$ 187,577	\$ 170,380
Raw materials and semi-finished goods	168,804	151,444
Supplies	28,964	31,273
Total	\$ 385,345	\$ 353,097

NOTE 7—PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment consisted of the following:

	Estimated Useful Lives (Years)	December 31,	
		2016	2015
Land	Not applicable	\$ 35,042	\$ 44,167
Land and waterway improvements	1 - 20	14,691	13,151
Buildings	2 - 40	57,555	57,389
Machinery and equipment ⁽¹⁾	1 - 20	670,085	654,670
Utility and supply lines	1 - 10	7,359	7,081
Leasehold interests	1 - 45	39,234	43,421
Other property	1 - 8	27,051	23,043
Construction in process	Not applicable	83,083	51,144
Property, plant and equipment		934,100	894,066
Less: accumulated depreciation		(420,343)	(375,315)
Property, plant and equipment, net		\$ 513,757	\$ 518,751

(1) Approximately 95% of our machinery and equipment had a useful life of three to ten years as of December 31, 2016 and 2015.

	Year Ended December 31,		
	2016	2015	2014
Depreciation expense	\$ 71,330	\$ 74,938	\$ 75,286
Capitalized interest	\$ 3,360	\$ 3,892	\$ 4,192

Refer to Notes 3 and 13, respectively, for a discussion of the impact to property, plant and equipment from the Company's divestiture of its latex binders and automotive businesses in Brazil as well as its decision to cease manufacturing operations at its latex binders facility in Livorno, Italy during 2016.

NOTE 8—GOODWILL AND INTANGIBLE ASSETS

Goodwill

The following table shows changes in the carrying amount of goodwill, by segment, from December 31, 2014 to December 31, 2015 and from December 31, 2015 to December 31, 2016, respectively. Prior period balances in this table have been recast in conjunction with the segment realignment that occurred in the fourth quarter of 2016. Refer to Note 19 for further information.

	Performance Materials			Basic Plastics & Feedstocks			Total
	Latex Binders	Synthetic Rubber	Performance Plastics	Basic Plastics	Feedstocks	Americas Styrenics	
Balance at							
December 31, 2014	\$ 13,815	\$ 9,461	\$ 4,867	\$ 6,431	\$ —	\$ —	\$ 34,574
Foreign currency impact	(1,403)	(960)	(494)	(653)	—	—	(3,510)
Balance at							
December 31, 2015	\$ 12,412	\$ 8,501	\$ 4,373	\$ 5,778	\$ —	\$ —	\$ 31,064
Divestiture (Note 3)	(421)	—	—	—	—	—	(421)
Foreign currency impact	(447)	(324)	(163)	(224)	—	—	(1,158)
Balance at							
December 31, 2016	<u>\$ 11,544</u>	<u>\$ 8,177</u>	<u>\$ 4,210</u>	<u>\$ 5,554</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 29,485</u>

Goodwill impairment testing is performed annually as of October 1st. In 2016, the Company performed its annual impairment test for goodwill and determined that the estimated fair value of each reporting unit was substantially in excess of the carrying value indicating that none of the Company's goodwill was impaired. The Company concluded there were no goodwill impairments or triggering events for the years ended December 31, 2016, 2015, and 2014.

Other Intangible Assets

The following table provides information regarding the Company's other intangible assets as of December 31, 2016 and 2015, respectively:

	Estimated Useful Life (Years)	December 31, 2016			December 31, 2015		
		Gross Carrying Amount	Accumulated Amortization	Net	Gross Carrying Amount	Accumulated Amortization	Net
Developed technology	15	\$ 166,230	\$ (72,159)	\$ 94,071	\$ 172,675	\$ (62,870)	\$ 109,805
Manufacturing Capacity Rights	6	19,977	(8,908)	11,069	20,750	(5,888)	14,862
Software	5 - 10	82,275	(15,095)	67,180	18,006	(9,494)	8,512
Software in development	N/A	4,751	—	4,751	24,516	—	24,516
Other	N/A	274	—	274	523	—	523
Total		<u>\$ 273,507</u>	<u>\$ (96,162)</u>	<u>\$ 177,345</u>	<u>\$ 236,470</u>	<u>\$ (78,252)</u>	<u>\$ 158,218</u>

During the second quarter of 2016, the Company began a phased implementation by geographic region to upgrade our legacy ERP environment to the latest version of SAP, which was completed as of December 31, 2016. The total amount of capitalized software related to this project was \$57.4 million, which is being amortized over its estimated useful life of approximately 9.0 years.

In March 2014, the Company entered into an agreement with material supplier JSR Corporation, Tokyo (“JSR”) to acquire its current production capacity rights at the Company’s rubber production facility in Schkopau, Germany for a purchase price of €19.0 million (approximately \$26.1 million based upon the acquisition date foreign exchange rate). Prior to this agreement, JSR held 50% of the capacity rights of one of the Company’s three solution styrene-butadiene rubber (“SSBR”) production trains in Schkopau. As a result, effective March 31, 2014, the Company had full capacity rights to this production train. The €19.0 million purchase price was recorded in “Other intangible assets, net” in the consolidated balance sheets, and is being amortized over its estimated useful life of approximately 6.0 years. Further, the purchase price was recorded within capital expenditures in investing activities in the consolidated statement of cash flows for the year ended December 31, 2014.

Amortization expense related to finite-lived intangible assets totaled \$21.3 million, \$18.5 million, and \$19.6 million, for the years ended December 31, 2016, 2015, and 2014, respectively.

The following table details the Company’s estimated amortization expense for the next five years, excluding any amortization expense related to software currently in development:

Estimated Amortization Expense for the Next Five Years				
2017	2018	2019	2020	2021
\$ 24,101	\$ 23,417	\$ 23,236	\$ 20,495	\$ 18,632

NOTE 9—ACCOUNTS PAYABLE

Accounts payable consisted of the following:

	December 31,	
	2016	2015
Trade payables	\$ 341,920	\$ 296,045
Other payables	36,109	28,584
Total	<u>\$ 378,029</u>	<u>\$ 324,629</u>

NOTE 10—DEBT

Debt consisted of the following:

	December 31,	
	2016	2015
Senior Credit Facility		
2020 Revolving Facility	\$ —	\$ —
2021 Term Loan B	491,545	496,365
2022 Senior Notes		
USD Notes	300,000	300,000
Euro Notes	394,275	409,538
Accounts Receivable Securitization Facility	—	—
Other indebtedness	1,591	1,895
Total debt	1,187,411	1,207,798
Less: current portion	(5,000)	(5,000)
Less: unamortized deferred financing fees ⁽¹⁾	(22,042)	(25,678)
Total long-term debt, net of unamortized deferred financing fees	<u>\$ 1,160,369</u>	<u>\$ 1,177,120</u>

- (1) As discussed in Note 2, effective January 1, 2016, the Company retroactively adopted new accounting guidance that requires deferred financing fees related to a debt liability be presented in the consolidated balance sheets as a direct reduction of the carrying value of that debt liability rather than as deferred assets. As such, fees and expenses incurred in connection with the issuance of debt facilities are now capitalized and recorded within “Long term debt, net of unamortized deferred financing fees” in the consolidated balance sheets. This caption

reflects this reclassification for both the current and prior periods. Note that this caption does not include deferred financing fees related to the 2020 Revolving Facility and the Accounts Receivable Securitization Facility, which are included within “Deferred charges and other assets” in the consolidated balance sheets.

For the years ended December 31, 2016, 2015, and 2014, interest charges, amortization of deferred financing fees and debt discounts, and cash paid for interest by debt facility were as listed below. Interest charges and amortization of deferred financing fees and debt discounts are recorded in “Interest expense, net” in the consolidated statements of operations.

	Year Ended		
	December 31,		
	2016	2015	2014
<i>2018 Revolving Credit Facility</i>			
Interest expense	\$ -	\$ 648	\$ 1,799
Amortization of deferred financing fees	-	982	2,854
Cash paid for interest	-	648	1,869
<i>Senior Credit Facility</i>			
<i>2020 Revolving Facility</i>			
Interest expense	\$ 1,827	\$ 1,287	\$ -
Amortization of deferred financing fees	1,491	978	-
Cash paid for interest	1,624	1,287	-
<i>2021 Term Loan B</i>			
Interest expense	\$ 21,414	\$ 14,212	\$ -
Amortization of deferred financing fees	1,707	1,078	-
Amortization of debt discount	180	115	-
Cash paid for interest	21,357	14,153	-
<i>2019 Senior Notes</i>			
Interest expense	\$ -	\$ 38,259	\$ 110,559
Amortization of deferred financing fees	-	2,091	5,656
Cash paid for interest	-	81,736	115,390
<i>2022 Senior Notes</i>			
Interest expense	\$ 46,562	\$ 30,543	\$ -
Amortization of deferred financing fees	1,929	1,194	-
Cash paid for interest	47,239	22,763	-
<i>Accounts Receivable Securitization Facility</i>			
Interest expense	\$ 2,834	\$ 2,849	\$ 2,890
Amortization of deferred financing fees	510	1,223	1,425
Cash paid for interest	2,834	2,849	2,890

Total accrued interest on outstanding debt as of December 31, 2016 and 2015 was \$7.6 million and \$7.8 million, respectively. Accrued interest is recorded in “Accrued expenses and other current liabilities” within the consolidated balance sheets.

2018 Senior Secured Credit Facility

In June 2010, the Company entered into a credit agreement, which was subsequently amended from time to time, and was set to mature in January 2018 (“2018 Senior Secured Credit Facility”).

In January 2013, the Company amended the 2018 Senior Secured Credit Facility to, among other things, repay its then outstanding term loans of \$1,239.0 million using the proceeds from its sale of its 2019 Senior Notes (discussed

below). The 2018 Senior Secured Credit Facility also included a revolving credit facility (“2018 Revolving Facility”), which included a borrowing capacity of \$300.0 million and a maturity date of January 2018.

Capitalized fees and costs incurred in connection with the Company’s 2018 Revolving Facility were amortized using a straight-line method over the term of the facility. Amortization of deferred financing fees are recorded in “Interest expense, net” in the consolidated statements of operations.

In May 2015, upon completion of the refinancing transactions discussed below, the Company terminated the 2018 Senior Secured Credit Facility. Immediately prior to this termination, the Company had no outstanding borrowings under the 2018 Revolving Facility. As a result of this termination, the Company recognized a \$0.7 million loss on extinguishment of long-term debt, comprised entirely of the write-off of a portion of the existing unamortized deferred financing fees related to the 2018 Revolving Facility. The remaining unamortized deferred financing fees under the 2018 Revolving Facility totaled \$7.2 million, which remained capitalized and are being amortized along with the new deferred financing fees over the life of the new revolving credit facility, discussed in further detail below.

Senior Credit Facility

On May 5, 2015, Trinseo Materials Operating S.C.A. and Trinseo Materials Finance, Inc. (together, the “Issuers” or the “Borrowers”), both wholly-owned subsidiaries of the Company, entered into a senior secured credit agreement (the “Credit Agreement”), which provides senior secured financing of up to \$825.0 million (the “Senior Credit Facility”). The Senior Credit Facility provides for senior secured financing consisting of a (i) \$325.0 revolving credit facility, with a \$25.0 million swingline subfacility and a \$35.0 million letter of credit subfacility (the “2020 Revolving Facility”) maturing in May 2020 and (ii) \$500.0 million senior secured term loan B facility maturing in November 2021 (the “2021 Term Loan B”). Amounts under the 2020 Revolving Facility are available in U.S. dollars and euros.

The 2021 Term Loan B bears an interest rate of LIBOR plus 3.25%, subject to a 1.00% LIBOR floor, and was issued at a 0.25% original issue discount. Further, the 2021 Term Loan B requires scheduled quarterly payments in amounts equal to 0.25% of the original principal amount of the 2021 Term Loan B, with the balance to be paid at maturity. During the years ended December 31, 2016 and 2015, the Company made principal payments of \$5.0 million and \$2.5 million, respectively, related to the 2021 Term Loan B. As of December 31, 2016 and 2015, \$5.0 million of these scheduled future payments were classified as current debt on the Company’s consolidated balance sheets, respectively.

Loans under the 2020 Revolving Facility, at the Borrowers’ option, may be maintained as (a) LIBO rate loans, which bear interest at a rate per annum equal to the LIBO rate plus the applicable margin (as defined in the Credit Agreement), if applicable, or (b) base rate loans which shall bear interest at a rate per annum equal to the base rate plus the applicable margin (as defined in the Credit Agreement). As of December 31, 2016, the Borrowers are required to pay a quarterly commitment fee in respect of any unused commitments under the 2020 Revolving Facility equal to 0.375% per annum.

As of December 31, 2016 and 2015, the Company had no outstanding borrowings, and had \$309.1 million and \$311.5 million, respectively, of funds available for borrowing under the 2020 Revolving Facility, net of \$15.9 million and \$13.5 million, respectively, of outstanding letters of credit.

The Senior Credit Facility is collateralized by a security interest in substantially all of the assets of Trinseo Materials Operating S.C.A., as lead borrower, Trinseo Materials Finance, Inc., as co-borrower, and the guarantors thereunder including Trinseo Materials S.à r.l., certain U.S. subsidiaries and certain foreign subsidiaries organized in Luxembourg, The Netherlands, Hong Kong, Singapore, Ireland, Germany and Switzerland.

The Senior Credit Facility requires the Borrowers and their restricted subsidiaries to comply with customary affirmative and negative covenants, including limitations on their abilities to incur liens; make certain loans and investments; incur additional debt; merge, consolidate liquidate or dissolve; transfer or sell assets; pay dividends and other distributions to shareholders or make certain other restricted payments; enter into transactions with affiliates; restrict any restricted subsidiary from paying dividends or making other distributions or agree to certain negative pledge clauses; materially alter the business they conduct; prepay certain other indebtedness; amend certain material documents; and change our fiscal year.

The 2020 Revolving Facility contains a financial covenant that requires compliance with a springing first lien net leverage ratio test. If the outstanding balance under the 2020 Revolving Facility exceeds 30% of the \$325.0 million borrowing capacity (excluding undrawn letters of credit up to \$10.0 million and cash collateralized letters of credit) at a quarter-end, then the Company's first lien net leverage ratio may not exceed 2.00 to 1.00. As of December 31, 2016 and 2015, the Company was in compliance with all debt covenant requirements under the Senior Credit Facility.

Fees and expenses incurred in connection with the issuance of the 2021 Term Loan B and the 2020 Revolving Facility were \$12.0 million and \$0.3 million, respectively.

For the 2021 Term Loan B, deferred financing fees and the 0.25% debt discount are being amortized over its 6.5 year term using the effective interest method. For the 2020 Revolving Facility, deferred financing fees (along with an additional \$7.2 million of unamortized deferred financing fees from the 2018 Revolving Facility) are being amortized over its 5.0 year term using the straight-line method.

Unamortized deferred financing fees and debt discount related to the 2021 Term Loan B were \$9.2 million and \$1.0 million, respectively, as of December 31, 2016, and \$10.9 million and \$1.1 million, respectively, as of December 31, 2015. Unamortized deferred financing fees related to the 2020 Revolving Facility were \$5.0 million and \$6.5 million as of December 31, 2016 and 2015, respectively.

2019 Senior Notes

In January 2013, the Company issued \$1,325.0 million 8.750% senior notes due to mature on February 1, 2019 (the "2019 Senior Notes"). The proceeds from the issuance of the 2019 Senior Notes were used to repay all of the Company's then outstanding term loans and related refinancing fees and expenses.

In July 2014, using proceeds from the Company's IPO (refer to Note 12), the Company redeemed \$132.5 million in aggregate principal amount of the 2019 Senior Notes, together with a 103% call premium totaling \$4.0 million and accrued and unpaid interest thereon of \$5.2 million. As a result, during the year ended December 31, 2014 the Company incurred a loss on the extinguishment of debt of approximately \$7.4 million, which includes the above \$4.0 million call premium and an approximately \$3.4 million write-off of related unamortized deferred financing fees.

On May 13, 2015, using the net proceeds from the issuance of the 2021 Term Loan B, together with the net proceeds from the issuance of the 2022 Senior Notes (defined and discussed below) and available cash, the Company redeemed all outstanding borrowings under the 2019 Senior Notes, totaling \$1,192.5 million in principal, together with a call premium of \$68.6 million (with a redemption price of 103% on the first \$132.5 million and 106.097% on the remaining balance) and accrued and unpaid interest thereon of \$29.6 million.

As a result, during the year ended December 31, 2015, the Company recorded a loss on extinguishment of long-term debt of \$94.5 million, which includes the above \$68.6 million call premium and a \$25.9 million write-off of unamortized deferred financing fees related to the 2019 Senior Notes.

Prior to the May 2015 redemption, fees and expenses incurred in connection with the issuance of 2019 Senior Notes were being amortized over the term of the 2019 Senior Notes using the effective interest rate method.

2022 Senior Notes

On May 5, 2015, the Issuers executed an indenture (the "Indenture") pursuant to which they issued \$300.0 million aggregate principal amount of 6.750% senior notes due May 1, 2022 (the "USD Notes") and €375.0 million aggregate principal amount of 6.375% senior notes due May 1, 2022 (the "Euro Notes", and together with the USD Notes, the "2022 Senior Notes"). Interest on the 2022 Senior Notes is payable semi-annually on May 1 and November 1 of each year, commencing on November 1, 2015.

At any time prior to May 1, 2018, the Issuers may redeem the Euro Notes and/or the USD Notes in whole or in part, at their option at a redemption price equal to 100% of the principal amount of such notes plus the relevant applicable premium as of, and accrued and unpaid interest to, but not including, the redemption date. At any time and from time to time after May 1, 2018, the Issuers may redeem the Euro Notes and/or the USD Notes, in whole or in part, at a redemption price equal to the percentage of principal amount set forth below plus accrued and unpaid interest, if any,

on the notes redeemed to, but not including, the redemption date:

<u>12-month period commencing May 1 in Year</u>	<u>Euro Notes</u>	<u>USD Notes</u>
	<u>Percentage</u>	<u>Percentage</u>
2018	103.188 %	103.375 %
2019	101.594 %	101.688 %
2020 and thereafter	100.000 %	100.000 %

In addition, at any time prior to May 1, 2018, the Issuers may redeem up to 40% of the aggregate principal amount of each of the USD Notes and the Euro Notes, either together or separately, at a redemption price equal to 106.750% of the principal amount thereof for the USD Notes and 106.375% of the principal amount thereof for the Euro Notes plus, in each case, accrued and unpaid interest to, but not including, the redemption date, in an amount equal to the aggregate gross proceeds from certain equity offerings.

The 2022 Senior Notes are the Issuers' senior unsecured obligations and rank equally in right of payment with all of the Issuers' existing and future indebtedness that is not expressly subordinated in right of payment thereto. The 2022 Senior Notes will be senior in right of payment to any future indebtedness that is expressly subordinated in right of payment thereto and effectively junior to (a) the Issuers' existing and future secured indebtedness, including the Company's accounts receivable facility and the Issuers' Senior Credit Facility (discussed above), to the extent of the value of the collateral securing such indebtedness and (b) all existing and future liabilities of the Issuers' non-guarantor subsidiaries.

The Indenture contains customary covenants that, among other things, limit the Issuers' and certain of their subsidiaries' ability to incur additional indebtedness and guarantee indebtedness, pay dividends or make other distributions, make investments, or prepay certain indebtedness, each subject to a number of exceptions and qualifications. Certain of these covenants will be suspended during any period of time that (1) the 2022 Notes have investment grade ratings (as defined in the Indenture) and (2) no default has occurred and is continuing under the Indenture. In the event that the 2022 Senior Notes are downgraded to below an investment grade rating, the Issuers and certain subsidiaries will again be subject to the suspended covenants with respect to future events. As of December 31, 2016 and 2015, the Company was in compliance with all debt covenant requirements under the Indenture.

Fees and expenses incurred in connection with the issuance of the 2022 Senior Notes were \$16.0 million, which are capitalized in the consolidated balance sheets and are being amortized over their 7.0 year term using the effective interest method. As of December 31, 2016 and 2015, there were \$12.9 million and \$14.8 million, respectively, of unamortized deferred financing fees in the consolidated balance sheets related to the 2022 Senior Notes.

Accounts Receivable Securitization Facility

In 2010, Styron Receivable Funding Ltd. ("SRF"), a VIE in which the Company is the primary beneficiary, executed an agreement for an accounts receivable securitization facility ("Accounts Receivable Securitization Facility"). As of December 31, 2016, the facility, as amended in October 2016, permitted borrowings by two of the Company's subsidiaries, Trinseo Europe GmbH ("TE") and Trinseo Export GmbH ("Trinseo Export"), up to a total of \$200.0 million and has a maturity date of May 2019.

Under the facility, TE and Trinseo Export sell their accounts receivable from time to time to SRF. In turn, SRF may sell undivided ownership interests in such receivables to commercial paper conduits in exchange for cash. The Company has agreed to continue servicing the receivables for SRF. Upon the sale of the interests in the accounts receivable by SRF, the conduits have a first priority perfected security interest in such receivables and, as a result, the receivables will not be available to the creditors of the Company or its other subsidiaries.

The Accounts Receivable Securitization Facility is subject to interest charges against the amount of outstanding borrowings as well as the amount of available, but undrawn commitments. In regards to outstanding borrowings, fixed interest charges are 2.6% plus variable commercial paper rates, while for available, but undrawn commitments, fixed interest charges are 1.4%.

As of December 31, 2016 and 2015, there were no amounts outstanding under the Accounts Receivable Securitization Facility, with approximately \$126.5 million and \$123.4 million, respectively, of funds available for borrowing under this facility, based on the pool of eligible accounts receivable.

Unamortized deferred financing fees related to the Accounts Receivable Securitization Facility were zero and \$0.5 million as of December 31, 2016 and 2015.

Other Indebtedness

The Company has a short-term revolving facility through our subsidiary in China that provides uncommitted funds available for borrowing, subject to the availability of collateral. The facility is subject to annual renewal. Outstanding borrowings under this revolving facility were zero as of December 31, 2016 and 2015, respectively.

NOTE 11—DERIVATIVE INSTRUMENTS

The Company’s ongoing business operations expose it to various risks, including fluctuating foreign exchange rates. To manage these risks, the Company periodically enters into derivative financial instruments such as foreign exchange forward contracts. The Company does not hold or enter into financial instruments for trading or speculative purposes. All derivatives are recorded in the consolidated balance sheets at fair value. Refer to Note 13 for fair value disclosures related to these instruments.

Foreign Exchange Forward Contracts

Certain subsidiaries have assets and liabilities denominated in currencies other than their respective functional currencies, which creates foreign exchange risk. The Company’s principal strategy in managing its exposure to changes in foreign currency exchange rates is to naturally hedge the foreign currency-denominated liabilities on our consolidated balance sheets against corresponding assets of the same currency such that any changes in liabilities due to fluctuations in exchange rates are offset by changes in their corresponding foreign currency assets. In order to further reduce its exposure, the Company also uses foreign exchange forward contracts to economically hedge the impact of the variability in exchange rates on our assets and liabilities denominated in certain foreign currencies. These derivative contracts are not designated for hedge accounting treatment.

As of December 31, 2016, the Company had open foreign exchange forward contracts with a notional U.S. dollar equivalent absolute value of \$209.4 million. The following table displays the notional amounts of the most significant net foreign exchange hedge positions outstanding as of December 31, 2016.

<u>Buy / (Sell)</u>	<u>December 31, 2016</u>
Chinese Yuan	\$ (67,571)
Euro	\$ 54,818
Swiss Franc	\$ 25,406
Indonesian Rupiah	\$ (25,099)
Japanese Yen	\$ (11,640)

Open foreign exchange forward contracts as of December 31, 2016 have maturities of less than three months.

Foreign Exchange Cash Flow Hedges

The Company also enters into forward contracts with the objective of managing the currency risk associated with forecasted U.S. dollar-denominated raw materials purchases by one of its subsidiaries whose functional currency is the euro. By entering into these forward contracts, which are designated as cash flow hedges, the Company buys a designated amount of U.S. dollars and sells euros at the prevailing market rate to mitigate the risk associated with the fluctuations in the euro-to-U.S. dollar foreign currency exchange rates. The qualifying hedge contracts are marked-to-market at each reporting date and any unrealized gains or losses are included in accumulated other comprehensive income to the extent effective, and reclassified to cost of sales in the period during which the transaction affects earnings or it becomes probable that the forecasted transaction will not occur.

Open foreign exchange cash flow hedges as of December 31, 2016 have maturities occurring over a period of 12 months, and have a net notional U.S. dollar equivalent of \$234.0 million.

Net Investment Hedge

The Company's outstanding debt includes €375.0 million of Euro Notes (refer to Note 10). As of December 31, 2016, the Company has designated a portion (€280.0 million) of the principal amount of these Euro Notes as a hedge of the foreign currency exposure of the Issuers' net investment in certain European subsidiaries. As this debt was deemed to be a highly effective hedge, changes in the Euro Notes' carrying value resulting from fluctuations in the euro exchange rate were recorded as cumulative foreign currency translation gain of \$14.5 million within accumulated other comprehensive income as of December 31, 2016.

Summary of Derivative Instruments

Information regarding changes in the fair value of the Company's derivative instruments, net of tax, including those not designated for hedge accounting treatment, is as follows:

	Gain (Loss) Recognized in AOCI on Balance Sheet			Gain (Loss) Recognized in Statement of Operations			Statement of Operations Classification
	Year Ended December 31,						
	2016	2015	2014	2016	2015	2014	
Designated as Cash Flow Hedges							
Foreign exchange cash flow hedges	\$ 6,703	\$ 5,569	\$ —	\$ 2,795	\$ 512	\$ —	Cost of sales
Total	\$ 6,703	\$ 5,569	\$ —	\$ 2,795	\$ 512	\$ —	
Net Investment Hedges							
Euro Notes	\$ 14,061	\$ 427	\$ —	\$ —	\$ —	\$ —	Other expense, net
Total	\$ 14,061	\$ 427	\$ —	\$ —	\$ —	\$ —	
Not Designated as Cash Flow Hedges							
Foreign exchange forward contracts	\$ —	\$ —	\$ —	\$ 3,723	\$ (16,526)	\$ (28,164)	Other expense, net
Total	\$ —	\$ —	\$ —	\$ 3,723	\$ (16,526)	\$ (28,164)	

The Company recorded gains of \$3.7 million during the year ended December 31, 2016, and losses of \$16.5 million and \$28.2 million during the years ended December 31, 2015 and 2014, respectively, from settlements and changes in the fair value of outstanding forward contracts (not designated as hedges). The activity from these forward contracts offset net foreign exchange transaction losses of \$5.5 million during the year ended December 31, 2016, and gains of \$6.1 million and \$32.4 million during the years ended December 31, 2015 and 2014, respectively, which resulted from the remeasurement of the Company's foreign currency denominated assets and liabilities. The cash settlements of these foreign exchange forward contracts are included within operating activities in the consolidated statements of cash flows.

As of December 31, 2016, the Company has no ineffectiveness related to its foreign exchange cash flow hedges. Further, the Company expects to reclassify in the next twelve months an approximate \$11.0 million net gain from other comprehensive income (loss) into earnings related to the Company's outstanding cash flow hedges as of December 31, 2016 based on current foreign exchange rates.

The following table summarizes the net unrealized gains and losses and balance sheet classification of outstanding derivatives recorded in the consolidated balance sheets:

Balance Sheet Classification	December 31, 2016			December 31, 2015		
	Foreign Exchange Forward Contracts	Foreign Exchange Cash Flow Hedges	Total	Foreign Exchange Forward Contracts	Foreign Exchange Cash Flow Hedges	Total
Asset Derivatives:						
Accounts receivable, net of allowance	\$ 1,664	\$ 11,018	\$ 12,682	\$ 4,592	\$ 4,958	\$ 9,550
Deferred charges and other assets	—	—	—	—	—	—
Total asset derivatives	<u>\$ 1,664</u>	<u>\$ 11,018</u>	<u>\$ 12,682</u>	<u>\$ 4,592</u>	<u>\$ 4,958</u>	<u>\$ 9,550</u>
Liability Derivatives:						
Accounts payable	\$ 511	\$ —	\$ 511	\$ 194	\$ —	\$ 194
Other noncurrent obligations	—	—	—	—	—	—
Total liability derivatives	<u>\$ 511</u>	<u>\$ —</u>	<u>\$ 511</u>	<u>\$ 194</u>	<u>\$ —</u>	<u>\$ 194</u>

Forward contracts are entered into with a limited number of counterparties, each of which allows for net settlement of all contracts through a single payment in a single currency in the event of a default on or termination of any one contract. As such, in accordance with the Company's accounting policy, we record these foreign exchange forward contracts on a net basis by counterparty within the consolidated balance sheets. Information regarding the gross amounts of the Company's derivative instruments and the amounts offset in the consolidated balance sheets is as follows:

	Gross Amounts Recognized in the Balance Sheet	Gross Amounts Offset in the Balance Sheet	Net Amounts Presented in the Balance Sheet
Balance at December 31, 2016			
Derivative assets	\$ 23,401	\$ (10,719)	\$ 12,682
Derivative liabilities	11,230	(10,719)	511
Balance at December 31, 2015			
Derivative assets	\$ 10,044	\$ (494)	\$ 9,550
Derivative liabilities	688	(494)	194

Refer to Notes 13 and 21 for further information regarding the fair value of the Company's derivative instruments and the related changes in accumulated other comprehensive income.

NOTE 12—SHAREHOLDERS' EQUITY

Ordinary Shares

On June 17, 2014, the Company completed the IPO of 11,500,000 ordinary shares at a price of \$19.00 per share. The number of ordinary shares at closing included 1,500,000 of shares sold pursuant to the underwriters' over-allotment option. The Company received cash proceeds of \$203.2 million from this transaction, net of underwriting discounts. These net proceeds were used by the Company for: i) the July 2014 repayment of \$132.5 million in aggregate principal amount of the 2019 Senior Notes, together with accrued and unpaid interest thereon of \$5.2 million and a call premium of \$4.0 million (refer to Note 10); ii) the payment of approximately \$23.3 million in connection with the termination of the Advisory Agreement with Bain Capital (refer to Note 18); iii) the payment of approximately \$5.1 million of advisory, accounting, legal and printing expenses directly related to the offering which were recorded as a reduction to additional paid-in capital in the consolidated balance sheets; and iv) general corporate purposes.

Secondary Offerings and Tender Offer

During the year ended December 31, 2016, the former Parent sold 37,269,567 ordinary shares pursuant to the Company's shelf registration statement filed with the SEC. The following table summarizes these transactions.

Trade Month	Underwriters	Shares Sold by former Parent	Price per Share
March 2016 ⁽¹⁾	Goldman, Sachs & Co.	10,600,000	\$ 35.63
May 2016	Goldman, Sachs & Co.	8,000,000	\$ 42.90
August 2016	Morgan Stanley & Co. LLC Jefferies LLC	8,000,000	\$ 49.15
September 2016	Morgan Stanley & Co. LLC	10,669,567	\$ 54.05

- (1) Concurrently with the completion of this offering, the Company agreed to repurchase from Goldman, Sachs & Co. 1,600,000 of the ordinary shares that were sold by the former Parent in the offering at the same \$35.63 price per share paid by Goldman, Sachs & Co. to the former Parent, resulting in an aggregate purchase price of \$57.0 million.

Because a repurchase transaction was completed as part of the offering, in order to satisfy certain requirements of Luxembourg law, promptly following the completion of the offering, the Company commenced a tender offer to purchase up to an additional 1,165,000 shares from its shareholders (other than the former Parent) at the same price per share that it paid to Goldman, Sachs & Co. for the shares repurchased as part of this offering. As a result of the tender offer, 38,702 ordinary shares were repurchased by the Company for an aggregate purchase price of \$1.4 million.

These repurchased shares were recorded at cost within "Treasury shares" in the consolidated balance sheets.

Additional Share Repurchases and Repayment of Equity

Under authorization from the Company's shareholders and board of directors, during the year ended December 31, 2016, the Company purchased an additional 2,864,870 ordinary shares from its shareholders through a combination of open market transactions for an aggregate purchase price of \$156.7 million (with \$3.4 million of additional repurchases not yet settled accrued on the consolidated balance sheet as of December 31, 2016). These repurchased shares have been recorded at cost within "Treasury shares" in the consolidated balance sheets.

As of December 31, 2016, there were approximately 2,332,067 ordinary shares available for repurchase under existing authorization from shareholders and the board of directors. This authorization ends on June 21, 2018 or on the date of its renewal by a subsequent general meeting of shareholders.

In 2016, pursuant to the authority granted to it by its shareholders, the Company began declaring repayments of equity on its' ordinary shares, summarized as follows:

Month of Declaration	Date of Record	Date of Payment	Repayment of Equity per Share	Total Repayment of Equity
June 2016	July 6, 2016	July 20, 2016	\$ 0.30	\$ 13,920
September 2016	October 12, 2016	October 26, 2016	\$ 0.30	\$ 13,396
December 2016	January 11, 2017	January 25, 2017	\$ 0.30	\$ 13,252 ⁽¹⁾

- (1) This amount was recorded within "Accrued expenses and other current liabilities" on the Company's consolidated balance sheet as of December 31, 2016.

NOTE 13—FAIR VALUE MEASUREMENTS

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Assets and liabilities measured at fair value are classified using the following hierarchy, which is based upon the transparency of inputs to the valuation as of the measurement date.

Level 1—Valuation is based upon quoted prices (unadjusted) for identical assets or liabilities in active markets.

Level 2—Valuation is based upon quoted prices for similar assets and liabilities in active markets, or other inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument.

Level 3—Valuation is based upon other unobservable inputs that are significant to the fair value measurement.

The following table summarizes the basis used to measure certain assets and liabilities at fair value on a recurring basis in the consolidated balance sheets at December 31, 2016 and 2015.

Assets (Liabilities) at Fair Value	December 31, 2016			Total
	Quoted Prices in Active Markets for Identical Items (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	
Foreign exchange forward contracts— Assets	\$ —	\$ 1,664	\$ —	\$ 1,664
Foreign exchange forward contracts— (Liabilities)	—	(511)	—	(511)
Foreign exchange cash flow hedges— Assets	—	11,018	—	11,018
Total fair value	\$ —	\$ 12,171	\$ —	\$ 12,171

Assets (Liabilities) at Fair Value	December 31, 2015			Total
	Quoted Prices in Active Markets for Identical Items (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	
Foreign exchange forward contracts— Assets	\$ —	\$ 4,592	\$ —	\$ 4,592
Foreign exchange forward contracts— (Liabilities)	—	(194)	—	(194)
Foreign exchange cash flow hedges— Assets	—	4,958	—	4,958
Total fair value	\$ —	\$ 9,356	\$ —	\$ 9,356

The Company uses an income approach to value its derivative instruments, utilizing discounted cash flow techniques, considering the terms of the contract and observable market information available as of the reporting date. Significant inputs to the valuation for foreign exchange forward contracts and foreign exchange cash flow hedges are obtained from broker quotations or from listed or over-the-counter market data, and are classified as Level 2 in the fair value hierarchy.

Nonrecurring Fair Value Measurements

The Company's financial assets and liabilities measured at fair value on a nonrecurring basis as of December 31, 2016 were as follows:

	December 31, 2016			Total Expense for the Year Ended December 31, 2016
	Quoted Prices in Active Markets for Identical Items (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	
Assets:				
Livorno property, plant and equipment (Note 20)	\$ —	\$ —	\$ 11,040	\$ 13,706
Total	\$ —	\$ —	\$ 11,040	\$ 13,706

Refer to Note 20 for information regarding the Livorno plant restructuring announced during the third quarter of 2016. As a result, the Company determined that the long-lived assets at the Livorno latex binders facility, which included

land and depreciable long-lived assets, should be assessed for impairment. This assessment indicated that the carrying value of the asset group was not recoverable when compared to the expected undiscounted cash flows from the operation and eventual disposition of these assets. Based upon our assessment, the Company concluded that the fair value of this asset group totaled \$11.0 million as of December 31, 2016. As a result, the Company recorded an impairment loss on these assets of approximately \$13.7 million for the year ended December 31, 2016. The amount was recorded within "Selling, general and administrative expenses" in the consolidated statement of operations and allocated entirely to the Latex Binders segment.

The fair value of the depreciable assets was determined under the income approach, utilizing a discounted cash flow model. The key assumption in this model was cash flow projections, which were determined to be nil, as the plant ceased manufacturing operations in October 2016. The fair value of the land was determined utilizing a combination of the market and income approaches, utilizing key inputs such as recent comparable market transactions, expected date of sale, and discount rate.

There were no other financial assets and liabilities measured at fair value on a nonrecurring basis as of December 31, 2016 and 2015.

Fair Value of Debt Instruments

The following table presents the estimated fair value of the Company's outstanding debt not carried at fair value as of December 31, 2016 and 2015, respectively:

	As of December 31, 2016	As of December 31, 2015
2022 Senior Notes		
USD Notes	\$ 315,000	\$ 296,250
Euro Notes	424,437	410,054
2021 Term Loan B	498,041	491,401
Total fair value	<u>\$ 1,237,478</u>	<u>\$ 1,197,705</u>

The fair value of the Company's Term Loan B, USD Notes, and Euro Notes (each Level 2 securities) is determined using over-the-counter market quotes and benchmark yields received from independent vendors.

There were no other significant financial instruments outstanding as of December 31, 2016 and 2015.

NOTE 14—INCOME TAXES

Income (loss) before income taxes earned within and outside the United States is shown below:

	Year Ended December 31,		
	2016	2015	2014
United States	\$ 137,232	\$ 105,220	\$ 17,522
Outside of the United States	268,077	98,636	(65,135)
Income (loss) before income taxes	<u>\$ 405,309</u>	<u>\$ 203,856</u>	<u>\$ (47,613)</u>

The provision for (benefit from) income taxes is composed of:

	Year Ended December 31, 2016			Year Ended December 31, 2015			Year Ended December 31, 2014		
	Current	Deferred	Total	Current	Deferred	Total	Current	Deferred	Total
U.S. federal	\$ 24,818	\$ 15,628	\$ 40,446	\$ 28,253	\$ 238	\$ 28,491	\$ 2,101	\$ (2,536)	\$ (435)
U.S. state and other	3,989	1,335	5,324	4,566	(31)	4,535	295	3	298
Non-U.S.	42,102	(875)	41,227	37,467	(284)	37,183	12,490	7,366	19,856
Total	<u>\$ 70,909</u>	<u>\$ 16,088</u>	<u>\$ 86,997</u>	<u>\$ 70,286</u>	<u>\$ (77)</u>	<u>\$ 70,209</u>	<u>\$ 14,886</u>	<u>\$ 4,833</u>	<u>\$ 19,719</u>

The effective tax rate on pre-tax income differs from the U.S. statutory rate due to the following:

	Year Ended December 31,		
	2016	2015	2014
Taxes at U.S. statutory rate ⁽¹⁾	\$ 141,858	\$ 71,350	\$ (16,664)
State and local income taxes	3,928	2,988	571
Non U.S. statutory rates, including credits	(77,841)	(29,868)	899
U.S. tax effect of foreign earnings and dividends	(1,663)	(1,942)	(2,112)
Unremitted earnings	3,766	4,008	(189)
Change in valuation allowances	6,186	24,292	14,679
Uncertain tax positions	(1,804)	1,155	(2,818)
Withholding taxes on interest and royalties	2,452	2,570	3,652
U.S. manufacturing deduction	(2,905)	(2,979)	—
Stock-based compensation	2,060	1,231	3,343
Non-deductible interest	2,527	3,142	5,401
Non-deductible other expenses	5,974	857	15,589 ⁽²⁾
Impact on foreign currency exchange	2,086	(3,521)	(2,643)
Other—net	373	(3,074)	11
Total provision for income taxes	<u>\$ 86,997</u>	<u>\$ 70,209</u>	<u>\$ 19,719</u>
Effective tax rate	<u>21 %</u>	<u>34 %</u>	<u>(41)%</u>

- (1) The U.S. statutory rate has been used as management believes it is more meaningful to the Company.
- (2) Non-deductible other expenses in 2014 include the tax effect of fees incurred for the termination of the Latex JV Option Agreement with Dow and a portion of the fees incurred in connection with the termination of the Advisory Agreement with Bain Capital. Refer to Note 18 for further information.

Deferred income taxes reflect temporary differences between the valuation of assets and liabilities for financial and tax reporting:

	December 31,			
	2016		2015	
	Deferred Tax Assets	Deferred Tax Liabilities	Deferred Tax Assets	Deferred Tax Liabilities
Tax loss and credit carry forwards	\$ 104,435	\$ —	\$ 76,436	\$ —
Unremitted earnings	—	10,597	—	6,781
Unconsolidated affiliates	4,383	—	6,532	—
Other accruals and reserves	1,715	—	2,366	—
Property, plant and equipment	—	44,398	—	39,445
Goodwill and other intangible assets	13,766	—	14,880	—
Deferred financing fees	13,206	—	17,698	—
Employee benefits	45,474	—	39,037	—
	<u>182,979</u>	<u>54,995</u>	<u>156,949</u>	<u>46,226</u>
Valuation allowance	(112,641)	—	(85,092)	—
Total	<u>\$ 70,338</u>	<u>\$ 54,995</u>	<u>\$ 71,857</u>	<u>\$ 46,226</u>

As of December 31, 2016 and 2015, all undistributed earnings of foreign subsidiaries and affiliates are expected to be repatriated.

Operating loss carryforwards amounted to \$404.6 million in 2016 and \$263.9 million in 2015. As of December 31, 2016, \$47.3 million of the operating loss carryforwards were subject to expiration in 2017 through 2021, and \$357.3 million of the operating loss carryforwards expire in years beyond 2021 or have an indefinite carryforward period. As of December 31, 2016, the Company had tax credit carryforwards of \$3.2 million relating to U.S. foreign tax credits, of which a portion will begin to expire in 2023.

The Company had valuation allowances which were related to the realization of recorded tax benefits on tax loss carryforwards, as well as other net deferred tax assets, primarily from subsidiaries in Luxembourg and China, of \$112.6 million as of December 31, 2016 and \$85.1 million as of December 31, 2015. In addition, the Company recorded a valuation allowance of \$7.3 million on the net deferred tax asset of one of its China subsidiaries during the year ended December 31, 2015, as this entity was in a three year cumulative loss position as of December 31, 2015 and the Company could no longer assert it would more likely than not be able to realize its deferred tax asset. This conclusion remains consistent as of December 31, 2016.

For the years presented, a reconciliation of the beginning and ending amount of the unrecognized tax benefits is as follows:

Balance as of December 31, 2013	\$ 26,899
Increases related to current year tax positions	187
Decreases related to prior year tax positions	(6,701)
Balance as of December 31, 2014	\$ 20,385
Increases related to current year tax positions	1,304
Decreases related to prior year tax positions	(1,647)
Balance as of December 31, 2015	\$ 20,042
Increases related to current year tax positions	108
Increases related to prior year tax positions	3,981
Decreases related to prior year tax positions	(5,972)
Settlement of uncertain tax positions	(1,087)
Decreases due to expiration of statutes of limitations	(968)
Balance as of December 31, 2016	<u>\$ 16,104</u>

The Company recognized interest and penalties of \$0.9 million, \$0.7 million, and less than \$0.1 million for the years ended December 31, 2016, 2015, and 2014, respectively, which was included as a component of income tax expense in the consolidated statements of operations. As of December 31, 2016 and 2015, the Company had \$3.1 million and \$2.3 million, respectively, accrued for interest and penalties. To the extent that the unrecognized tax benefits are recognized in the future, \$12.7 million will impact the Company's effective tax rate.

The Company is currently under examination in a number of tax jurisdictions. Although it is difficult to predict the timing or results of these worldwide examinations, the company believes it is reasonably possible that approximately \$4.0 million to \$5.0 million of unrecognized income tax benefits, including the impact relating to accrued interest and penalties, could be realized within the next twelve months.

Tax years that remain subject to examination for the Company's major tax jurisdictions are shown below.

Major Tax Jurisdictions	Earliest Open Year
United States: Federal income tax	2012
Germany	2010
Switzerland	2012
Netherlands	2015
Luxembourg	2010
China	2007
Hong Kong	2008
Indonesia	2008
Italy	2010

NOTE 15—COMMITMENTS AND CONTINGENCIES

Leased Property

The Company routinely leases premises for use as sales and administrative offices, warehouses and tanks for product storage, railcars, motor vehicles, and other equipment under operating leases. Rental expense for these leases was \$16.0 million, \$18.4 million and \$15.9 million during the years ended December 31, 2016, 2015, and 2014, respectively.

Future minimum rental payments under operating leases with remaining non-cancelable terms in excess of one year are as follows:

Year	Annual Commitment
2017	\$ 11,041
2018	9,449
2019	8,281
2020	5,919
2021	3,824
Thereafter	17,134
Total	\$ 55,648

Environmental Matters

Accruals for environmental matters are recorded when it is probable that a liability has been incurred and the amount of the liability can be reasonably estimated, based on current law, existing technologies and other information. As of December 31, 2016 and 2015, the Company had no accrued obligations for environmental remediation and restoration costs. Pursuant to the terms of the Acquisition, the pre-closing environmental conditions were retained by Dow and the Company has been indemnified by Dow from and against all environmental liabilities incurred or relating to the predecessor periods. There are several properties which the Company now owns on which Dow has been conducting investigation, monitoring, or remediation to address historical contamination. Those properties include Allyn's Point, Connecticut, Dalton, Georgia, and Livorno, Italy. There are other properties with historical contamination that are owned by Dow that the Company leases for its operations, including its facilities in Midland, Michigan, Schkopau, Germany, and Terneuzen, The Netherlands. No environmental claims have been asserted or threatened against the Company, and the Company is not a potentially responsible party at any Superfund Sites.

Inherent uncertainties exist in the Company's potential environmental liabilities primarily due to unknown conditions, whether future claims may fall outside the scope of the indemnity, changing governmental regulations and legal standards regarding liability, and evolving technologies for handling site remediation and restoration. In connection with the Company's existing indemnification, the possibility is considered remote that environmental remediation costs will have a material adverse impact on the consolidated financial statements.

There were no amounts recorded in the consolidated statements of operations relating to environmental remediation for the years ended December 31, 2016, 2015, and 2014.

Purchase Commitments

In the normal course of business, the Company has certain raw material purchase contracts where it is required to purchase certain minimum volumes at current market prices. These commitments range from 1 to 5 years. The following

table presents the fixed and determinable portion (based on current pricing) of the obligation under the Company's purchase commitments as of December 31, 2016 (in millions):

<u>Year</u>	<u>Annual Commitment</u>
2017	\$ 1,420
2018	1,178
2019	801
2020	860
2021	5
Thereafter	—
Total	\$ 4,264

In certain raw material purchase contracts, the Company has the right to purchase less than the required minimums and pay a liquidated damages fee, or, in case of a permanent plant shutdown, to terminate the contracts. In such cases, these obligations would be less than the obligations shown in the table above.

The Company has service agreements with Dow, some of which contain fixed annual fees. Refer to Note 18 for further information.

Litigation Matters

From time to time, the Company may be subject to various legal claims and proceedings incidental to the normal conduct of business, relating to such matters as product liability, antitrust/competition, past waste disposal practices and release of chemicals into the environment. While it is impossible at this time to determine with certainty the ultimate outcome of these routine claims, the Company does not believe that the ultimate resolution of these claims will have a material adverse effect on the Company's results of operations, financial condition or cash flow.

Legal costs, including those legal costs expected to be incurred in connection with a loss contingency, are expensed as incurred.

NOTE 16—PENSION PLANS AND OTHER POSTRETIREMENT BENEFITS

Defined Benefit Pension Plans

Many of the Company's employees are participants in various defined benefit pension plans which are administered and sponsored by the Company and are primarily in Germany, Switzerland, The Netherlands, Belgium and Japan.

Company employees who were not previously associated with the acquired pension and postretirement plans are generally not eligible for enrollment in these plans. Pension benefits are typically based on length of service and the employee's final average compensation.

Other Postretirement Benefits

The Company provides certain health care and life insurance benefits to Dow-heritage employees in the United States when they retire. Prior to the 2016 divestiture of the Company's latex binders and automotive businesses in Brazil (refer to Note 3 in the consolidated financial statements), the Company also provided health care and life insurance benefits to retired employees in Brazil.

In the U.S., the plan provides for health care benefits, including hospital, physicians' services, drug and major medical expense coverage. In general, the plan applies to employees hired by Dow before January 1, 2008 and transferred to the Company in connection with the Acquisition, and who are at least 50 years old with 10 years of service. The plan allows for spouse coverage as well. If an employee was hired on or before January 1, 1993, the coverage extends past age 65. For employees hired after January 1, 1993 but before January 1, 2008, coverage ends at age 65. The Company reserves the right to modify the provisions of the plan at any time, including the right to terminate, and does not guarantee the continuation of the plan or its provisions.

Prior to the divestiture of operations in Brazil, the Company provided an insured medical benefit to all employees and eligible dependents under Brazil’s healthcare legislation, which grants the right to employees (and their beneficiaries) who have contributed towards the medical plan to extend medical coverage upon retirement or in case of involuntary dismissal. The extended medical plan must include the same level of coverage and other conditions offered to active employees, whereas former employees must assume 100% of the premium cost. Prior to 2014, the Company had not accrued for the postretirement benefits owed under this plan. As a result, for the year ended December 31, 2014, a \$2.7 million liability was recorded, which includes an adjustment related to the original purchase price allocation from the Acquisition as a portion of this obligation was assumed from Dow. The impact of this adjustment was a \$1.7 million increase to goodwill and \$1.0 million of net periodic benefit costs, net of currency remeasurement gains, incurred from the date of the Acquisition through December 31, 2013. The Company does not believe these adjustments were material to any prior period financial statements.

In The Netherlands, the Company previously provided postretirement medical benefits to Dow-heritage employees who transferred to the Company in connection with the Acquisition. The Company ceased providing these benefits effective January 1, 2015. As a result, the Company recognized approximately \$1.5 million of curtailment gain for the year ended December 31, 2014.

Assumptions

The weighted-average assumptions used to determine pension plan obligations and net periodic benefit costs are provided below:

	Pension Plan Obligations			Net Periodic Benefit Costs		
	December 31,			December 31,		
	2016	2015	2014	2016	2015	2014
Discount rate	1.65 %	2.06 %	2.01 %	2.06 %	2.01 %	3.30 %
Rate of increase in future compensation levels	2.61 %	2.68 %	2.71 %	2.68 %	2.71 %	2.86 %
Expected long-term rate of return on plan assets	N/A	N/A	N/A	1.79 %	1.73 %	2.83 %

The weighted-average assumptions used to determine other postretirement benefit (“OPEB”) obligations and net periodic benefit costs are provided below:

	OPEB Obligations			Net Periodic Benefit Costs		
	December 31,			December 31,		
	2016	2015	2014	2016	2015	2014
Discount rate	4.16 %	6.51 %	6.40 %	6.51 %	6.40 %	6.69 %
Initial health care cost trend rate	6.70 %	8.19 %	8.05 %	8.19 %	8.05 %	6.67 %
Ultimate health care cost trend rate	5.00 %	5.26 %	5.43 %	5.26 %	5.43 %	5.00 %
Year ultimate trend rate to be reached	2022	2023	2021	2023	2021	2019

The discount rate utilized to measure the pension and other postretirement benefit plans is based on the yield of high-quality fixed income debt instruments at the measurement date. Future expected, actuarially determined cash flows of the plans are matched against a yield curve to arrive at a single discount rate for each plan.

The expected long-term rate of return on plan assets is determined by performing a detailed analysis of key economic and market factors driving historical returns for each asset class and formulating a projected return based on factors in the current environment. Factors considered include, but are not limited to, inflation, real economic growth, interest rate yield, interest rate spreads, and other valuation measures and market metrics. The expected long-term rate of return for each asset class is then weighted based on the strategic asset allocation approved by the governing body for each plan. The historical experience with the pension fund asset performance is also considered.

A one-percentage point change in the assumed health care cost trend rate would have had a nominal effect on both service and interest costs, but would result in an approximate \$0.4 million impact to the projected benefit obligation.

The net periodic benefit costs for the pension and other postretirement benefit plans for the years ended December 31, 2016, 2015, and 2014 were as follows:

	Defined Benefit Pension Plans			Other Postretirement Benefit Plans		
	December 31,			December 31,		
	2016	2015	2014	2016	2015	2014
Net periodic benefit cost						
Service cost	\$ 16,511	\$ 16,595	\$ 14,097	\$ 243	\$ 338	\$ 1,048 ⁽⁴⁾
Interest cost	5,500	5,219	7,687	447	516	1,189 ⁽⁴⁾
Expected return on plan assets	(1,958)	(1,617)	(2,427)	—	—	—
Amortization of prior service cost (credit)	(1,940)	(1,567)	(1,002)	102	102	102
Amortization of net (gain) loss	4,397	5,466	2,557	(171)	—	(45) ⁽⁴⁾
Settlement and curtailment (gain) loss	—	—	1,517 ⁽¹⁾	—	—	(1,507) ⁽²⁾
Net periodic benefit cost (income)	<u>\$ 22,510</u>	<u>\$ 24,096</u>	<u>\$ 22,429</u>	<u>\$ 621</u>	<u>\$ 956</u>	<u>\$ 787</u>
Amounts recognized in other comprehensive income (loss)						
Net loss (gain)	\$ 24,844	\$ (6,299)	\$ 56,318	\$ 1,864	\$ (1,498)	\$ 1,263 ⁽⁴⁾
Amortization of prior service (cost) credit	1,940	1,567	1,002	(102)	(102)	(102)
Amortization of net gain (loss)	(4,397)	(5,466)	(2,557)	171	—	45 ⁽⁴⁾
Settlement and curtailment gain (loss)	—	—	(1,517)	—	—	(242)
Prior service cost (credit)	—	(3,373) ⁽⁵⁾	(12,706) ⁽³⁾	—	—	—
Acquisitions/divestitures	156 ⁽⁶⁾	—	—	(1,144) ⁽⁶⁾	—	—
Total recognized in other comprehensive income (loss)	22,543	(13,571)	40,540	789	(1,600)	964
Net periodic benefit cost (income)	<u>22,510</u>	<u>24,096</u>	<u>22,429</u>	<u>621</u>	<u>956</u>	<u>787</u>
Total recognized in net periodic benefit cost and other comprehensive income (loss)	<u>\$ 45,053</u>	<u>\$ 10,525</u>	<u>\$ 62,969</u>	<u>\$ 1,410</u>	<u>\$ (644)</u>	<u>\$ 1,751</u>

- (1) This amount represents settlement losses from one of the Company's defined benefit plans in Switzerland due to the termination of certain employees during the year, which resulted in a loss recognized in the year ended December 31, 2014 due to a charge against the unamortized net loss recorded in other comprehensive income.
- (2) This amount represents a curtailment gain from the Company's other postretirement benefit plan in The Netherlands, due to the cessation of retiree medical benefit accruals effective January 1, 2015.
- (3) This adjustment was made to the Company's pension plan in The Netherlands to reflect the introduction of a salary cap and lower accrual rate on pension benefits as a result of tax law changes effective January 1, 2015. The impact of the change resulted in an adjustment to prior service credit in other comprehensive income as of December 31, 2014, which will be amortized to net periodic benefit cost over the estimated remaining service period of the employees.
- (4) These amounts include the prior period net periodic cost and other comprehensive income components of the postretirement benefits in Brazil recognized during 2014, as discussed above.
- (5) This amount is primarily related to a reduction in annuity conversion rates announced by the insurance provider for the pension plans in Switzerland. The impact of the change resulted in an adjustment to prior service credit in other comprehensive income as of December 31, 2015, which will be amortized to net periodic benefit cost over the estimated remaining service period of the employees.
- (6) These amounts relate to the Company's divestiture of its Brazilian business during 2016. As of December 31, 2016, the Company had no residual AOCI balances recorded related to the Brazilian pension and postretirement medical plans.

The changes in the pension benefit obligations and the fair value of plan assets and the funded status of all significant plans for the years ended December 31, 2016 and 2015 were as follows:

	Defined Benefit Pension Plans		Other Postretirement Benefit Plans	
	December 31,		December 31,	
	2016	2015	2016	2015
Change in projected benefit obligations				
Benefit obligation at beginning of period	\$ 265,470	\$ 280,091	\$ 7,567	\$ 9,077
Service cost	16,511	16,595	243	338
Interest cost	5,500	5,219	447	516
Plan participants' contributions	2,320	2,578	—	—
Actuarial changes in assumptions and experience	27,647	(7,485)	1,864	(1,498)
Benefits paid from fund	89	(4,087)	—	—
Benefit payments by employer	(1,888)	(1,652)	(46)	(3)
Acquisitions/divestitures	(850)	—	(3,963)	—
Plan amendments	—	(3,373)	—	—
Curtailments	—	—	—	—
Settlements	—	—	—	—
Other	—	—	—	—
Currency impact	(11,472)	(22,416)	539	(863)
Benefit obligation at end of period	\$ 303,327	\$ 265,470	\$ 6,651	\$ 7,567
Change in plan assets				
Fair value of plan assets at beginning of period	\$ 100,505	\$ 92,570	\$ —	\$ —
Actual return on plan assets ⁽⁷⁾	4,761	430	—	—
Settlements	—	—	—	—
Employer contributions	12,761	16,828	46	3
Plan participants' contributions	2,320	2,578	—	—
Benefits paid	(1,799)	(5,739)	(46)	(3)
Other	—	—	—	—
Currency impact	(4,348)	(6,162)	—	—
Fair value of plan assets at end of period	114,200	100,505	—	—
Funded status at end of period	\$ (189,127)	\$ (164,965)	\$ (6,651)	\$ (7,567)

(7) The fair values of certain plan assets as of December 31, 2016 and 2015 were determined using cash surrender values provided under the insurance contracts which took effect on January 1, 2013. The resulting change in the fair value of plan assets due to the use of cash surrender values was included as "return on plan assets".

The net amounts recognized in the consolidated balance sheets as of December 31, 2016 and 2015 were as follows:

	Defined Benefit Pension Plans		Other Postretirement Benefit Plans	
	December 31,		December 31,	
	2016	2015	2016	2015
Net amounts recognized in the balance sheets as of December 31				
Current liabilities	\$ (1,571)	\$ (1,180)	\$ (60)	\$ (48)
Noncurrent liabilities	(187,556)	(163,785)	(6,591)	(7,519)
Net amounts recognized in the balance sheet	<u>\$ (189,127)</u>	<u>\$ (164,965)</u>	<u>\$ (6,651)</u>	<u>\$ (7,567)</u>
Accumulated benefit obligation at the end of the period	<u>\$ 245,342</u>	<u>\$ 205,641</u>	<u>\$ 6,651</u>	<u>\$ 7,567</u>
Pretax amounts recognized in AOCI as of December 31:				
Net prior service cost (credit)	\$ (21,252)	\$ (23,192)	\$ 424	\$ 526
Net loss (gain)	105,965	85,362	(873)	(1,764)
Total at end of period	<u>\$ 84,713</u>	<u>\$ 62,170</u>	<u>\$ (449)</u>	<u>\$ (1,238)</u>

Approximately \$5.4 million and \$1.9 million of net loss and net prior service credit, respectively, for the defined benefit pension plans and less than \$0.1 million and \$0.1 million of net gain and net prior service cost, respectively, for other postretirement benefit plans will be amortized from accumulated other comprehensive income to net periodic benefit cost in 2017.

The estimated future benefit payments, reflecting expected future service, as appropriate, are presented in the following table:

	2017	2018	2019	2020	2021	2022	Total
						through 2026	
Defined benefit pension plans	\$ 4,347	\$ 4,395	\$ 4,478	\$ 5,412	\$ 4,835	\$ 38,924	\$ 62,391
Other postretirement benefit plans	60	93	137	188	247	2,350	3,075
Total	<u>\$ 4,407</u>	<u>\$ 4,488</u>	<u>\$ 4,615</u>	<u>\$ 5,600</u>	<u>\$ 5,082</u>	<u>\$ 41,274</u>	<u>\$ 65,466</u>

The Company estimates it will make cash contributions, including benefit payments for unfunded plans, of \$12.7 million in 2017 to the defined benefit pension plans.

The following information relates to pension plans with projected and accumulated benefit obligations in excess of the fair value of plan assets as of December 31, 2016 and 2015:

Projected Benefit Obligation Exceeds the Fair Value of Plan Assets	December 31,	
	2016	2015
Projected benefit obligations	\$ 303,327	\$ 265,470
Fair value of plan assets	\$ 114,200	\$ 100,505
Accumulated Benefit Obligation Exceeds the Fair Value of Plan Assets	December 31,	
	2016	2015
Accumulated benefit obligations	\$ 201,940	\$ 161,520
Fair value of plan assets	\$ 45,378	\$ 41,365

Plan Assets

As of December 31, 2016 and 2015, respectively, plan assets totaled \$114.2 million and \$100.5 million, consisting of investments in insurance contracts. Investments in the pension plan insurance were valued utilizing unobservable inputs, which are contractually determined based on cash surrender values, returns, fees, and the present value of the future cash flows of the contracts.

Insurance contracts are classified as Level 3 investments. Changes in the fair value of these level 3 investments during the years ended December 31, 2016 and 2015 are included in the “Change in plan assets” table above.

Concentration of Risk

The Company mitigates the credit risk of investments by establishing guidelines with investment managers that limit investment in any single issue or issuer to an amount that is not material to the portfolio being managed. These guidelines are monitored for compliance both by the Company and external managers. Credit risk related to derivative activity is mitigated by utilizing multiple counterparties and through collateral support agreements.

Supplemental Employee Retirement Plan

The Company established a non-qualified supplemental employee retirement plan in 2010. The net benefit costs recognized for the years ended December 31, 2016, 2015, and 2014 were \$1.1 million, \$1.0 million, and \$1.3 million, respectively. Benefit obligations under this plan were \$15.1 million and \$13.7 million as of December 31, 2016 and 2015, respectively. As of December 31, 2016 and 2015, the amounts of net loss included in AOCI were \$1.8 million and \$1.6 million, respectively, with \$1.0 million and \$0.8 million amortized from AOCI into net periodic benefit costs during the years ended December 31, 2016 and 2015, respectively. Approximately \$0.9 million is expected to be amortized from AOCI into net periodic benefit cost in 2017.

Based on the Company’s current estimates, the estimated future benefit payments under this plan, reflecting expected future service, as appropriate, are presented in the following table:

	2017	2018	2019	2020	2021	Thereafter	Total
Supplemental employee retirement plan	\$ —	\$ 15,518	\$ —	\$ —	\$ —	\$ —	\$ 15,518

Defined Contribution Plans

The Company also offers defined contribution plans to eligible employees in the U.S. and in other countries, including China, Belgium, Hong Kong, Korea, The Netherlands, Taiwan and the United Kingdom. The defined contribution plans are comprised of a non-discretionary elective matching contribution component as well as a discretionary non-elective contribution component. Employees participate in the non-discretionary component by contributing a portion of their eligible compensation to the plan, which is partially matched by the Company. Non-elective contributions are made at the discretion of the Company and are based on a combination of eligible employee compensation and performance award targets. For the years ended December 31, 2016, 2015, and 2014, respectively, the Company contributed \$8.6 million, \$7.8 million, and \$6.8 million to the defined contribution plans.

NOTE 17—STOCK-BASED COMPENSATION

Summary of Stock-based Compensation Expense

Stock-based compensation expense, which is recorded within “Selling, general and administrative expenses” in the consolidated statements of operations, was as follows for the years ended December 31, 2016, 2015, and 2014, respectively:

	Year Ended December 31,		
	2016	2015	2014
<i>2014 Omnibus Plan Awards</i>			
RSUs	\$ 5,322	\$ 2,114	\$ 100
Option Awards	5,590	3,039	—
Liability Awards	329	43	—
<i>Restricted Stock Awards Issued by the former Parent</i>			
Time-based Restricted Stock Awards	1,646	2,531	7,037
Modified Time-based Restricted Stock Awards	4,503	2,406	2,469
Management Retention Awards	—	(1,089)	896
Liability awards issued by the former Parent	60	48	50
Total stock-based compensation expense	<u>\$ 17,450</u>	<u>\$ 9,092</u>	<u>\$ 10,552</u>

2014 Omnibus Plan

In connection with the IPO, the Company’s board of directors approved the 2014 Omnibus Plan, adopted on May 28, 2014, under which 4.5 million ordinary shares is the maximum number that may be delivered upon satisfaction of awards granted. Following the IPO, all equity-based awards granted by the Company will be granted under the 2014 Omnibus Plan, which provides for awards of stock options, share appreciation rights, restricted stock, unrestricted stock, stock units, performance awards, cash awards and other awards convertible into or otherwise based on ordinary shares of the Company. Since the IPO, the board of directors of the Company has approved equity award grants for certain directors, executives, and employees, including restricted share units (or RSUs) and options to purchase shares (or options awards).

Restricted Share Units (RSUs)

The RSUs granted to executives and employees vest in full on the third anniversary of the date of grant, generally subject to the employee remaining continuously employed by the Company through the vesting date. RSUs granted to directors of the Company vest in full on the first anniversary of the date of grant. Upon a termination of employment due to the employee’s death or retirement or a termination of employment by the Company without cause in connection with a restructuring or redundancy or due to the employee’s disability prior to the vesting date, the RSUs will vest in full or in part, depending on the type of termination. In the event employment is terminated for cause, all unvested RSUs will be forfeited. When RSUs vest, shares are issued from the existing pool of treasury shares.

Compensation cost for RSUs is measured at grant date based on the fair value of the award and is recognized ratably as expense over the applicable vesting term. Prior to November 2016, dividend and dividend equivalents did not accumulate on unvested RSUs. In November 2016, the board of directors approved an amendment to all outstanding RSUs, entitling each award holder to an amount equal to any cash dividend or repayment of equity paid by the Company upon one ordinary share for each RSU held by the award holder (“dividend equivalents”). The dividend equivalents earned on the RSUs only include dividends or repayments of equity paid after this amendment and the award holders have no right to receive the dividend equivalents unless and until the associated RSUs vest. The dividend equivalents will be payable in cash and will not accrue interest. The impact of this amendment is immaterial to the consolidated financial statements.

The fair value of RSUs is equal to the fair market value of the Company’s ordinary shares based on the closing price on the date of grant. Total compensation expense for RSUs was \$5.3 million, \$2.1 million, and \$0.1 million for the years ended December 31, 2016, 2015, and 2014, respectively. As of December 31, 2016, there was \$9.4 million of total

unrecognized compensation cost related to RSUs, which is expected to be recognized over a weighted-average period of 1.8 years.

The following table summarizes the award activity for RSUs during the year ended December 31, 2016:

Restricted Share Units	Shares	Weighted-Average
		Grant Date
		Fair Value per Share
Unvested, December 31, 2015	412,410	\$ 18.62
Granted	342,136	28.39
Vested	(17,570)	27.19
Forfeited	(14,193)	26.73
Unvested, December 31, 2016	<u>722,783</u>	\$ 22.88

The following table summarizes the weighted-average grant date fair value per share of RSUs granted during the years ended December 31, 2016, 2015, and 2014 as well as the total fair value of awards vested during those periods:

	Restricted Share Units	
	Weighted-Average Grant Date	Total Fair Value
	Fair Value per Share	of Awards Vested
	of Grants during Period	during Period
Year Ended December 31, 2016	\$ 28.39	\$ 478
Year Ended December 31, 2015	\$ 18.67	\$ 180
Year Ended December 31, 2014	\$ 19.00	N/A ⁽¹⁾

(1) No RSUs vested during the year ended December 31, 2014.

Option Awards

The option awards, which contain an exercise term of nine years from the date of grant, vest in three equal annual installments beginning on the first anniversary of the date of grant, generally subject to the employee remaining continuously employed on the applicable vesting date. Upon a termination of employment due to the employee's death or retirement or a termination of employment by the Company without cause in connection with a restructuring or redundancy or due to the employee's disability prior to a vesting date, the option awards will vest in full or will continue to vest on the original vesting schedule, depending on the type of termination. In the event employment is terminated for cause, all vested and unvested option awards will be forfeited. When option awards are exercised, shares are issued from the existing pool of treasury shares.

Compensation cost for option awards is measured at the grant date based on the fair value of the award and is recognized as expense over the appropriate service period utilizing graded vesting. Total compensation expense for option awards was \$5.6 million, \$3.0 million, and zero for the years ended December 31, 2016, 2015, and 2014, respectively. As of December 31, 2016, there was \$1.4 million of total unrecognized compensation cost related to option awards, which is expected to be recognized over a weighted-average period of 1.4 years.

The following table summarizes the activity for option awards during the years ended December 31, 2016 and 2015 (noting no granted awards prior to 2015):

Option Awards	Shares	Weighted-Average		
		Exercise Price per share	Contractual Term (years)	Aggregate Intrinsic Value
Outstanding as of December 31, 2014	—	\$ —		
Granted	607,382	18.20		
Exercised	—	—		
Forfeited	(48,641)	18.14		
Outstanding as of December 31, 2015	558,741	\$ 18.20		
Granted	569,281	27.96		
Exercised	(11,562)	18.46		
Forfeited	(6,160)	22.90		
Outstanding as of December 31, 2016	1,110,300	\$ 23.18	7.7	\$ 40,109
Exercisable as of December 31, 2016	174,667	\$ 18.19	7.2	\$ 7,181
Expected to vest as of December 31, 2016	935,633	\$ 24.11	7.8	\$ 32,928

The range of exercise prices for the above option awards outstanding at December 31, 2016 is from \$18.14 to \$47.45. During the year ended December 31, 2016, the Company received cash of \$0.2 million from the exercise of option awards and the total intrinsic value of option awards exercised was \$0.4 million (noting no option awards were exercised in 2015 or 2014).

The fair value for option awards is computed using the Black-Scholes pricing model, whose inputs and assumptions are determined as of the date of grant. Determining the fair value of the option awards requires considerable judgment, including estimating the expected term of said awards and the expected volatility of the price of the Company's ordinary shares.

Since the Company's equity interests were privately held prior to the IPO in June 2014, there is limited publicly traded history of the Company's ordinary shares. Until such time that the Company can determine expected volatility based solely on the publicly traded history of its ordinary shares, expected volatility used in the Black-Scholes model for option awards granted is based on a combination of the Company's historical volatility and similar companies' stock that are publicly traded. The expected term of option awards represents the period of time that option awards granted are expected to be outstanding. For all grants of option awards presented herein, the simplified method was used to calculate the expected term, given the Company's limited historical exercise data. The risk-free interest rate for the periods within the expected term of option awards is based on the U.S. Treasury yield curve in effect at the time of grant. The dividend yield is estimated based on historical and expected dividend activity.

The following are the weighted-average assumptions used within the Black-Scholes pricing model for grants during the years ended December 31, 2016 and 2015:

	Year Ended December 31,	
	2016	2015
Expected term (in years)	5.50	5.50
Expected volatility	40.00 %	45.00 %
Risk-free interest rate	1.42 %	1.65 %
Dividend yield	0.60 %	— %

Utilizing the above assumptions, the weighted average grant date fair value per option award granted in the years ended December 31, 2016 and 2015 was \$10.10 and \$7.82, respectively (noting no granted awards prior to 2015).

Restricted Stock Awards issued by the former Parent

On June 17, 2010, the former Parent authorized the issuance of up to 750,000 of its shares in restricted stock awards to certain key members of management. Any related compensation associated with these awards has since been allocated to the Company from the former Parent. Since the adoption of the 2014 Omnibus Plan in May 2014, discussed further above, restricted stock awards are no longer issued by the former Parent on behalf of the Company.

During the year ended December 31, 2016, the former Parent completed the sale of its ordinary shares of the Company through secondary offerings, and as a result, no longer holds an ownership interest in the Company. Refer to Note 12 for further information. Given that the former Parent sold its interest in the substantive assets of the Company, under the terms of the related securityholder agreements, vesting of all outstanding restricted stock awards was fully accelerated into the year ended December 31, 2016. There will be no additional expense related to these awards in future periods.

Time-based Restricted Stock Awards

Prior to the full acceleration of vesting in 2016 noted above, the time-based restricted stock awards issued by the former Parent contained a service-based condition that required continued employment with the Company. Generally, these awards were to vest over three to five years of service, with a portion (20% to 40%) cliff vesting after the first one or two years, and the remaining portion vesting ratably over the subsequent service period. Compensation cost for the time-based restricted stock awards was measured at the grant date based on the fair value of the award and was recognized as expense over the appropriate service period utilizing graded vesting.

Total compensation expense for time-based restricted stock awards was \$1.6 million, \$2.5 million, and \$7.0 million for the years ended December 31, 2016, 2015, and 2014, respectively. As of December 31, 2016, there was no unrecognized compensation cost related to these awards.

The following table summarizes the activity in the former Parent's time-based restricted stock awards during the year ended December 31, 2016:

Time-based restricted stock	Shares	Weighted-Average Grant Date Fair Value per Share
Unvested, December 31, 2015	30,171	\$ 156.65
Granted	—	—
Vested	(30,171)	156.65
Forfeited	—	—
Unvested, December 31, 2016	—	\$ —

The following table summarizes the weighted-average grant date fair value per share of time-based restricted stock awards granted during the years ended December 31, 2016, 2015, and 2014, as well as the total fair value of awards vested during those periods:

	Time-Based Restricted Stock	
	Weighted-Average Grant Date Fair Value per Share of Grants during Period	Total Fair Value of Awards Vested during Period
Year Ended December 31, 2016	N/A ⁽¹⁾	\$ 4,726
Year Ended December 31, 2015	N/A ⁽¹⁾	\$ 5,109
Year Ended December 31, 2014	N/A ⁽¹⁾	\$ 10,783

- (1) There were no grants of time-based restricted stock awards by the former Parent during the years ended December 31, 2016, 2015, and 2014 as a result of the adoption of the 2014 Omnibus Plan.

Modified Time-based Restricted Stock Awards

Prior to June 2014, the former Parent had issued performance-based restricted stock awards that contained provisions wherein vesting was subject to the full satisfaction of both time and performance vesting criterion. On

June 10, 2014, prior to the completion of the Company's IPO, the former Parent entered into agreements to modify the outstanding performance-based restricted stock awards to remove the performance-based vesting condition associated with such awards related to the achievement of certain investment returns (while maintaining the requirement for a change in control or IPO). This modification also changed the time-based vesting requirement associated with such awards to provide that any shares which would have satisfied the time-based vesting condition previously applicable on or prior to June 30, 2017 to instead vest on June 30, 2017, subject to the holder remaining continuously employed by the Company through such date. Any such awards that were subject to a time-based vesting condition beyond June 30, 2017 remained subject to those previous conditions. Henceforth, these awards have been described as modified time-based restricted stock awards.

With the completion of the Company's IPO in June 2014, the remaining performance condition associated with these modified time-based restricted stock awards was achieved. As a result, the Company began recognizing compensation expense on these awards, which was measured at the modification date based on their fair value. Prior to the full acceleration of vesting in 2016 noted above, compensation expense on these awards was being recognized over the appropriate service period utilizing graded vesting.

Total compensation expense for modified time-based restricted stock awards was \$4.5 million, \$2.4 million, and \$2.5 million for the years ended December 31, 2016, 2015, and 2014, respectively. As of December 31, 2016, there was no unrecognized compensation cost related to these awards.

The following table summarizes the activity in the former Parent's modified time-based restricted stock awards during the year ended December 31, 2016:

Modified time-based restricted stock	Shares	Weighted-Average Grant Date Fair Value per Share
Unvested, December 31, 2015	73,586	\$ 115.30
Granted	—	—
Vested	(73,586)	115.30
Forfeited	—	—
Unvested, December 31, 2016	—	\$

The following table summarizes the weighted-average grant date fair value per share of modified time-based restricted stock awards granted during the years ended December 31, 2016, 2015, and 2014, as well as the total fair value of awards vested during those periods:

	Modified Time-Based Restricted Stock	
	Weighted-Average Grant Date Fair Value per Share of Grants during Period	Total Fair Value of Awards Vested during Period
Year Ended December 31, 2016	N/A ⁽¹⁾	\$ 8,484
Year Ended December 31, 2015	N/A ⁽¹⁾	\$ 298
Year Ended December 31, 2014	N/A ⁽¹⁾	\$ —

(1) There were no grants of modified time-based restricted stock awards by the former Parent during the years ended December 31, 2016, 2015, and 2014 as a result of the adoption of the 2014 Omnibus Plan.

Fair Value Assumptions for Restricted Stock Award Grants

There were no grants by the former Parent of time-based, performance-based, or modified time-based restricted stock awards during the years ended December 31, 2016, 2015, and 2014. However, as a result of the above-described June 2014 modification, the fair value of all modified time-based restricted stock awards was calculated as of the modification date. The fair values of time-based, modified time-based, and performance-based restricted stock awards (in prior years) were estimated on the grant date using a combination of a call option and digital option model that uses assumptions about expected volatility, risk-free interest rates, the expected term, and dividend yield. The expected term for time-based and modified time-based awards considered both the service conditions of vesting of the awards, as well as management's probability-weighted estimate of the expected liquidity horizon. The expected volatilities were based on a combination of implied and historical volatilities of a peer group of companies, as the Company was a non-publicly

traded company prior to the IPO. The risk-free rate was based on the U.S. Treasury yield curve in effect at the time of grant for periods corresponding with the expected life of the awards. The expected dividend yield was based on an assumption that no dividends were expected to be declared in the near future.

The following are the weighted average assumptions used for the valuation of the modified time-based awards in June 2014 (noting no grants or modifications during the years ended December 31, 2016 and 2015):

	Year Ended December 31, 2014
Dividend yield	— %
Expected volatility	65.00 %
Risk-free interest rate	1.54 %
Expected term (in years) for modified time-based shares	4.50

Management Retention Awards

In 2012, the former Parent agreed to retention awards with certain officers, which generally vested over one to four years and were payable upon vesting. Total compensation expense for these retention awards was \$0.9 million for the year ended December 31, 2014, while for the year ended December 31, 2015 a net benefit of \$1.1 million was recorded due to certain employment terminations, resulting in forfeited retention awards. As of December 31, 2015, there was no unrecognized compensation cost related to these retention awards.

Adoption of Accounting Standards Update

As discussed in Note 2, effective April 1, 2016, the Company adopted new accounting guidance issued by the FASB that simplifies several aspects of accounting for share-based payments. Among other things, as part of this adoption, the Company made an accounting policy election to recognize forfeitures as incurred, rather than estimating the forfeitures in advance. The impact of this change was applied utilizing a modified retrospective approach, with an adjustment of \$0.9 million recorded during the year ended December 31, 2016 to decrease opening retained earnings and increase opening additional paid-in-capital. All other impacts of this adoption were not material to the Company's financial position and results of operations.

NOTE 18—RELATED PARTY AND DOW TRANSACTIONS

The Company has entered into certain agreements with Dow, including the Second Amended and Restated Master Outsourcing Services Agreement, which was modified on June 1, 2013 (or SAR MOSA), site and operating services agreements, and supply agreements.

The SAR MOSA provides for ongoing worldwide services from Dow in areas such as information technology, enterprise resource planning, finance, environmental health and safety, training, customer service, marketing and sales support, supply chain and certain sourcing and transactional procurement services. The term of this agreement runs through December 31, 2020 and which automatically renews for two year periods unless either party provides six months' notice of non-renewal to the other party. The services provided pursuant to the SAR MOSA generally are priced per function, and the Company has the ability to terminate the services or any portion thereof, for convenience any time after June 1, 2015, subject to payment of termination charges. Services which are "highly integrated" follow a different process for evaluation and termination. In addition, either party may terminate for cause, which includes a bankruptcy, liquidation or similar proceeding by the other party, for material breach which is not cured, or by Dow in the event of our failure to pay for the services thereunder. In the event of a change of control, as defined in the agreement, Dow has the right to terminate the SAR MOSA. As of December 31, 2016, the estimated minimum contractual obligations under the SAR MOSA are approximately \$22.6 million.

In addition, the Company entered into various site service agreements with Dow, which were amended as of June 1, 2013 (the Second Amended and Restated Site Services Agreements, or SAR SSAs). Under the SAR SSAs, general site services are provided at specific facilities co-located with Dow, rather than organization-wide services, and include utilities, site administration, environmental health and safety, site maintenance and supply chain. Conversely, the Company entered into similar agreements with Dow, where at Company owned sites, it provides such services to Dow. These agreements generally have 25-year terms from the date amended, with options to renew. These agreements may be

terminated at any time by agreement of the parties, or, by either party, for cause, including a bankruptcy, liquidation or similar proceeding by the other party, or under certain circumstances for a material breach which is not cured. In addition, the Company may terminate for convenience any services that Dow has agreed to provide that are identified in any site services agreement as “terminable” with 12 months prior notice to Dow, dependent upon whether the service is highly integrated into Dow operations. Highly integrated services are agreed to be nonterminable. With respect to “nonterminable” services that Dow has agreed to provide to the Company, such as electricity and steam, the Company generally cannot terminate such services prior to the termination date unless the Company experiences a production unit shut down for which Dow is provided with 15-months prior notice, or upon payment of a shutdown fee. Upon expiration or termination, the Company would be obligated to pay a monthly fee to Dow, which obligation extends for a period of 45 (in the case of expiration) to 60 months (in the case of termination) following the respective event of each site services agreement. The agreements under which Dow receives services from the Company may be terminated under the same circumstances and conditions.

The following tables detail expenses incurred during the years ended December 31, 2016, 2015, and 2014 under the SAR MOSA and SAR SSAs by financial statement line item:

(in millions) Financial Statement Line Item	Year Ended December 31, 2016		
	SAR MOSA	SAR SSAs	Total
Cost of sales	\$ 41.7	\$ 169.9	\$ 211.6
Selling, general, and administrative expenses	5.6	4.9	10.5
Total	\$ 47.3	\$ 174.8	\$ 222.1

(in millions) Financial Statement Line Item	Year Ended December 31, 2015		
	SAR MOSA	SAR SSAs	Total
Cost of sales	\$ 42.9	\$ 188.6	\$ 231.5
Selling, general, and administrative expenses	5.1	5.5	10.6
Total	\$ 48.0	\$ 194.1	\$ 242.1

(in millions) Financial Statement Line Item	Year Ended December 31, 2014		
	SAR MOSA	SAR SSAs	Total
Cost of sales	\$ 43.6	\$ 227.2	\$ 270.8
Selling, general, and administrative expenses	5.2	6.5	11.7
Total	\$ 48.8	\$ 233.7	\$ 282.5

In connection with the Acquisition, certain of the Company’s affiliates entered into the Latex JV Option Agreement with Dow, pursuant to which Dow was granted an irrevocable option to purchase 50% of the issued and outstanding interests in a joint venture to be formed by Dow and the Company’s affiliates with respect to the SB Latex business in Asia, Latin America, the Middle East, Africa, Eastern Europe, Russia and India. On May 30, 2014, the Company’s affiliates entered into an agreement with Dow to terminate the Latex JV Option Agreement, Dow’s rights to the option, and all other obligations thereunder, in exchange for a termination payment of \$32.5 million. This termination payment was made on May 30, 2014, and the termination of the Latex JV Option Agreement became effective as of such date. This termination payment was recorded as an expense within “Other expense, net” in the consolidated statement of operations for the year ended December 31, 2014.

In addition, the Company has transactions in the normal course of business with Dow and its affiliates. For the years ended December 31, 2016, 2015, and 2014, sales to Dow and its affiliated companies were approximately \$203.5 million, \$227.0 million, and \$343.8 million, respectively. For the years ended December 31, 2016, 2015, and 2014, purchases from Dow and its affiliated companies were approximately \$1,090.4 million, \$1,244.2 million, and \$2,196.0 million, respectively.

As of December 31, 2016 and 2015, receivables from Dow and its affiliated companies were approximately \$20.7 million and \$21.5 million, respectively, and are included in “Accounts receivable, net of allowance” in the consolidated balance sheets. As of December 31, 2016 and 2015, payables to Dow and its affiliated companies were approximately \$121.6 million and \$96.7 million, respectively, and are included in “Accounts payable” in the consolidated balance sheets.

In connection with the Acquisition, the Company entered into the Advisory Agreement wherein Bain Capital provided management and consulting services and financial and other advisory services to the Company. The Advisory Agreement terminated upon consummation of the Company's IPO in June 2014 and pursuant to its terms, the Company paid \$23.3 million of termination fees representing acceleration of the advisory fees for the remainder of the original term. The termination fee was paid in June 2014 using the proceeds from the IPO, and was recorded as an expense within "Selling, general and administrative expenses" in the consolidated statement of operations for the year ended December 31, 2014. However, Bain Capital continued to provide an immaterial level of ad hoc advisory services for the Company, which ceased as a result of the completed sale of the former Parent's ownership interest in the Company discussed in Note 12. In conjunction with the foregoing, we incurred Bain Capital fees (including out-of-pocket expenses) of zero, \$0.1 million, and \$2.4 million for the years ended December 31, 2016, 2015, and 2014, respectively (excluding the termination fees noted above).

Bain Capital also provided advice pursuant to a 10-year Transaction Services Agreement with fees payable equaling 1% of the transaction value of each financing, acquisition or similar transaction. In connection with the IPO, Bain Capital received \$2.2 million of transaction fees, which were recorded within "Additional paid-in-capital" in the consolidated balance sheets (refer to Note 12). As a result of the completed sale of the former Parent's ownership interest in the Company discussed in Note 12, these expenses are not expected in future periods.

During the year ended December 31, 2016, the former Parent sold 37,269,567 ordinary shares pursuant to the Company's shelf registration statement filed with the SEC. In connection with these offerings, the Company incurred advisory, accounting, legal and printing expenses on behalf of the former Parent of \$2.5 million during the year ended December 31, 2016. These expenses were included within "Selling, general and administrative expenses" in the consolidated statement of operations. Refer to Note 12 for further information.

Total fees incurred from Bain Capital for these management and transaction advisory services were zero, \$0.1 million, and \$27.9 million, respectively, for the years ended December 31, 2016, 2015, and 2014.

NOTE 19—SEGMENTS

Through September 30, 2016, the Company operated under two divisions: Performance Materials and Basic Plastics & Feedstocks. The Performance Materials division included the following reporting segments: Latex, Synthetic Rubber, and Performance Plastics. The Basic Plastics & Feedstocks division represented a separate segment for financial reporting purposes.

Effective October 1, 2016, the Company realigned its reporting segments to reflect the new model under which the business will be managed and results will be reviewed by the chief executive officer, who is the Company's chief operating decision maker. This change in segments is being made to provide increased clarity and understanding around the drivers of profitability and cash flow of the Company. The previous Basic Plastics & Feedstocks segment was split into three new segments: Basic Plastics, which includes polystyrene, copolymers, and polycarbonate; Feedstocks, which represents the Company's styrene monomer business; and Americas Styrenics, which reflects the equity earnings from its 50%-owned styrenics joint venture. In addition, certain highly differentiated ABS supplied into Performance Plastics markets, which was previously included in the results of Basic Plastics & Feedstocks, is now included in Performance Plastics. Finally, the Latex segment was renamed to Latex Binders. In conjunction with the segment realignment, the Company also changed its primary measure of segment operating performance from EBITDA to Adjusted EBITDA. Refer to the discussion below for further information about Adjusted EBITDA.

The information in the tables below has been retroactively adjusted to reflect the changes in reporting segments and segment operating performance.

The Latex Binders segment produces SB latex and other latex polymers and binders, primarily for coated paper and packaging board, carpet and artificial turf backings, as well as a number of performance latex binders applications, such as adhesive, building and construction and the technical textile paper market. The Synthetic Rubber segment produces synthetic rubber products used predominantly in high-performance tires, impact modifiers and technical rubber products, such as conveyer belts, hoses, seals and gaskets. The Performance Plastics segment produces highly engineered compounds and blends and some specialized ABS grades for automotive end markets, as well as consumer electronics, medical, electrical and lighting, collectively consumer essential markets, or CEM. The Basic Plastics segment produces styrenic polymers, including polystyrene, basic ABS, and SAN products, as well as PC, all of which are used as inputs in

a variety of end use markets. The Basic Plastics segment also includes the results of our 50%-owned joint venture, Sumika Styron Polycarbonate. The Feedstocks segment includes the Company's production and procurement of styrene monomer outside of North America, which is used as a key raw material in many of the Company's products, including polystyrene, SB latex, ABS resins, SSB, etc. Lastly, the Americas Styrenics segment consists solely of the operations of our 50%-owned joint venture, Americas Styrenics, a producer of both styrene monomer and polystyrene in North America.

Asset, capital expenditure, and intersegment sales information is not reviewed or included with the Company's reporting to the chief operating decision maker. Therefore, the Company has not disclosed this information for each reportable segment.

For the year ended	Performance Materials			Basic Plastics & Feedstocks			Corporate Unallocated	Total
	Latex Binders	Synthetic Rubber	Performance Plastics	Basic Plastics	Feedstocks	Americas Styrenics		
December 31, 2016								
Sales to external customers	\$ 925,337	\$ 450,691	\$ 693,433	\$ 1,352,690	\$ 294,489	\$ —	\$ —	\$ 3,716,640
Equity in earnings (losses) of unconsolidated affiliates	—	—	—	8,932	—	135,801	—	144,733
Adjusted EBITDA ⁽¹⁾	94,310	110,920	136,232	148,156	80,247	135,801		
Investment in unconsolidated affiliates	—	—	—	41,753	—	149,665	—	191,418
Depreciation and amortization	23,840	34,727	6,138	15,701	10,593	—	5,460	96,459
December 31, 2015								
Sales to external customers	\$ 966,209	\$ 474,617	\$ 742,831	\$ 1,478,069	\$ 310,176	\$ —	\$ —	\$ 3,971,902
Equity in earnings (losses) of unconsolidated affiliates	—	—	—	4,848	—	135,330	—	140,178
Adjusted EBITDA ⁽¹⁾	79,012	92,999	107,596	115,530	51,341	135,330		
Investment in unconsolidated affiliates	—	—	—	38,972	—	143,864	—	182,836
Depreciation and amortization	32,360	30,358	5,611	15,396	9,958	—	3,069	96,752
December 31, 2014								
Sales to external customers	\$ 1,261,137	\$ 633,983	\$ 821,053	\$ 1,978,090	\$ 433,698	\$ —	\$ —	\$ 5,127,961
Equity in earnings (losses) of unconsolidated affiliates	—	—	—	(2,520)	—	50,269	—	47,749
Adjusted EBITDA ⁽¹⁾	97,229	136,984	85,396	(15,129)	(20,547)	50,269		
Investment in unconsolidated affiliates	—	—	—	34,125	—	133,533	—	167,658
Depreciation and amortization	26,954	32,900	5,602	20,244	13,961	—	4,045	103,706

(1) The Company's primary measure of segment operating performance is Adjusted EBITDA, which is defined as income from continuing operations before interest expense, net; provision for income taxes; depreciation and amortization expense; loss on extinguishment of long-term debt; asset impairment charges; gains or losses on the dispositions of businesses and assets; restructuring and other items. Adjusted EBITDA is a key metric that is used by management to evaluate business performance in comparison to budgets, forecasts, and prior year financial results, providing a measure that management believes reflects core operating performance by removing the impact of transactions and events that would not be considered a part of core operations. Adjusted EBITDA is useful for analytical purposes; however, it should not be considered an alternative to the Company's reported GAAP results, as there are limitations in using such financial measures. Other companies in the industry may define Adjusted EBITDA differently than the Company, and as a result, it may be difficult to use Adjusted EBITDA, or similarly-named financial measures, that other companies may use to compare the performance of those companies to the Company's segment performance.

The reconciliation of income (loss) before income taxes to Segment Adjusted EBITDA is as follows:

	Year Ended December 31,		
	2016	2015	2014
Income (loss) before income taxes	\$ 405,309	\$ 203,856	\$ (47,613)
Interest expense, net	74,968	93,197	124,923
Depreciation and amortization	96,459	96,752	103,706
Corporate Unallocated ⁽²⁾	94,794	89,820	72,585
Adjusted EBITDA Addbacks ⁽³⁾	34,136	98,183	80,601
Segment Adjusted EBITDA	<u>\$ 705,666</u>	<u>\$ 581,808</u>	<u>\$ 334,202</u>

(2) Corporate unallocated includes corporate overhead costs and certain other income and expenses.

(3) Adjusted EBITDA addbacks for the years ended December 31, 2016, 2015, and 2014 are as follows:

(in millions)	Year Ended December 31,		
	2016	2015	2014
Loss on extinguishment of long-term debt (Note 10)	\$ —	\$ 95.2	\$ 7.4
Net loss (gain) on disposition of businesses and assets (Note 3)	15.1	—	(0.6)
Restructuring and other charges (Note 20)	23.5	0.8	10.0
Fees paid pursuant to advisory agreement (Note 18)	—	—	25.4
Other items ^(a)	(4.4)	2.2	38.4
Total Adjusted EBITDA Addbacks	<u>\$ 34.2</u>	<u>\$ 98.2</u>	<u>\$ 80.6</u>

(a) For the year ended December 31, 2016, other items include other income of \$6.9 million from the effective settlement of certain value-added tax positions, offset by \$2.5 million of fees incurred in conjunction with the Company's secondary offerings completed during the year (refer to Note 12). For the year ended December 31, 2015, other items represents costs related to the process of changing our corporate name from Styron to Trinseo. For the year ended December 31, 2014, other items includes the above referenced name change costs, as well as a one-time \$32.5 million termination payment made to Dow in connection with the termination of our Latex JV Option Agreement (refer to Note 18).

Geographic Information

As of December 31, 2016, the Company operates 30 manufacturing plants (which include a total of 75 production units) at 23 sites in 12 countries, inclusive of joint ventures and contract manufacturers as well as 10 R&D facilities globally, including mini plants, development centers and pilot coaters. Sales are attributed to geographic areas based on the location where sales originated; long-lived assets are attributed to geographic areas based on asset location. The Company is incorporated under the existing laws of the Grand Duchy of Luxembourg, as discussed in Note 1, which

therefore represents its country of domicile. The Company has no existing long-lived assets or sales generated from this country.

	As of and for the Year Ended		
	December 31,		
	2016	2015	2014
<i>United States</i>			
Sales to external customers	\$ 538,413	\$ 551,823	\$ 663,425
Long-lived assets	53,005	51,189	65,329
<i>Europe</i>			
Sales to external customers	\$ 2,229,490	\$ 2,373,242	\$ 3,066,581
Long-lived assets	338,736	355,033	383,311
<i>Asia-Pacific</i>			
Sales to external customers	\$ 811,772	\$ 889,451	\$ 1,196,163
Long-lived assets	121,945	104,438	99,654
<i>Rest of World</i>			
Sales to external customers	\$ 136,965	\$ 157,386	\$ 201,792
Long-lived assets	71	8,091	8,403
<i>Total</i>			
Sales to external customers ⁽¹⁾	\$ 3,716,640	\$ 3,971,902	\$ 5,127,961
Long-lived assets ⁽²⁾⁽³⁾	513,757	518,751	556,697

- (1) Sales to external customers in China represented approximately 8%, 7% and 8% of the total for the years ended December 31, 2016, 2015, and 2014, respectively. Sales to external customers in Germany represented approximately 11%, 11% and 12% of the total for the years ended December 31, 2016, 2015, and 2014, respectively. Sales to external customers in Hong Kong represented approximately 10%, 11% and 11% of the total for the years ended December 31, 2016, 2015, and 2014, respectively.
- (2) Long-lived assets in China represented approximately 14%, 8%, and 6% of the total as of December 31, 2016, 2015, and 2014, respectively. Long-lived assets in Germany represented approximately 42%, 42%, and 43% of the total as of December 31, 2016, 2015, and 2014, respectively. Long-lived assets in The Netherlands represented approximately 14%, 14%, and 13% of the total as of December 31, 2016, 2015, and 2014, respectively.
- (3) Long-lived assets consist of property, plant and equipment, net.

NOTE 20—RESTRUCTURING

Livorno Plant Restructuring

In August 2016, the Company announced its plan to cease manufacturing activities at its latex binders manufacturing facility in Livorno, Italy. This is a result of declining demand for graphical paper and is expected to provide improved asset utilization, as well as cost reductions within the Company's European latex binders business. Production at the facility ceased in October 2016, followed by decommissioning activities which began in the fourth quarter of 2016.

For the year ended December 31, 2016, the Company recorded restructuring charges of \$14.3 million related to property, plant and equipment and other asset impairment charges, \$4.6 million related to employee termination benefit charges, \$0.3 million of contract termination charges, and \$0.7 of decommissioning and other charges. These charges were included in "Selling, general and administrative expenses" in the consolidated statement of operations and were allocated entirely to the Latex Binders segment. Employee and contract termination benefits charges are recorded within "Accrued expenses and other current liabilities" in the consolidated balance sheets.

The following table provides a rollforward of the liability balances associated with the Livorno plant restructuring for the year ended December 31, 2016:

	Balance at December 31, 2015	Expenses	Deductions	Balance at December 31, 2016
Employee termination benefit charges	\$ —	\$ 4,632	\$ —	\$ 4,632
Contract termination charges	—	269	—	269
Other ⁽¹⁾	—	677	(677)	—
Total	<u>\$ —</u>	<u>\$ 5,578</u>	<u>\$ (677)</u>	<u>\$ 4,901</u>

(1) Includes decommissioning charges incurred, primarily related to labor and third party service costs.

The majority of the accrued balances above are expected to be paid during the first quarter of 2017. The Company expects to incur incremental employee termination benefit charges of \$0.8 million throughout 2017, which are expected to be paid in early 2018. Lastly, the Company also expects to incur additional decommissioning costs associated with this plant shutdown in 2017, the cost of which will be expensed as incurred, within the Latex Binders segment.

Divestiture of Brazil Business

As discussed in Note 3, during the second quarter of 2016, the Company signed a definitive agreement to sell Trinseo Brazil. While the majority of the Company's operations in Brazil were transferred to the buyer, certain corporate functions not included in the sale were eliminated by the Company prior to the completion of the sale, resulting in the exit of all direct operations in Brazil.

As a result, for the year ended December 31, 2016, the Company recorded restructuring charges of \$0.7 million related to employee termination benefit charges, which are included within "Selling, general, and administrative expenses" in the consolidated statement of operations and were allocated entirely to Corporate. All employee termination benefit charges were paid as of December 31, 2016 and therefore nothing remains accrued in the consolidated balance sheet, as noted in the table below.

	Balance at December 31, 2015	Expenses	Deductions	Balance at December 31, 2016
Employee termination benefit charges	\$ —	\$ 656	\$ (656)	\$ —
Total	<u>\$ —</u>	<u>\$ 656</u>	<u>\$ (656)</u>	<u>\$ —</u>

Allyn's Point Plant Shutdown

In September 2015, the Company approved the plan to close its Allyn's Point latex binders manufacturing facility in Gales Ferry, Connecticut. This restructuring plan was a strategic business decision to improve the results of the overall Latex Binders segment due to continuing declines in the coated paper industry in North America. Production at the facility ceased at the end of 2015, followed by decommissioning activities which began in 2016.

The Company recorded restructuring charges of \$0.6 million and \$6.7 million for the years ended December 31, 2016 and 2015, respectively, relating to the accelerated depreciation of the related assets at the Allyn's Point facility, and \$2.1 million and \$0.4 million, respectively, of employee termination benefit and decommissioning charges, which are included within "Selling, general and administrative expenses" in the consolidated statements of operations and were allocated entirely to the Latex Binders segment. Employee termination benefit charges are recorded within "Accrued

expenses and other current liabilities” in the consolidated balance sheets, the balances for which are displayed in the tables below.

	Balance at December 31, 2015	Expenses	Deductions	Balance at December 31, 2016
Employee termination benefit charges	\$ 434	\$ 363	\$ (408)	\$ 389
Other ⁽¹⁾	—	1,720	(1,720)	—
Total	\$ 434	\$ 2,083	\$ (2,128)	\$ 389

	Balance at December 31, 2014	Expenses	Deductions	Balance at December 31, 2015
Employee termination benefit charges	\$ —	\$ 434	\$ —	\$ 434
Total	\$ —	\$ 434	\$ —	\$ 434

(1) Includes decommissioning charges incurred, primarily related to labor and third party service costs.

The Company does not expect to incur additional employee termination benefit charges related to this restructuring, with the majority of the benefits expected to be paid by September 30, 2017. The Company also expects to incur a limited amount of decommissioning costs associated with this plant shutdown in 2017, the cost of which will be expensed as incurred, within the Latex Binders segment.

Restructuring in Polycarbonate

During the second quarter of 2014, the Company announced a restructuring within its Basic Plastics segment to exit the commodity market for polycarbonate in North America and to terminate existing arrangements with Dow regarding manufacturing services for the Company at Dow’s Freeport, Texas facility (the “Freeport facility”). The Company also entered into a new long-term supply contract with a third party to supply polycarbonate in North America. These revised arrangements became operational in the fourth quarter of 2014. In addition, the Company executed revised supply contracts for certain raw materials that are processed at its polycarbonate manufacturing facility in Stade, Germany, which took effect January 1, 2015. Production at the Freeport facility ceased as of September 30, 2014, and decommissioning and demolition began thereafter, with completion in the first quarter of 2015.

For the year ended December 31, 2014, the Company recorded restructuring charges of \$3.5 million relating to the accelerated depreciation of the related assets at the Freeport facility and \$6.6 million in charges for the reimbursement of decommissioning and demolition costs incurred by Dow. For the year ended December 31, 2015, the Company recorded the remainder of the restructuring charges of \$0.5 million related to the reimbursement of decommissioning and demolition costs incurred by Dow. These charges were included in “Selling, general and administrative expenses” in the consolidated statements of operations, and were allocated entirely to the Basic Plastics segment. There were no remaining amounts accrued in the consolidated balance sheet as of December 31, 2015.

Altona Plant Shutdown

In July 2013, the Company’s board of directors approved the plan to close the Company’s latex binders manufacturing facility in Altona, Australia. This restructuring plan was a strategic business decision to improve the results of the overall Latex Binders segment. The facility manufactured SB latex used in the carpet and paper markets. Production at the facility ceased in the third quarter of 2013, followed by decommissioning, with demolition throughout most of 2014.

As a result of the plant closure, for the year ended December 31, 2014, the Company recorded additional net restructuring charges of approximately \$2.8 million, related primarily to incremental employee termination benefit charges, contract termination charges, and decommissioning costs. These charges were included in “Selling, general and administrative expenses” in the consolidated statement of operations, and were allocated entirely to the Latex Binders segment. There were no additional restructuring charges recorded related to the Altona plant shutdown during the year ended December 31, 2015, and no amounts remained accrued as of December 31, 2015.

The following table provides a rollforward of the liability balances associated with the Altona plant shutdown for the year ended December 31, 2015:

	Balance at December 31, 2014	Expenses	Deductions ⁽¹⁾	Balance at December 31, 2015
Contract termination charges	\$ 2,128	\$ (112)	\$ (2,016)	\$ —
Total	<u>\$ 2,128</u>	<u>\$ (112)</u>	<u>\$ (2,016)</u>	<u>\$ —</u>

(1) Includes primarily payments made against the existing accrual, as well as immaterial impacts of foreign currency remeasurement.

NOTE 21—ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)

The components of accumulated other comprehensive income (loss), net of income taxes, consisted of:

Year Ended December 31, 2016, 2015, and 2014	Cumulative Translation Adjustments	Pension & Other Postretirement Benefit Plans, Net	Foreign Exchange Cash Flow Hedges, Net	Total
Balance at December 31, 2013	\$ 116,146	\$ (27,768)	\$ —	\$ 88,378
Other comprehensive income (loss)	(133,901)	(32,913)	—	(166,814)
Amounts reclassified from AOCI to net income ⁽¹⁾	—	3,219	—	3,219
Balance at December 31, 2014	\$ (17,755)	\$ (57,462)	\$ —	\$ (75,217)
Other comprehensive income (loss)	(91,365)	7,938	6,081	(77,346)
Amounts reclassified from AOCI to net income ⁽¹⁾	—	3,358	(512)	2,846
Balance at December 31, 2015	\$ (109,120)	\$ (46,166)	\$ 5,569	\$ (149,717)
Other comprehensive income (loss)	(9,802)	(20,596)	9,498	(20,900)
Amounts reclassified from AOCI to net income ⁽¹⁾	—	3,258	(2,795)	463
Balance at December 31, 2016	<u>\$ (118,922)</u>	<u>\$ (63,504)</u>	<u>\$ 12,272</u>	<u>\$ (170,154)</u>

(1) The following is a summary of amounts reclassified from AOCI to net income for the years ended December 31, 2016, 2015, and 2014:

AOCI Components	Amount Reclassified from AOCI			Statement of Operations Classification
	Year Ended December 31,			
	2016	2015	2014	
Cash flow hedging items				
Foreign exchange cash flow hedges	\$ (2,795)	\$ (512)	\$ —	Cost of sales
Total before tax	(2,795)	(512)	—	
Tax effect	—	—	—	Provision for income taxes
Total, net of tax	<u>\$ (2,795)</u>	<u>\$ (512)</u>	<u>\$ —</u>	
Amortization of pension and other postretirement benefit plan items				
Curtailment and settlement loss	\$ —	\$ —	\$ 1,759	(a)
Prior service credit	(1,838)	(1,465)	(900)	(a)
Net actuarial loss	5,191	6,283	3,336	(a)
Acquisitions/divestitures	988	—	—	(b)
Total before tax	4,341	4,818	4,195	
Tax effect	(1,083)	(1,460)	(976)	Provision for income taxes
Total, net of tax	<u>\$ 3,258</u>	<u>\$ 3,358</u>	<u>\$ 3,219</u>	

- (a) These AOCI components are included in the computation of net periodic benefit costs (refer to Note 16).
- (b) This amount relates to the Company's divestiture of its Brazilian business during 2016. As of December 31, 2016, the Company had no residual AOCI balances recorded related to the Brazilian pension and postretirement medical plans.

NOTE 22—EARNINGS PER SHARE

Basic earnings (loss) per ordinary share (“basic EPS”) is computed by dividing net income (loss) available to ordinary shareholders by the weighted average number of the Company’s ordinary shares outstanding for the applicable period. Diluted earnings (loss) per ordinary share (“diluted EPS”) is calculated using net income (loss) available to ordinary shareholders divided by diluted weighted-average ordinary shares outstanding during each period, which includes unvested RSUs and stock option awards. Diluted EPS considers the impact of potentially dilutive securities except in periods in which there is a loss because the inclusion of the potential ordinary shares would have an anti-dilutive effect.

The following table presents basic EPS and diluted EPS for the years ended December 31, 2016, 2015, and 2014, respectively.

(in thousands, except per share data)	Year Ended December 31,		
	2016	2015	2014
Earnings:			
Net income (loss)	\$ 318,312	\$ 133,647	\$ (67,332)
Shares:			
Weighted-average ordinary shares outstanding	46,510	48,774	43,476
Dilutive effect of RSUs and option awards*	968	196	—
Diluted weighted-average ordinary shares outstanding	<u>47,478</u>	<u>48,970</u>	<u>43,476</u>
Income (loss) per share:			
Income (loss) per share—basic	<u>\$ 6.84</u>	<u>\$ 2.74</u>	<u>\$ (1.55)</u>
Income (loss) per share—diluted	<u>\$ 6.70</u>	<u>\$ 2.73</u>	<u>\$ (1.55)</u>

* As net loss was reported for the year ended December 31, 2014, potentially dilutive awards have not been included within the calculation of diluted EPS, as they would have an anti-dilutive effect.

NOTE 23—SELECTED QUARTERLY FINANCIAL DATA (Unaudited)

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
2016				
Net sales	\$ 894,084	\$ 969,694	\$ 935,410	\$ 917,452
Gross profit	139,672	169,740	140,384	137,830
Equity in earnings of unconsolidated affiliates	35,026	38,602	36,686	34,419
Operating income	120,212	156,093	103,170 ⁽²⁾	111,341 ⁽²⁾
Income before income taxes	98,647	124,404 ⁽¹⁾	83,254 ⁽¹⁾⁽²⁾	99,004 ⁽¹⁾⁽²⁾⁽³⁾
Net income	76,747	95,804 ⁽¹⁾	67,254 ⁽¹⁾⁽²⁾	78,507 ⁽¹⁾⁽²⁾⁽³⁾
Net income per share- basic	1.58	2.04 ⁽¹⁾	1.47 ⁽¹⁾⁽²⁾	1.76 ⁽¹⁾⁽²⁾⁽³⁾
Net income per share- diluted	\$ 1.56	\$ 2.00 ⁽¹⁾	\$ 1.43 ⁽¹⁾⁽²⁾	\$ 1.72 ⁽¹⁾⁽²⁾⁽³⁾
2015				
Net sales	\$ 1,018,265	\$ 1,028,673	\$ 1,027,952	\$ 897,012
Gross profit	103,079	142,137	111,562	112,324
Equity in earnings of unconsolidated affiliates	36,707	40,841	33,489	29,141
Operating income	88,011	132,239	93,958	87,108
Income before income taxes	55,604	8,256 ⁽⁴⁾	73,255	66,741
Net income	37,704	756 ⁽⁴⁾	52,055	43,132 ⁽⁵⁾
Net income per share- basic	0.77	0.02 ⁽⁴⁾	1.07	0.88 ⁽⁵⁾
Net income per share- diluted	\$ 0.77	\$ 0.02 ⁽⁴⁾	\$ 1.06	\$ 0.88 ⁽⁵⁾

- (1) Includes charges for the estimated loss on sale of Trinseo Brazil of \$12.9 million, \$0.3 million, and \$1.8 million during the second, third, and fourth quarters of 2016, respectively. Refer to Note 3 for further information.
- (2) Includes restructuring charges related to the Company's decision to cease manufacturing activities at its latex binders manufacturing facility in Livorno, Italy of \$16.0 million and \$3.9 million during the third and fourth quarters of 2016, respectively. Refer to Note 20 for further information.
- (3) Includes other income of \$6.9 million from the effective settlement of certain value-added tax positions during the fourth quarter of 2016.
- (4) Includes a \$95.2 million loss on extinguishment of debt related to the May 2015 redemption of \$1,192.5 million in aggregate principal amount of the 2019 Senior Notes. Refer to Note 10 for further information.
- (5) Includes a valuation allowance of \$7.3 million on the net deferred tax asset of one of the Company's China subsidiaries recorded in the fourth quarter of 2015. Refer to Note 14 for further information.

NOTE 24—SUBSEQUENT EVENTS

On January 31, 2017, the Company completed the sale of its 50% share in Sumika Styron Polycarbonate to Sumitomo Chemical Company Limited for total sales proceeds of ¥4.9 billion (approximately \$43.2 million). As a result, the Company will record an estimated gain on sale of approximately \$9.0 million in the first quarter of 2017. In addition, the parties have agreed to continue long-term supply of polycarbonate resin from Sumika Styron Polycarbonate to the Company's Performance Plastics businesses.

TRINSEO S.A.
SCHEDULE II—FINANCIAL STATEMENT SCHEDULE
VALUATION AND QUALIFYING ACCOUNTS
(In Millions)

	Balance at Beginning of the Period	Charged to Cost and Expense	Deduction from Reserves	Currency Translation Adjustments	Balance at End of the Period
<u>Allowance for doubtful accounts:</u>					
Year ended December 31, 2016	\$ 2.4	\$ 1.0	\$ (0.1) ^(a)	\$ (0.2)	\$ 3.1
Year ended December 31, 2015	6.3	0.3	(3.3) ^(a)	(0.9)	2.4
Year ended December 31, 2014	5.9	1.1	— ^(a)	(0.7)	6.3
<u>Tax valuation allowances:</u>					
Year ended December 31, 2016	\$ 85.1	\$ 27.7	\$ —	\$ (0.2)	\$ 112.6
Year ended December 31, 2015	66.9	22.1	—	(3.9)	85.1
Year ended December 31, 2014	50.4	18.2	—	(1.7)	66.9

(a) Amounts written off, net of recoveries. Amount in 2014 is less than \$0.1 million.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Members of
Americas Styrenics LLC
The Woodlands, Texas

We have audited the accompanying consolidated balance sheets of Americas Styrenics LLC and subsidiaries (the "Company") as of December 31, 2016 and 2015, and the related consolidated statements of comprehensive income, members' equity, and cash flows for each of the three years in the period ended December 31, 2016. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States) and in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of Americas Styrenics LLC and its subsidiaries at December 31, 2016 and 2015, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2016, in conformity with accounting principles generally accepted in the United States of America.

/s/ DELOITTE & TOUCHE LLP

Houston, Texas
February 15, 2017

AMERICAS STYRENICS LLC

CONSOLIDATED BALANCE SHEETS
AS OF DECEMBER 31, 2016 AND 2015
(In millions of dollars)

	2016	2015
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	\$ 62.9	\$ 79.9
Trade receivables (net of allowance of \$2.6 in 2016 and \$3.8 in 2015)	120.0	128.1
Related company receivables	11.3	8.2
Inventories	146.8	134.5
Other current assets	13.8	16.1
Total current assets	<u>354.8</u>	<u>366.8</u>
NET PROPERTY, PLANT AND EQUIPMENT	<u>233.5</u>	<u>254.1</u>
OTHER ASSETS:		
Deferred income taxes	1.8	2.8
Other assets	13.2	12.8
Total other assets	<u>15.0</u>	<u>15.6</u>
TOTAL	<u>\$ 603.3</u>	<u>\$ 636.5</u>
LIABILITIES AND MEMBERS' EQUITY		
CURRENT LIABILITIES:		
Trade payables	\$ 69.1	\$ 77.2
Related company payables	36.6	31.7
Other payables	14.8	15.5
Income taxes payable	5.3	5.7
Accrued liabilities	17.4	16.7
Total current liabilities	<u>143.2</u>	<u>146.8</u>
POSTRETIREMENT BENEFIT LIABILITY	<u>16.9</u>	<u>17.1</u>
OTHER LONG-TERM LIABILITIES	<u>1.3</u>	<u>1.0</u>
Total liabilities	<u>161.4</u>	<u>164.9</u>
COMMITMENTS AND CONTINGENCIES (Note 7)		
MEMBERS' EQUITY:		
Members' equity	446.2	477.4
Accumulated other comprehensive loss	(4.3)	(5.8)
Total members' equity	<u>441.9</u>	<u>471.6</u>
TOTAL	<u>\$ 603.3</u>	<u>\$ 636.5</u>

See notes to consolidated financial statements.

AMERICAS STYRENICS LLC

**CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
FOR THE YEARS ENDED DECEMBER 31, 2016, 2015, AND 2014**
(In millions of dollars)

	2016	2015	2014
Net sales	\$ 1,483.1	\$ 1,600.1	\$ 1,992.4
Cost of sales	1,205.0	1,309.5	1,881.0
Gross margin	278.1	290.6	111.4
Technical service and development	2.4	2.5	2.9
Selling and marketing	8.9	8.7	9.1
Administrative	31.0	29.0	25.8
Foreign exchange loss	0.6	4.7	4.6
Other expense—net	0.3	2.0	3.8
Operating income	234.9	243.7	65.2
Interest income	0.2	0.1	—
Income tax expense	(6.3)	(6.3)	(9.0)
Net income	228.8	237.5	56.2
Other comprehensive loss:			
Net actuarial (loss) gain	0.7	(0.5)	(1.2)
Reclassification of actuarial loss to income	0.1	—	—
Reclassification of prior-service cost to income	0.7	0.7	0.7
Net other comprehensive income (loss)—defined benefit plans	1.5	0.2	(0.5)
Total comprehensive income	<u>\$ 230.3</u>	<u>\$ 237.7</u>	<u>\$ 55.7</u>

See notes to consolidated financial statements.

AMERICAS STYRENICS LLC

**CONSOLIDATED STATEMENTS OF MEMBERS' EQUITY
FOR THE YEARS ENDED DECEMBER 31, 2016, 2015, AND 2014
(In millions of dollars)**

	Members' Equity	Accumulated Other Comprehensive Loss	Total
BALANCE—January 1, 2014	\$ 503.7	\$ (5.5)	\$ 498.2
Distribution to Members	(70.0)	—	(70.0)
Defined benefit plans—other comprehensive loss	—	(0.5)	(0.5)
Net income	56.2	—	56.2
BALANCE—December 31, 2014	489.9	(6.0)	483.9
Distribution to Members	(250.0)	—	(250.0)
Defined benefit plans—other comprehensive income	—	0.2	0.2
Net income	237.5	—	237.5
BALANCE—December 31, 2015	477.4	(5.8)	471.6
Distribution to Members	(260.0)	—	(260.0)
Defined benefit plans—other comprehensive income	—	1.5	1.5
Net income	228.8	—	228.8
BALANCE—December 31, 2016	<u>\$ 446.2</u>	<u>\$ (4.3)</u>	<u>\$ 441.9</u>

See notes to consolidated financial statements.

AMERICAS STYRENICS LLC

CONSOLIDATED STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2016, 2015, AND 2014
(In millions of dollars)

	<u>2016</u>	<u>2015</u>	<u>2014</u>
OPERATING ACTIVITIES:			
Net income	\$ 228.8	\$ 237.5	\$ 56.2
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	41.0	39.0	40.3
Net gain on disposal of assets	—	0.4	(0.1)
Deferred income taxes	1.0	(0.4)	2.1
Allowance for doubtful accounts	(1.2)	(0.7)	2.9
Changes in assets and liabilities that provided (used) cash:			
Trade receivables	9.3	33.4	34.1
Related company receivables	(3.1)	7.1	7.1
Inventories	(12.3)	(20.5)	8.5
Trade payables	(8.1)	(21.4)	31.5
Related company payables	4.9	(9.5)	(61.0)
Other assets and liabilities	5.1	10.3	(11.0)
Net cash provided by operating activities	<u>265.4</u>	<u>275.2</u>	<u>110.6</u>
INVESTING ACTIVITIES:			
Capital expenditures	(22.5)	(36.5)	(23.5)
Proceeds from settlement treated as reimbursement of capital expenditures (Note 7)	—	7.8	—
Disposal of assets	0.1	—	0.1
Net cash used in investing activities	<u>(22.4)</u>	<u>(28.7)</u>	<u>(23.4)</u>
FINANCING ACTIVITY—Distribution to Members			
Cash used in financing activity	(260.0)	(250.0)	(70.0)
(DECREASE) INCREASE IN CASH AND CASH EQUIVALENTS			
	(17.0)	(3.5)	17.2
CASH AND CASH EQUIVALENTS—Beginning of year	79.9	83.4	66.2
CASH AND CASH EQUIVALENTS—End of year	<u>\$ 62.9</u>	<u>\$ 79.9</u>	<u>\$ 83.4</u>
SUPPLEMENTAL CASH FLOW INFORMATION:			
Noncash investing activity—capital expenditures payable	\$ 2.1	\$ 2.9	\$ 7.0
Cash paid for income taxes	<u>\$ 4.7</u>	<u>\$ 3.3</u>	<u>\$ 3.6</u>

See notes to consolidated financial statements.

AMERICAS STYRENICS LLC

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
AS OF DECEMBER 31, 2016 AND 2015, AND
FOR THE YEARS ENDED DECEMBER 31, 2016, 2015, AND 2014
(Amounts in millions of dollars)

1. FORMATION OF VENTURE

Effective May 1, 2008, Chevron Phillips Chemical Company LP (“CPChem”) and The Dow Chemical Company (“Dow”) joined forces in styrenics by creating Americas Styrenics LLC (the “Company”). Effective June 17, 2010, Dow divested its ownership in the Company to Trinseo LLC (formerly, Styron LLC). CPChem and Trinseo LLC are referred to herein as the “Members.” The Members share equally in the profits and losses of the Company.

2. NATURE OF OPERATIONS AND SIGNIFICANT ACCOUNTING POLICIES

Principles of Consolidation—The consolidated financial statements include the accounts of the Company and its subsidiaries. All intercompany accounts and transactions have been eliminated in consolidation. The Company’s subsidiaries and partnership interests are as follows: Americas Styrenics Colombia Ltda, Americas Styrenics Chile Commercial Ltda (liquidated in 2014), Americas Styrenics de Mexico, de R.L. de C.V., Americas Styrenics Canada Inc., and Americas Styrenics Industria e Comercio de Poliestireno Ltda (Brazil).

Nature of Operations—The Company was formed as a joint venture and focuses on styrenics (styrene and polystyrene) production, sales, and distribution in North America and South America.

Cash and Cash Equivalents—Included in cash and cash equivalents, from time to time, are short-term interest-bearing investments on deposit with financial institutions. There were \$17.6 and \$33.0 of interest-bearing investments at December 31, 2016 and 2015, respectively.

Trade Receivables—The Company’s United States’ customers are primarily in the packaging industry, but also consist of other chemical and plastics manufacturers. The Company’s foreign customers reside primarily in Argentina, Brazil, Chile, Colombia, and Mexico. The Company evaluates the creditworthiness of customers and in certain circumstances, may require letters of credit to support product sales. The Company maintains an allowance for doubtful accounts based on anticipated collection of its accounts receivable.

Inventories—Inventories at December 31, 2016 and 2015, were as follows:

	2016	2015
Finished goods	\$ 55.1	\$ 47.3
Work in process	67.6	53.2
Raw materials	13.5	24.7
Supplies	10.6	9.3
Total inventories	<u>\$ 146.8</u>	<u>\$ 134.5</u>

Inventories are stated at the lower of cost or market. Finished products and work-in-process inventories include material, labor, and manufacturing overhead costs. The reserves reducing inventories from a first-in, first-out (FIFO) basis to a last-in, first-out (LIFO) basis amounted to \$31.4 at December 31, 2016, and \$24.9 at December 31, 2015. In 2014, the liquidation of certain of the Company’s LIFO inventory layers increased operating income by \$1.8. Foreign inventories are accounted for on a FIFO basis.

Property, Plant, and Equipment—Upon formation of the Company, property, plant, and equipment were recorded at CPChem’s and Dow’s net book value. Current additions of property, plant, and equipment are recorded at cost. The Company provides for depreciation using the straight-line method at rates based on the estimated service lives of the various classes of assets (3–45 years). Expenditures for repairs and maintenance, including major maintenance commonly known as turnarounds, are expensed as incurred. Components of property, plant, and equipment at December 31, 2016 and 2015, are as follows:

	<u>2016</u>	<u>2015</u>
Land and waterway improvements	\$ 11.2	\$ 10.8
Buildings	28.4	27.9
Transportation and construction equipment	67.0	67.4
Machinery and other equipment	862.8	855.6
Utilities and supply lines/other property	10.9	9.8
Construction in progress	17.6	10.0
Total property, plant, and equipment	<u>997.9</u>	<u>981.5</u>
Less accumulated depreciation	(764.4)	(727.4)
Net property, plant, and equipment	<u>\$ 233.5</u>	<u>\$ 254.1</u>

Income Taxes—The Company is treated as a flow-through partnership for U.S. federal income tax purposes and for most state income tax purposes. As such, the Company itself is not liable for U.S. federal income taxes. The Company files a U.S. partnership return which reflects each Member’s share of income or loss. The Members are responsible for reporting and paying any tax on their respective income tax returns. The Company is directly liable for certain state income and franchise taxes, foreign withholding, and foreign direct or indirect taxes.

The Company has foreign subsidiaries in Canada, Chile (liquidated in 2014), Colombia, and Mexico. All foreign entities except the Canadian subsidiary have elected to be treated as disregarded foreign branches of the Company for U.S. purposes. As such, the income or loss of the respective disregarded entities will be included in the U.S. federal partnership return. The foreign subsidiaries are responsible for all applicable taxes on foreign operations, and these taxes have been provided for in the consolidated financial statements.

The Company has not recorded any liabilities for uncertain tax positions.

Impairment of Long-Lived Assets—The Company evaluates the carrying value of long-lived assets to be held and used, including intangible assets, when events or circumstances warrant such a review. The carrying value of a long-lived asset to be held and used is considered impaired when the anticipated, separately identifiable undiscounted cash flows from such an asset are less than the carrying value of the asset. In that event, a loss is recognized based on the amount by which the carrying value exceeds the fair value of the long lived asset. Fair value is determined primarily using the anticipated cash flows discounted at a rate commensurate with the risk involved. No impairment was recorded in 2016, 2015, or 2014.

Asset Retirement Obligation—The Company assesses whether it has legal obligations associated with the retirement of tangible long-lived assets that result from the acquisition, construction, or development and/or the normal operation of a long-lived asset, including any legal obligations that require disposal of a replaced part that is a component of a tangible long-lived asset. At December 31, 2016 and 2015, the Company had no significant asset retirement obligations.

Insurance —The Company maintains insurance for automobile risks, general liability, including products, directors, officers, workers’ compensation, and property. This insurance is placed with highly rated insurance carriers. The limits and deductibles are consistent for a company of this size and structure.

Foreign Currency—The functional currency for the Company’s foreign operations is the U.S. dollar, resulting in no currency translation adjustments. Foreign currency gains and losses are reflected in operations.

Use of Estimates—The preparation of the consolidated financial statements in conformity with accounting principles generally accepted in the United States of America (U.S. GAAP) requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Fair Value of Financial Instruments—The carrying amounts reported in the balance sheets of cash and cash equivalents, accounts receivable and accounts payable approximate fair value because of the immediate or short-term maturity of these financial instruments.

Revenue Recognition—The Company recognizes revenue when there is evidence of a sales agreement, the delivery of goods has occurred, the sales price is fixed or determinable, and the collectability of revenue is reasonably assured. Revenue includes the selling price of the product and all related delivery charges paid by the customer. Freight costs and any directly related associated costs of transporting finished product to customers are recorded as “cost of sales.” Revenue is reduced at the time of sale for estimated customer-related incentives (mostly volume-related incentives).

Subsequent Events—The Company has evaluated subsequent events through February 15, 2017, the date the financial statements were available to be issued.

3. RECENT ACCOUNTING GUIDANCE

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2014-09, Revenue from Contracts with Customers. The objective of ASU No. 2014-09 is to clarify the principles for recognizing revenue and to develop a common revenue standard for U.S. GAAP and International Financial Reporting Standards. In August 2015, the FASB issued ASU No. 2015-14, Revenue from Contracts with Customers: Deferral of Effective Date, which deferred the effective date of ASU No. 2014-09 for one year. Further, in March 2016, the FASB issued ASU No. 2016-08, Revenue from Contracts with Customers (Topic 606): Principal versus Agent Considerations (Reporting Revenue Gross versus Net), clarifying the implementation guidance on principal versus agent considerations. In April 2016, the FASB issued ASU No. 2016-10, Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing, clarifying the implementation guidance on identifying performance obligations in a contract and determining whether an entity’s promise to grant a license provides a customer with either a right to use the entity’s intellectual property (which is satisfied at a point in time) or a right to access the entity’s intellectual property (which is satisfied over time). In May 2016, the FASB issued ASU No. 2016-12, Revenue from Contracts with Customers (Topic 606): Narrow-Scope Improvements and Practical Expedients, providing clarifications and practical expedients for certain narrow aspects of Topic 606. In December 2016, the FASB issued ASU No. 2016-20, Technical Corrections and Improvements to Topic 606, Revenue from Contracts with Customers. These ASUs are effective for fiscal years beginning after December 15, 2017. The standards permit retrospective application using either of the following methodologies: (i) restatement of each prior reporting period presented or (ii) recognition of a cumulative-effect adjustment as of the date of the initial application. The Company is currently evaluating the impact of adopting these ASUs, including the transition method to be applied.

In July 2015, the FASB issued ASU No. 2015-11, Simplifying the Measurement of Inventory. This ASU requires entities to measure most inventory at the lower of cost and net realizable value, thereby simplifying the current guidance under which an entity must measure inventory at the lower of cost or market. ASU No. 2015-11 is effective for fiscal years beginning after December 15, 2016, and should be applied prospectively. We do not expect the adoption of this ASU to have a significant impact on our consolidated financial statements.

In February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842). This ASU will increase transparency and comparability among entities by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. This ASU will require lessees to recognize in the statement of financial position a liability to make lease payments (the lease liability) and a right-of-use asset representing its right to use the underlying asset for the lease term. ASU No. 2016-02 is effective for fiscal years beginning after December 15, 2018. Early adoption is permitted. Reporting entities are required to recognize and measure leases under these amendments at the beginning of the earliest period presented using a modified retrospective approach. The Company is currently evaluating the impact of adopting ASU No. 2016-02.

4. REVOLVING CREDIT FACILITY

The Company’s unsecured \$50.0 revolving credit facility with Comerica Bank terminates in August 2020. Interest on amounts drawn under the facility equal, at the Company’s option, a margin over either the prime rate or the

London InterBank Offered Rate-based rate as defined in the credit agreement. There were no outstanding borrowings at December 31, 2016 or 2015.

5. INCOME TAXES

The components of income before taxes for the years ended December 31, 2016, 2015, and 2014, are as follows:

	2016	2015	2014
Domestic	\$ 215.0	\$ 240.3	\$ 59.3
Foreign	20.1	3.5	5.9
Total income before taxes	<u>\$ 235.1</u>	<u>\$ 243.8</u>	<u>\$ 65.2</u>

The components of income tax expense for the years ended December 31, 2016, 2015, and 2014, are as follows:

	2016	2015	2014
State—current	\$ 0.2	\$ 0.2	\$ —
Foreign—current	5.1	6.5	7.7
Foreign—deferred	1.0	(0.4)	1.3
Total income tax expense	<u>\$ 6.3</u>	<u>\$ 6.3</u>	<u>\$ 9.0</u>

The components of deferred income tax assets and liabilities at December 31, 2016 and 2015, are as follows:

	2016	2015
Inventory	\$ 1.2	\$ —
Fixed assets	1.1	2.2
Other temporary differences	(0.5)	0.6
Deferred tax assets	<u>\$ 1.8</u>	<u>\$ 2.8</u>

Undistributed earnings of foreign subsidiaries are not deemed to be permanently reinvested. Currently, undistributed earnings exist in the Canadian, Colombian, and Mexican subsidiaries. Future repatriation of earnings will not be subject to tax by the Company (but rather its Members); however, foreign withholding taxes may apply.

6. EMPLOYEE BENEFIT PLANS

The Company provides reimbursement of medical and dental costs to retired employees. The Company's plan, the Retiree Reimbursement Account (RRA), is calculated at the time of the employee's retirement based on years of credited service. The Company has the ability to change the benefits at any time. All employees are eligible, except for former Dow employees who choose to participate in The Dow Chemical Company Retiree Medical Care Program upon retirement. The Company uses a December 31 measurement date for the RRA.

At each of December 31, 2016 and 2015, the RRA had benefit obligations in the amount of \$17.7. The Company contributed and paid benefits in the amount of \$0.5 in 2016, \$0.4 in 2015, and \$0.4 in 2014.

At December 31, 2016 and 2015, amounts recognized in the consolidated balance sheets consist of:

	2016	2015
Current liabilities	\$ (0.8)	\$ (0.6)
Noncurrent liabilities	(16.9)	(17.1)
Total	<u>\$ (17.7)</u>	<u>\$ (17.7)</u>

At December 31, 2016 and 2015, amounts recognized in accumulated other comprehensive loss were as follows:

	2016	2015
Net actuarial loss	\$ 1.6	\$ 2.4
Prior service cost	2.7	3.4
Total	<u>\$ 4.3</u>	<u>\$ 5.8</u>

In 2017, \$0.7 of estimated prior service cost will be amortized from accumulated other comprehensive loss into net periodic benefit cost.

Net periodic benefit cost and components of other amounts recognized in other comprehensive (income) loss were as follows:

	<u>2016</u>	<u>2015</u>	<u>2014</u>
Net periodic postretirement benefit cost	\$ 2.0	\$ 1.8	\$ 1.8
Other changes in benefit obligations recognized in other comprehensive loss (income):			
Net actuarial (gain) loss	(0.7)	0.5	1.2
Recognized actuarial loss	(0.1)	—	—
Recognized prior-service cost	(0.7)	(0.7)	(0.7)
Total recognized in other comprehensive (income) loss	(1.5)	(0.2)	0.5
Total recognized in net periodic benefit cost and other comprehensive loss (income)	<u>\$ 0.5</u>	<u>\$ 1.6</u>	<u>\$ 2.3</u>

Actuarial assumptions used to determine benefit obligations and net periodic benefit cost were as follows:

	<u>2016</u>	<u>2015</u>	<u>2014</u>
Discount rate used to determine net periodic benefit cost	3.76 %	3.65 %	4.27 %
Discount rate used to determine benefit obligation at December 31	3.82 %	3.76 %	N/A
Health Care Cost Assumptions			
Initial health care cost trend rate	8.00 %	8.00 %	8.50 %
Ultimate health care cost trend rate	4.50 %	4.50 %	4.50 %
Year ultimate reached	2027	2023	2023

Estimated health care cost trend rates can have a significant effect on the amounts reported for the RRA.

The Company expects to contribute approximately \$0.8 to its RRA plan in 2017.

At December 31, 2016, the estimated future benefit payments, reflecting expected future service, as appropriate, are expected to be paid as follows:

2017	\$ 0.8
2018	1.0
2019	1.2
2020	1.4
2021	1.6
2022 through 2026	9.9
Total	<u>\$ 15.9</u>

The Company also has a defined contribution employee savings plan and made discretionary contributions of \$3.5, \$3.5, and \$3.4 in 2016, 2015, and 2014, respectively.

7. COMMITMENTS AND CONTINGENCIES

Commitments

The Company and its subsidiaries maintain outside service agreements and lease buildings, ground and easements, rail cars, and other vehicles under noncancelable operating leases, which expire on varying dates between 2017 and 2028.

Total future minimum annual rentals in effect at December 31, 2016, for noncancelable operating leases are as follows:

Years Ending December 31		
2017	\$	12.6
2018		8.4
2019		5.2
2020		2.7
2021		2.1
2022 and thereafter		7.6
Total	\$	38.6

Expense for total rental and long-term commitments was \$9.3, \$7.6, and \$9.4 for the years ended December 31, 2016, 2015, and 2014, respectively.

The Company has entered into long-term sales commitments and purchase agreements with several of its key suppliers, including its Members (see Note 8). The commitment contracts are for one- to three-year periods. Because the pricing and supply fluctuates with the commodity market, a definitive dollar value cannot be determined.

In addition, the Company has purchase commitments of \$54.6 mainly related to certain feedstock, utility, and capital projects costs. The Company does not consider purchase orders to be firm commitments. If the Company chooses to cancel a purchase order, it may be obligated to reimburse the vendor for unrecoverable outlays incurred prior to cancellation under certain circumstances.

Contingencies

The Company is cooperating with a confidential subpoena dated May 11, 2015, from the U.S. Postal Service in coordination with the U.S. Department of Justice seeking information relating to the polystyrene market. The Company has conducted an internal review and is unaware of any improper activity. The Company has appointed a Litigation Management Committee among its Board of Directors to provide oversight to the matter. At this time, it is premature for the Company to determine whether it is probable that a loss will occur, nor is the Company able to estimate a range of potential loss. Therefore, a liability has not been recorded with respect to this matter.

The Company is a party to various legal proceedings and claims incidental to the normal conduct of its business. Management believes that the ultimate disposition of these matters will not have a material adverse effect on the Company's consolidated financial position or results of operations.

Pursuant to the contribution agreement, all preexisting environmental matters have been outlined for each site and any contingencies are the responsibility of Dow and CPChem. All subsequent obligations are the liability of the Company. No environmental reserve was recorded as of December 31, 2016, 2015, or 2014. During 2015, the Company received reimbursement from Dow of certain capital costs at one of its polystyrene facilities, totaling \$7.8, which was recorded as a reduction of the carrying cost of the assets.

8. RELATED-PARTY TRANSACTIONS

The Company entered into various supply and purchase agreements with the Members and their affiliated companies. These agreements include sales and purchases of energy, raw materials, and services. A summary of transactions for the years ended December 31, 2016, 2015, and 2014, is as follows:

	<u>2016</u>	<u>2015</u>	<u>2014</u>
Net sales	\$ 134.4	\$ 161.4	\$ 263.0
Purchases	384.0	483.3	847.0

Balances receivable and payable to the Members are included in the consolidated financial statements as related company receivables and payables.

EXHIBIT INDEX

Exhibit No.	Description
3.1	Amended and Restated Articles of Association of Trinseo S.A., as amended (incorporated herein by reference to Exhibit 3.1 to the Annual Report filed on Form 10-K, File No. 001-36473, filed March 10, 2015)
4.1	Indenture among Trinseo Materials Operating S.C.A., Trinseo Materials Finance, Inc. and The Bank of New York Mellon, as Trustee, dated as of May 5, 2015 (incorporated herein by reference to Exhibit 4.1 to the Current Report filed on Form 8-K, File No. 001-36473, filed May 11, 2015)
4.2	Form of Specimen Share Certificate of Trinseo S.A. (incorporated herein by reference to Exhibit 4.1 to Amendment No. 3 of the Registration Statement filed on Form S-1, File No. 333-194561, filed May 16, 2014)
10.1	Credit Agreement among Trinseo Materials Operating S.C.A., Trinseo Materials Finance, Inc. together with Trinseo Holdings S.à r.l., and Trinseo Materials S.à r.l., Deutsche Bank AG New York Branch, as administrative agent, collateral agent L/C issuer and swing line lender, Citigroup Global Markets Inc., as syndication agent, and the lenders from time to time party thereto, dated as of May 5, 2015 (incorporated herein by reference to Exhibit 10.1 to the Current Report filed on Form 8-K, No. 001-36473, filed May 11, 2015)
10.2	Amended and Restated Employment Agreement, among Trinseo US Holding, Inc. (f/k/a Styron US Holding, Inc.), Bain Capital Everest Manager Holding SCA and Christopher D. Pappas, dated April 11, 2013 (incorporated herein by reference to Exhibit 10.7 to the Registration Statement filed on Form S-4, File No. 333-191460, filed September 30, 2013)
10.3	First Amendment to Amended & Restated Employment Agreement between Trinseo US Holding, Inc., Bain Capital Everest Manager Holding SCA, and Christopher D. Pappas, dated March 30, 2016 (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K, File No. 001-36473, filed April 5, 2016)
10.4	Letter Agreement, dated March 3, 2016, between Trinseo S.A. and Christopher D. Pappas, defining retirement for purpose of equity awards (incorporated by reference to Exhibit 10.3 to the Quarterly Report filed on Form 10-Q, File No. 001-36473, filed May 5, 2016)
10.5	Employment Agreement among Trinseo US Holding, Inc. (f/k/a Styron US Holding, Inc.), Bain Capital Everest Manager Holding SCA and Martin Pugh, dated March 1, 2013 (incorporated herein by reference to Exhibit 10.35 to the Annual Report filed on Form 10-K, File No. 333-191460, filed March 14, 2014)
10.6	First Amendment to the Employment Agreement, dated January 17, 2014, by and between Trinseo US Holding, Inc. (f/k/a Styron US Holding, Inc.) and Martin Pugh (incorporated herein by reference to Exhibit 10.35 to the Registration Statement filed on Form S-4, File No. 333-191460, as amended on January 17, 2014)
10.7	Second Amendment to the Employment Agreement, dated October 8, 2014, by and between Trinseo US Holding, Inc. (f/k/a Styron US Holding, Inc.) and Martin Pugh (incorporated herein by reference to Exhibit 10.16 to the Annual Report filed on Form 10-K, File No. 001-36473, filed March 10, 2015)

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10.8	Third Amendment to the Employment Agreement, dated October 6, 2015, by and between Trinseo US Holding, Inc. (f/k/a Styron US Holding, Inc.) and Martin Pugh (incorporated herein by reference to Exhibit 10.1 to the Current Report filed on Form 8-K, File No. 001-36473, filed October 8, 2015)
10.9	Letter Agreement, dated March 1, 2016, between Trinseo S.A. and Martin Pugh, defining retirement for purpose of equity awards (incorporated by reference to Exhibit 10.4 to the Quarterly Report filed on Form 10-Q, File No. 001-36473, filed May 5, 2016)
10.10	Employment Agreement between Trinseo LLC and Barry Niziolek, dated May 20, 2016 (incorporated herein by reference to Exhibit 10.1 to the Current Report filed on Form 8-K, File No. 001-36473, filed May 23, 2016)
10.11	Employment Agreement, dated September 14, 2015 by and between Trinseo Europe GmBH. and Timothy M. Stedman (incorporated herein by reference to Exhibit 10.11 to the Annual Report filed on Form 10-K, File No. 001-36473, filed March 11, 2016)
10.12	Employment Agreement, dated August 7, 2015, by and between Trinseo Europe GmBH and Hayati Yarkadas (incorporated herein by reference to Exhibit 10.12 to the Annual Report filed on Form 10-K, File No. 001-36473, filed March 11, 2016)
10.13	Employment Agreement, among Trinseo US Holding, Inc. (f/k/a Bain Capital Everest US Holding, Inc.) Bain Capital Everest Manager Holding SCA and Marilyn Horner, dated January 5, 2011 (incorporated herein by reference to Exhibit 10.12 to the Annual Report filed on Form 10-K, File No. 001-36473, filed March 10, 2015)
10.14	First Amendment to Employment Agreement, among Trinseo US Holding, Inc. (f/k/a Bain Capital Everest US Holding, Inc.) Bain Capital Everest Manager Holding SCA and Marilyn Horner, dated February 14, 2012 (incorporated herein by reference to Exhibit 10.13 to the Annual Report filed on Form 10-K, File No. 001-36473, filed March 10, 2015)
10.15	Letter Agreement, dated March 1, 2016, between Trinseo S.A. and Marilyn N. Horner, defining retirement for purpose of equity awards (incorporated by reference to Exhibit 10.5 to the Quarterly Report filed on Form 10-Q, File No. 001-36473, filed May 5, 2016)
10.16	Employment Agreement, dated November 17, 2014, by and between Trinseo US Holding, Inc. (f/k/a Bain Capital Everest US Holding, Inc.) and Angelo N. Chaclas (incorporated herein by reference to Exhibit 10.10 to the Annual Report filed on Form 10-K, File No. 001-36473, filed March 11, 2016)
10.17*	Second Amended and Restated Master Outsourcing Services Agreement, among The Dow Chemical Company and Trinseo LLC (f/k/a Styron LLC) and Trinseo Holding B.V. (f/k/a Styron Holding B.V.), dated June 1, 2013 (incorporated herein by reference to Exhibit 10.19 to Amendment No. 2 to the Registration Statement filed on Form S-4, File No. 333-191460, filed December 17, 2013)
10.18*	Contract of Sale, by and between Americas Styrenics LLC and The Dow Chemical Company, dated December 1, 2009, as amended by that certain Amendment to and Consent to Partial Assignment, dated April 1, 2010 (incorporated herein by reference to Exhibit 10.20 to Amendment No. 2 to the Registration Statement filed on Form S-4, File No. 333-191460, filed December 17, 2013)

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10.19*	Styrene Baseload Sale and Purchase Agreement, between Trinseo Europe GmbH (f/k/a Dow Europe GmbH) and Jubail Chevron Phillips Company, dated June 30, 2004 (incorporated herein by reference to Exhibit 10.21 to Amendment No. 2 to the Registration Statement filed on Form S-4, File No. 333-191460, filed December 17, 2013)
10.20*	Amended and Restated Ethylene Sales Contract (Europe), between Dow Europe GmbH and Trinseo Europe GmbH (f/k/a Styron Europe GmbH), dated June 17, 2010 (incorporated herein by reference to Exhibit 10.22 to Amendment No. 2 to the Registration Statement filed on Form S-4, File No. 333-191460, filed December 17, 2013)
10.21*	Amended and Restated Benzene Sales Contract (Europe), between Dow Europe GmbH and Trinseo Europe GmbH (f/k/a Styron Europe GmbH), dated June 17, 2010 (incorporated herein by reference to Exhibit 10.23 to Amendment No. 2 to the Registration Statement filed on Form S-4, File No. 333-191460, filed December 17, 2013)
10.22*	Amended and Restated Butadiene Sales Contract (Europe), between Dow Europe GmbH and Trinseo Europe GmbH (f/k/a Styron Europe GmbH), dated June 17, 2010 (incorporated herein by reference to Exhibit 10.27 to Amendment No. 2 to the Registration Statement filed on Form S-4, File No. 333-191460, filed December 17, 2013)
10.23*	Amended and Restated MOD5 Computerized Process Control Software Agreement, Licenses and Services, between Rofan Services Inc. and Trinseo LLC (f/k/a Styron LLC), dated as of June 17, 2010 (incorporated herein by reference to Exhibit 10.29 to the Registration Statement filed on Form S-4, File No. 333-191460, filed September 30, 2013)
10.24*	Amendment No. 1 to the Amended and Restated MOD5 Computerized Process Control Software Agreement, Licenses and Services, between Rofan Services Inc. and Trinseo LLC (f/k/a Styron LLC), dated as of June 1, 2013 (incorporated herein by reference to Exhibit 10.30 to Amendment No. 2 to the Registration Statement filed on Form S-4, File No. 333-191460, filed December 17, 2013)
10.25*	Amended and Restated Styron License Agreement, among The Dow Chemical Company, Dow Global Technologies Inc. and Trinseo LLC (f/k/a Styron LLC), dated as of June 17, 2010. (incorporated herein by reference to Exhibit 10.31 to Amendment No. 2 to the Registration Statement filed on Form S-4, File No. 333-191460, filed December 17, 2013)
10.26†	Deed of Amendment, Restatement and Accession, dated October 31, 2016, entered into by and among Trinseo Europe GmbH, Trinseo Export GmbH, Trinseo Deutschland Anlagengesellschaft mbH, Trinseo Netherlands B.V., Trinseo LLC, Trinseo U.S. Receivables Company SPV LLC, Styron Receivables Funding Designated Activity Company, Trinseo Finance Luxembourg S.à r.l., Luxembourg, Zweigniederlassung Horgen, Regency Assets Designated Activity Company, HSBC Bank plc, Trinseo Holding S.à r.l., TMF Administration Services Limited and the Law Debenture Trust Corporation plc
10.27	Form of Restoration and Elective Deferral Plan (incorporated herein by reference to Exhibit 10.35 to Amendment No. 2 to the Registration Statement on Form S-1, File No. 333-194561, filed May 5, 2014)
10.28	Performance Award (PA) Plan (incorporated herein by reference to Exhibit 10.36 to Amendment No. 2 to the Registration Statement on Form S-1, File No. 333-194561, filed May 5, 2014)

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10.29	Form of 2014 Omnibus Incentive Plan (incorporated herein by reference to Exhibit 10.38 to Amendment No. 4 to the Registration Statement on Form S-1, File No. 333-194561, filed June 2, 2014)
10.30	Trinseo S.A. Cash Incentive Plan (incorporated herein by reference to Exhibit 10.35 to Amendment No. 3 to the Registration Statement on Form S-1, File No. 333-194561, filed May 16, 2014)
10.31	Form of Indemnification Agreement for Directors and Officers (incorporated herein by reference to Exhibit 10.39 to Amendment No. 2 to the Registration Statement on Form S-1, File No. 333-194561, filed May 5, 2014)
10.32	Form of Director Offer Letter (incorporated herein by reference to Exhibit 10.1 to the Current Report filed on Form 8-K, File No. 001-36473, filed August 31, 2016)
10.33	Form of Restricted Stock Unit Agreement for Directors (incorporated herein by reference to Exhibit 10.38 to Amendment No. 4 to the Registration Statement on Form S-1, File No. 333-194561, filed June 2, 2014)
10.34	Form of Executive Restricted Stock Unit Award Agreement (incorporated herein by reference to Exhibit 10.1 to the Current Report filed on Form 8-K, File No. 001-36473, filed March 5, 2015)
10.35	Form of Executive Nonstatutory Option Award Agreement (incorporated herein by reference to Exhibit 10.1 to the Current Report filed on Form 8-K, File No. 001-36473, filed March 5, 2015)
10.36	Form of Employee Restricted Stock Unit Award Agreement (incorporated herein by reference to Exhibit 10.5 to the Quarterly Report filed on Form 10-Q, File No. 001-36473, filed August 7, 2015)
10.37	Form of Employee Non-statutory Option Award Agreement (incorporated herein by reference to Exhibit 10.6 to the Quarterly Report filed on Form 10-Q, File No. 001-36473, filed August 7, 2015)
10.38†	Form of Letter Agreement to Restricted Stock Unit Awardees regarding payment of dividend equivalents
12.1†	Statement of Computation of Ratios of Earnings to Fixed Charges
21.1†	Subsidiaries of Trinseo S.A.
23.1†	Consent of Independent Registered Public Accounting Firm PricewaterhouseCoopers LLP
23.2†	Consent of Independent Registered Public Accounting Firm Deloitte & Touche LLP
31.1†	Certification of Chief Executive Officer Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2†	Certification of Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, 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

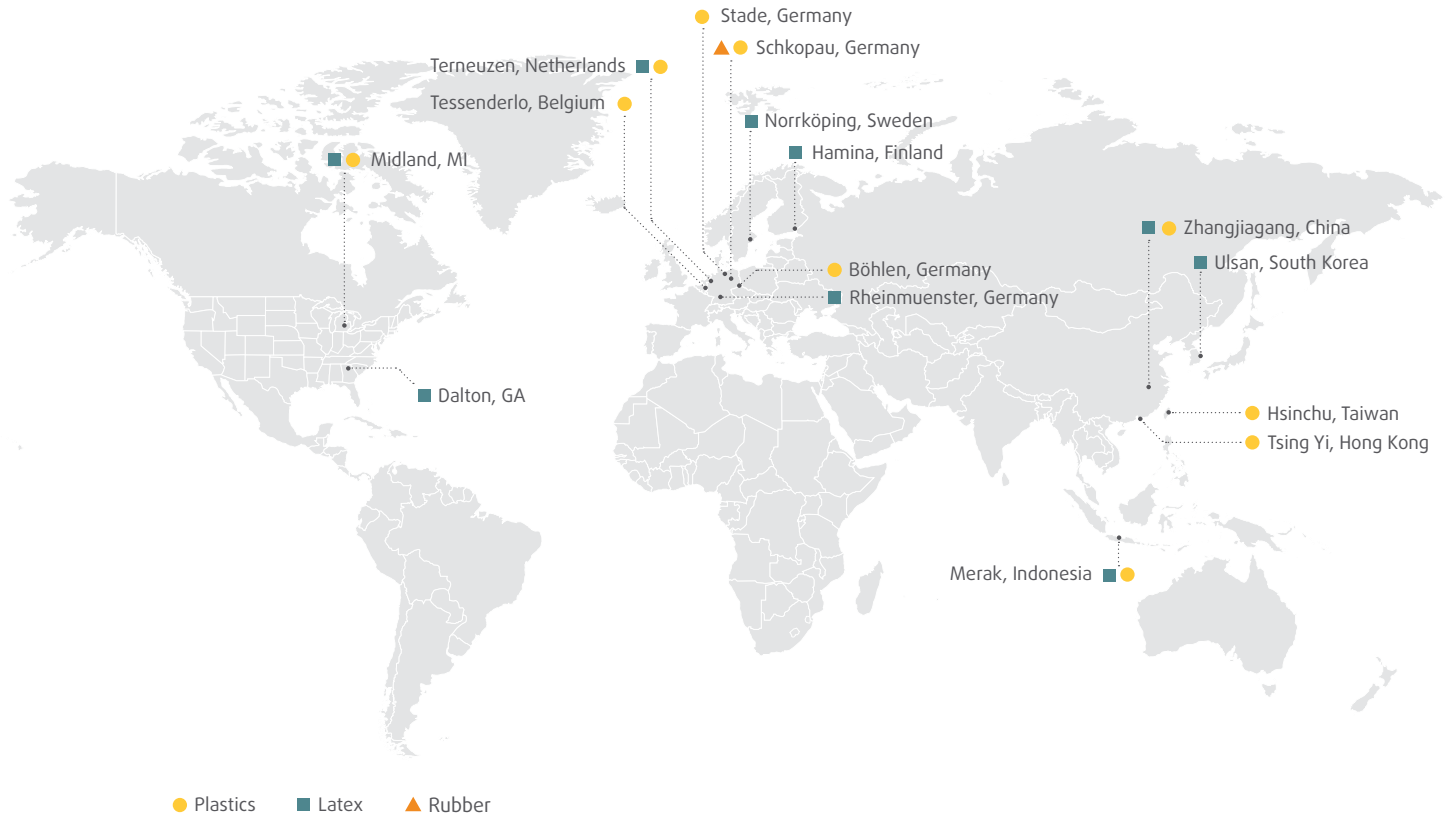
**Exhibit
No.****Description**

Exhibit No.	Description
32.2†	Certification of Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.INS†	XBRL Instance Document
101.SCH†	XBRL Taxonomy Extension Schema Document
101.CAL†	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF†	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB†	XBRL Extension Label Linkbase Document
101.PRE†	XBRL Taxonomy Extension Presentation Linkbase Document

* Application has been made to the Securities and Exchange Commission for confidential treatment of certain provisions of these exhibits. Omitted material for which confidential treatment has been requested has been filed separately with the Securities and Exchange Commission.

† Filed herewith.

Worldwide Manufacturing Assets



TRINSEO™

Trinseo LLC
1000 Chesterbrook Blvd.
Berwyn, PA 19312
+1 888 789 7661
+1 855 TRINSEO

Trinseo Europe GmbH
Zugerstrasse 231
8810 Horgen / Switzerland
+41 44 718 3600

Trinseo (Hong Kong) Limited
Suite 3401-3, 34/F Central Plaza
18 Harbour Road
Wanchai, Hong Kong
+852 3120 6300

CIG@Trinseo.com | www.Trinseo.com

