UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

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

For the fiscal year ended December 31, 2017

OR

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

For the transition period from to

Commission File Number 1-71

HEXION INC.
(Exact name of registrant as specified in its charter)

New Jersey	**13-0511250**
(State of incorporation)	**(I.R.S. Employer Identification No.)**
180 East Broad St., Columbus, OH 43215	**614-225-4000**
(Address of principal executive offices)	**(Registrant's telephone number)**

SECURITIES REGISTERED PURSUANT TO SECTION 12(b) OF THE ACT:

Title of each class	Name of each exchange on which registered
None	**None**

(Former name, former address and fiscal year, if changed since last report)

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 o No x.

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 o No x.

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 x No o.

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes x No o.

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. x

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

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

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

At December 31, 2017, the aggregate market value of voting and non-voting common equity of the Registrant held by non-affiliates was zero.

Number of shares of common stock, par value $0.01 per share, outstanding as of the close of business on March 1, 2018: 82,556,847

Documents incorporated by reference. None

HEXION INC.

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PART I

(dollars in millions)

Forward-Looking and Cautionary Statements

Certain statements in this report, including without limitation, certain statements made under Item 1, “Business,” and Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” are forward-looking statements within the meaning of and made pursuant to the safe harbor provisions of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. In addition, our management may from time to time make oral forward-looking statements. All statements, other than statements of historical facts, are forward-looking statements. Forward-looking statements may be identified by the words “believe,” “expect,” “anticipate,” “project,” “plan,” “estimate,” “may,” “will,” “could,” “should,” “seek” or “intend” and similar expressions. Forward-looking statements reflect our current expectations and assumptions regarding our business, the economy and other future events and conditions and are based on currently available financial, economic and competitive data and our current business plans. Actual results could vary materially depending on risks and uncertainties that may affect our operations, markets, services, prices and other factors as discussed in the Risk Factors section of this report. While we believe our assumptions are reasonable, we caution you against relying on any forward-looking statements as 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 those in the forward-looking statements include, but are not limited to, a weakening of global economic and financial conditions, interruptions in the supply of or increased cost of raw materials, the loss of, or difficulties with the further realization of, cost savings in connection with our strategic initiatives, the impact of our substantial indebtedness, our failure to comply with financial covenants under our credit facilities or other debt, pricing actions by our competitors that could affect our operating margins, changes in governmental regulations and related compliance and litigation costs and the other factors listed in the Risk Factors section of this report. For a more detailed discussion of these and other risk factors, see the Risk Factors section in this report. All forward-looking statements are expressly qualified in their entirety by this cautionary notice. The forward-looking statements made by us speak only as of the date on which they are made. Factors or events that could cause our actual results to differ may emerge from time to time. 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.

ITEM 1 - BUSINESS

Overview

Hexion Inc. (“Hexion” or the “Company”), a New Jersey corporation with predecessors dating from 1899, is the world’s largest producer of thermosetting resins, or thermosets, and a leading producer of adhesive and structural resins and coatings. Thermosets are a critical ingredient in most paints, coatings, glues and other adhesives produced for consumer or industrial uses. The type of thermoset used, and how it is formulated, applied and cured, determines its key attributes, such as durability, gloss, heat resistance, adhesion or strength of the final product. Thermosetting resins include materials such as phenolic resins, epoxy resins, polyester resins, acrylic resins and urethane resins.

Our direct parent is Hexion LLC, a holding company and wholly owned subsidiary of Hexion Holdings LLC (“Hexion Holdings”), the ultimate parent entity of Hexion. Hexion Holdings is controlled by investment funds managed by affiliates of Apollo Management Holdings, L.P. (together with Apollo Global Management, LLC and its subsidiaries, “Apollo”).

Our business is organized based on the products we offer and the markets we serve. At December 31, 2017, we had three reportable segments: Epoxy, Phenolic and Coating Resins; Forest Products Resins; and Corporate and Other.

Products and Markets

We have a broad range of thermoset resin technologies, with high quality research, applications development and technical service capabilities. We provide a broad array of thermosets and associated technologies, and have significant market positions in each of the key markets that we serve.

Our products are used in thousands of applications and are sold into diverse markets, such as forest products, architectural and industrial paints, packaging, consumer products, composites and automotive coatings. Major industry sectors that we serve include industrial/marine, construction, consumer/durable goods, automotive, wind energy, aviation, electronics, architectural, civil engineering, repair/remodeling and oil and gas field support. The diversity of our products limits our dependence on any one market or end-use. We have a history of product innovation and success in introducing new products to new markets, as evidenced by more than 850 granted patents, the majority of which relate to the development of new products and manufacturing processes, and we are constantly looking at ways to introduce new products in our currently established markets.

As of December 31, 2017, we had 52 active production sites around the world. Through our worldwide network of strategically located production facilities, we serve more than 3,300 customers in approximately 90 countries. Our position in certain additives, complementary materials and services further enables us to leverage our core thermoset technologies and provide our customers with a broad range of product solutions. As a result of our focus on innovation and a high level of technical service, we have cultivated long-standing customer relationships. Our global customers include leading companies in their respective industries, such as 3M, Akzo Nobel, BASF, Bayer, Dow, Louisiana Pacific, Monsanto, Owens Corning, PPG Industries, Valspar and Weyerhaeuser.

Industry & Competitors

We are a large participant in the specialty chemicals industry. Thermosetting resins are generally considered specialty chemical products because they are sold primarily on the basis of performance, technical support, product innovation and customer service. However, as a result of the impact of the ongoing global economic volatility and overcapacity in certain markets, certain of our competitors have focused more on price to retain business and market share, which we have followed in certain markets to maintain market share and remain a market leader.

We compete with many companies in most of our product lines, including large global chemical companies and small specialty chemical companies. No single company competes with us across all of our segments and existing product lines. The principal competitive factors in our industry include technical service, breadth of product offerings, product innovation, product quality and price. Some of our competitors are larger, have greater financial resources and may be able to better withstand adverse changes in industry conditions, including pricing, and the economy as a whole. Further, our competitors may have more resources to support continued expansion than we do. Some of our competitors also have a greater range of products and may be more vertically integrated than we are within specific product lines or geographies.

We believe that the principal factors that contribute to success in the specialty chemicals market, and our ability to maintain our position in the markets we serve, are (i) consistent delivery of high-quality products; (ii) favorable process economics; (iii) the ability to provide value to customers through both product attributes and strong technical service and (iv) an international footprint and presence in growing and developing markets.

Our Businesses

The following is a discussion of our reportable segments, their corresponding major product lines and the primary end-use applications of our key products as of December 31, 2017.

Epoxy, Phenolic and Coating Resins Segment
2017 Net Sales: $2,052

Epoxy Specialty Resins

We are a leading producer of epoxy specialty resins, modifiers and curing agents in Europe and the United States with a global reach to our end markets, which include emerging regions such as China and Latin America. Epoxy resins are the fundamental component of many types of materials and are often used in the automotive, construction, wind energy, aerospace and electronics industries due to their superior adhesion, strength and durability. We internally consume approximately 30% of our liquid epoxy resin (“LER”) production in specialty composite, coating and adhesive applications, which ensures a consistent supply of our required intermediate materials. Our position in basic epoxy resins, along with our technology and service expertise, has enabled us to offer formulated specialty products in certain markets. In composites, our specialty epoxy products are used either as replacements for traditional materials such as metal, wood and ceramics, or in applications where traditional materials do not meet demanding engineering specifications.

We are a leading producer of resins that are used in fiber reinforced composites. Composites are a fast growing class of materials that are used in a wide variety of applications ranging from aircraft components and wind turbine blades to sports equipment, and increasingly in automotive and transportation. We supply epoxy resin systems to composite fabricators in the wind energy, automotive and pipe markets.

Epoxy specialty resins are also used for a variety of high-end coating applications that require the superior adhesion, corrosion resistance and durability of epoxy, such as protective coatings for industrial flooring, pipe, marine and construction applications and automotive coatings. Epoxy-based surface coatings are among the most widely used industrial coatings due to their long service life and broad application functionality combined with overall economic efficiency. We also leverage our resin and additives position to supply custom resins to specialty coatings formulators.

Products	Key Applications
Adhesive Applications:	
Civil Engineering	Building and bridge construction, concrete enhancement and corrosion protection
Adhesives	*Automotive*: hem flange adhesives and panel reinforcements
	Construction: ceramic tiles, chemical dowels and marble
	Aerospace: metal and composite laminates
	Electronics: chip adhesives and solder masks
Electrical Applications:	
Electronic Resins	Unclad sheets, paper impregnation and electrical laminates for printed circuit boards
Electrical Castings	Generators and bushings, transformers, medium and high-voltage switch gear components, post insulators, capacitors and automotive ignition coils

Principal Competitors: Olin, Nan Ya, Huntsman, Spolchemie, Leuna Harze and Aditya Birla (Thai Epoxy)

Products	Key Applications
Composites:	
Composite Epoxy Resins	Pipes and tanks, automotive, sports (ski, snowboard, golf), boats, construction, aerospace, wind energy and industrial applications

Principal Competitors: Olin, Cytec-Solvay Group, BASF, Aditya Birla (Thai Epoxy), Gurit, Huntsman and Swancor

Products	Key Applications
Coating Applications:	
Floor Coatings (LER, Solutions, Performance Products)	Chemically resistant, antistatic and heavy duty flooring used in hospitals, the chemical industry, electronics workshops, retail areas and warehouses
Ambient Cured Coatings (LER, Solid Epoxy Resin (“SER”) Solutions, Performance Products)	Marine (manufacturing and maintenance), shipping containers and large steel structures (such as bridges, pipes, plants and offshore equipment)
Waterborne Coatings (EPI-REZ™ Epoxy Waterborne Resins)	Substitutes of solvent-borne products in both heat cured and ambient cured applications

Principal Competitors: Olin, Huntsman, Nan Ya, Air Products, Cytec-Solvay Group and Allnex

Basic Epoxy Resins and Intermediates

We are one of the world’s largest suppliers of basic epoxy resins, such as solid epoxy resin (“SER”) and LER. These base epoxies are used in a wide variety of industrial coatings applications. In addition, we are a major producer of bisphenol-A (“BPA”) and epichlorohydrin (“ECH”), key precursors in the downstream manufacture of basic epoxy resins and epoxy specialty resins. We internally consume the majority of our BPA, and all of our ECH, which ensures a consistent supply of our required intermediate materials.

Products	Key Applications
Electrocoat (LER, SER, BPA)	Automotive, general industry and white goods (such as appliances)
Powder Coatings (SER, Performance Products)	White goods, pipes for oil and gas transportation, general industry (such as heating radiators) and automotive (interior parts and small components)
Heat Cured Coatings (LER, SER)	Metal packaging and coil-coated steel for construction and general industry

Principal Competitors: Olin, Huntsman, Nan Ya and the Formosa Plastics Group, Leuna Harze, Kukdo and other Korean producers

Versatic Acids and Derivatives

We are the world’s largest producer of Versatic acids and derivatives. Versatic acids and derivatives are specialty monomers that provide significant performance advantages for finished coatings, including superior adhesion, hydrolytic stability, water resistance, appearance and ease of application. Our products include basic Versatic acids and derivatives sold under the Versatic™, VEOVA™ vinyl ester and CARDURA™ glycidyl ester names. Applications for these specialty monomers include decorative, automotive and protective coatings, as well as other uses, such as adhesives and intermediates.

Products	Key Applications
CARDURA™ glycidyl ester	Automotive repair/refinishing, automotive original equipment manufacturing (“OEM”) and industrial coatings
Versatic™ Acids	Chemical intermediates (e.g., for peroxides, pharmaceuticals and agrochemicals) and adhesion promoters (e.g., for tires)
VEOVA™ vinyl ester	Architectural coatings, construction and adhesives

Principal Competitors: ExxonMobil and Hebei Shield Excellence Technology

Phenolic Specialty Resins and Molding Compounds

We are one of the leading producers of phenolic specialty resins, which are used in applications that require extreme heat resistance and strength, such as after-market automotive and OEM truck brake pads, filtration, aircraft components and foundry resins. These products are sold under globally recognized brand names such as BORDEN, BAKELITE, DURITE and CELLOBOND. Our phenolic specialty resins are known for their binding qualities and are used widely in the production of mineral wool and glass wool used for commercial and domestic insulation applications.

We have expanded our phenolic specialty resins business in select regions where we believe there are prospects for strong long-term growth. In the second half of 2015, we acquired the remaining 50% interest in a joint venture that constructed a phenolic specialty resins manufacturing facility in China. This facility produces a full range of specialty novolac and resole phenolic resins used in a diverse range of applications, including refractories, friction and abrasives to support the growing auto and consumer markets in China, as well as exports.

Products	Key Applications
Phenolic Specialty Resins:	
Composites and Electronic Resins	Aircraft & rail components, ballistic applications, industrial grating, pipe, jet engine components, computer chip encasement and photolithography
Automotive Phenol Formaldehyde Resins	Acoustical insulation, engine filters, brakes, friction materials, interior components, molded electrical parts and assemblies
Construction Phenol Formaldehyde Resins and Urea Formaldehyde Resins	Fiberglass insulation, floral foam, insulating foam, lamp cement for light bulbs, molded appliance and electrical parts, molding compounds, sandpaper, fiberglass mat and coatings
Molding Compounds:	
Phenolic, Epoxy, Unsaturated Polyesters	High performance automotive transmissions and under-hood components, heat resistant knobs and bases, switches and breaker components, pot handles and ashtrays
Glass	High load, dimensionally stable automotive underhood parts and commutators

Principal Competitors: Sumitomo (Durez), SI Group, Plenco, Dynea International, Arclin, Georgia-Pacific and Shenquan

Phenolic Encapsulated Substrates

We are a leading producer of phenolic resin encapsulated sand and ceramic substrates that are used in oil field applications. Our highly specialized compounds and resins are designed to perform well under extreme conditions, such as intense heat, high-closure stress and corrosive environments, that characterize oil and gas drilling. Our resin encapsulated proppants are also used to enhance oil and gas recovery rates and extend well life.

Products	Key Applications
Oil & Gas Stimulation Services Applications:	
Resin Encapsulated Proppants	Oil and gas fracturing

Principal Competitors: Santrol, Preferred Sands, Patriot Proppants, Atlas Resins, and Carbo Ceramics

Forest Products Resins Segment
2017 Net Sales: $1,539

Formaldehyde Based Resins and Intermediates

We are the leading producer of formaldehyde-based resins for the North American forest products industry, and also hold significant positions in Latin America, Australia, New Zealand, and Europe. Formaldehyde-based resins, also known as forest products resins, are a key adhesive and binding ingredient used in the production of a wide variety of engineered lumber products, including medium-density fiberboard (“MDF”), particleboard, oriented strand board (“OSB”) and various types of plywood and laminated veneer lumber (“LVL”). These products are used in a wide range of applications in the construction, remodeling and furniture industries. Forest products resins have relatively short shelf lives, and as such, our manufacturing facilities are strategically located in close proximity to our customers.

In addition, we are a significant producer of formaldehyde, a key raw material used to manufacture thousands of other chemicals and products, including the manufacture of methylene diphenyl diisocyanate (“MDI”) and butanediol (“BDO”). Nearly all of our formaldehyde requirements for the production of forest products resins are provided by internal production, giving us a competitive advantage versus our non-integrated competitors.

In the second half of 2015, we completed the expansion of our forest products resins manufacturing capacity in Brazil and the construction of a new formaldehyde plant in North America. In addition, we finalized construction of an additional formaldehyde plant in North America in early 2016. This added capacity has enhanced our ability to leverage the expected long-term growth in these regions.

Products	Key Applications
Forest Products Resins:	
Engineered Wood Resins	Softwood and hardwood plywood, OSB, LVL, particleboard, MDF and decorative laminates
Specialty Wood Adhesives	Laminated beams, cross-laminated timber, structural and nonstructural fingerjoints, wood composite I-beams, truck-decking, cabinets, doors, windows, furniture, molding and millwork and paper laminations
Wax Emulsions	Moisture resistance for panel boards and other specialty applications
Formaldehyde Applications:	
Formaldehyde	MDI, BDO, herbicides and fungicides, scavengers for oil and gas production, fabric softeners, urea formaldehyde resins, phenol formaldehyde resins, melamine formaldehyde resins, hexamine and other catalysts

Principal Competitors: Arclin, Georgia-Pacific, Huntsman, BASF, Covestro and Foremark Performance Chemicals

Corporate and Other Segment

Our Corporate and Other segment primarily includes corporate general and administrative expenses that are not allocated to the other segments, such as shared service and administrative functions, foreign exchange gains and losses and legacy company costs.

For additional information about our segments, see Note 16 to our Consolidated Financial Statements in Item 8 of Part II of this Annual Report on Form 10-K.

Marketing, Customers and Seasonality

Our products are sold to industrial users worldwide through a combination of a direct sales force that services our larger customers and third-party distributors that more cost-effectively serve our smaller customers. Our customer service and support network is made up of key regional customer service centers. We have global account teams that serve the major needs of our global customers for technical service and supply and commercial term requirements. Where operating and regulatory factors vary from country to country, these functions are managed locally.

In 2017, our largest customer accounted for approximately 2% of our net sales, and our top ten customers accounted for approximately 14% of our net sales. Neither our overall business nor any of our reporting segments depends on any single customer or a particular group of customers; therefore, the loss of any single customer would not have a material adverse effect on either of our two reporting segments or the Company as a whole. Our primary customers are manufacturers, and the demand for our products is seasonal in certain of our businesses, with the highest demand in the summer months and lowest in the winter months. Therefore, the dollar amount of our backlog orders as of December 31, 2017 is not significant. Demand for our products can also be cyclical, as general economic health and industrial and commercial production levels are key drivers for our business.

International Operations

Our non-U.S. operations accounted for 58%, 60% and 60% of our sales in 2017, 2016 and 2015, respectively. While our international operations may be subject to a number of additional risks, such as exposure to foreign currency exchange risk, we do not believe that our foreign operations, on the whole, carry significantly greater risk than our operations in the United States. Information about sales by geographic region for the past three years and long-lived assets by geographic region for the past two years can be found in Note 16 in Item 8 of Part II of this Annual Report on Form 10-K. More information about our methods and actions to manage exchange risk and interest rate risk can be found in Item 7A of Part II of this Annual Report on Form 10-K.

Raw Materials

In 2017, we purchased approximately $2.2 billion of raw materials, representing approximately 70% of our cost of sales. The three largest raw materials that we use are phenol, methanol and urea, which collectively represented approximately 50% of our total raw material expenditures in 2017. The majority of raw materials that we use to manufacture our products are available from more than one source, and are readily available in the open market. We have long-term purchase agreements for certain raw materials that ensure the availability of adequate supply. These agreements generally have periodic price adjustment mechanisms and do not have minimum annual purchase requirements. Smaller quantity materials that are single sourced generally have long-term supply contracts to maximize supply reliability. Prices for our main feedstocks are generally driven by underlying petrochemical benchmark prices and energy costs, which are subject to price fluctuations. Although we seek to offset increases in raw material prices with increases in our product prices, we may not always be able to do so, and there are periods when price increases lag behind raw material price increases.

Research and Development

Our research and development activities are geared towards developing and enhancing products, processes and application technologies so that we can maintain our position as the world’s largest producer of thermosetting resins. We focus on:

- developing new or improved applications based on our existing product lines and identified market trends;
- developing new resin products and applications for customers to improve their competitive advantage and profitability;
- providing premier technical service for customers of specialty products;
- providing technical support for manufacturing locations and assisting in optimizing our manufacturing processes;
- ensuring that our products are manufactured consistent with our global environmental, health and safety policies and objectives;
- developing lower cost manufacturing processes globally; and
- expanding our production capacity.

We have over 380 scientists and technicians worldwide. Our research and development facilities include a broad range of synthesis, testing and formulating equipment and small-scale versions of customer manufacturing processes for applications development and demonstration.

More recently, we have focused research and development resources on the incorporation of green chemistry principles into technology innovations to remain competitive and to address our customers’ demands for more environmentally preferred solutions. Our efforts have focused on developing resin technologies that reduce emissions, maximize efficiency and increase the use of bio-based raw materials. Some examples of meaningful results of our investment in the development of green products include:

- EPIKOTE™ / EPIKURE™ epoxy systems for wind energy applications, which provide superior mechanical and process properties, reducing air emissions when hours of energy are created;
- EPIKOTE™ and Bakelite® resin systems for automotive applications, which produce lightweight automotive composite components and other automotive parts that allow customers to build cars with better mileage, reducing air emissions without sacrificing performance;
- EcoBind™ Resin Technology, an ultra low-emitting binder resin used to produce engineered wood products; and
- Epi-Rez™ Epoxy Waterborne Resins, which provide for lower volatile organic compounds, reducing air emissions.

In 2017, 2016 and 2015, our research and development and technical services expense was $58, $59 and $65, respectively ($3 and $6 of these expenses in 2016 and 2015, respectively, relate to divested businesses). We take a customer-driven approach to discovering new applications and processes and providing customer service through our technical staff. Through regular direct contact with our key customers, our research and development associates can become aware of evolving customer needs in advance, and can anticipate their requirements to more effectively plan customer programs. We also focus on continuous improvement of plant yields and production capacity and reduction of fixed costs.

Intellectual Property

As of December 31, 2017, we own, license or have rights to over 850 granted patents and over 1,150 registered trademarks, as well as various patent and trademark applications and technology licenses around the world, which we currently use or hold for use in our operations. A majority of our patents relate to developing new products and processes for manufacturing and will expire between 2018 and 2035. We renew our trademarks on a regular basis. While we view our patents and trademarks to be valuable, because of the broad scope of our products and services, we do not believe that the loss or expiration of any single patent or trademark would have a material adverse effect on our results of operations, financial position or the continuation of our business.

Industry Regulatory Matters

Domestic and international laws regulate the production and marketing of chemical substances. Almost every country has its own legal procedures for registration and import. Of these, the laws and regulations in the European Union, the United States (Toxic Substances Control Act) and China are the most significant to our business. Additionally, other laws and regulations may also limit our expansion into other countries. Chemicals that are not included on one or more of these, or any other country’s chemical inventory lists, can usually be registered and imported, but may first require additional testing or submission of additional administrative information.

The European Commission enacted a regulatory system in 2006, known as Registration, Evaluation, Authorization and Restriction of Chemical substances (“REACH”), which requires manufacturers, importers and consumers of certain chemicals to register these chemicals and evaluate their potential impact on human health and the environment. As REACH matures, significant market restrictions could be imposed on the current and future uses of chemical products that we use as raw materials or that we sell as finished products in the European Union. Other countries may also enact similar regulations.

Environmental Regulations

Our policy is to operate our plants in a manner that protects the environment, health and safety of our employees, customers and communities. We have implemented company-wide environmental, health and safety policies managed by our Environmental, Health and Safety (“EH&S”) department and overseen by the EH&S Committee of Hexion Holdings’ Board of Managers. Our EH&S department provides support and oversight to our operations worldwide to ensure compliance with environmental, health and safety laws and regulations. This responsibility is executed via training, communication of EH&S policies, formulation of relevant policies and standards, EH&S audits and incident response planning and implementation. Our EH&S policies include systems and procedures that govern environmental emissions, waste generation, process safety management, handling, storage and disposal of hazardous substances, worker health and safety requirements, site security, emergency planning and response and product stewardship.

Our operations involve the use, handling, processing, storage, transportation and disposal of hazardous materials, and we are subject to extensive environmental regulation at the federal, state and international levels. We are also exposed to the risk of claims for environmental remediation or restoration. Our production facilities require operating permits that are subject to renewal or modification. Violations of environmental laws or permits may result in restrictions being imposed on operating activities, substantial fines, penalties, damages or other costs. In addition, statutes such as the federal Comprehensive Environmental Response, Compensation and Liability Act and comparable state and foreign laws impose strict, joint and several liability for investigating and remediating the consequences of spills and other releases of hazardous materials, substances and wastes at current and former facilities, as well as third-party disposal sites. Other laws permit individuals to seek recovery of damages for alleged personal injury or property damage due to exposure to hazardous substances and conditions at our facilities or to hazardous substances otherwise owned, sold or controlled by us. Therefore, notwithstanding our commitment to environmental management and environmental health and safety, we may incur liabilities in the future, and these liabilities may result in a material adverse effect on our business, financial condition, results of operations or cash flows.

Although our environmental policies and practices are designed to ensure compliance with international, federal and state laws and environmental regulations, future developments and increasingly stringent regulation could require us to make additional unforeseen environmental expenditures. In addition, our former operations, including our ink, wallcoverings, film, phosphate mining and processing, thermoplastics and food and dairy operations, may give rise to claims relating to our period of ownership.

We expect to incur future costs for capital improvements and general compliance under environmental, health and safety laws, including costs to acquire, maintain and repair pollution control equipment. In 2017, we incurred related capital expenditures of $25. We estimate that capital expenditures in 2018 for environmental controls at our facilities will be between $20 and $25. This estimate is based on current regulations and other requirements, but it is possible that a material amount of capital expenditures, in addition to those we currently anticipate, could be necessary if these regulations or other requirements or other facts change.

Employees

At December 31, 2017, we had approximately 4,300 employees. Approximately 37% of our employees are members of a labor union or are represented by workers’ councils that have collective bargaining agreements, including most of our European employees. We believe that we have good relations with our union and non-union employees.

Our Board of Directors and sole shareholder expect honest and ethical conduct from every employee. We strive to adhere to the highest ethical standards in the conduct of our business and to comply with all laws and regulations that are applicable to the business. Each employee has a responsibility to maintain and advance the ethical values of the Company. In support of this, our employees receive training to emphasize the importance of compliance with our Code of Conduct.

Where You Can Find More Information

The public may read and copy any materials that we file with the Securities and Exchange Commission (the “SEC”) at the SEC’s Public Reference Room at 100 F Street, NW, Washington, DC 20549. The public may obtain information about the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. In addition, our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to these reports are available free of charge to the public through our internet website at www.hexion.com under “Investor Relations - SEC Filings” or on the SEC’s website at www.sec.gov.

ITEM 1A - RISK FACTORS

Following are our principal risks. These factors may or may not occur, and we cannot express a view on the likelihood that any of these may occur. Other factors may exist that we do not consider significant based on information that is currently available or that we are not currently able to anticipate. Any of the following risks could materially adversely affect our business, financial condition or results of operations and prospects.

Risks Related to Our Business

If global economic conditions are weak or deteriorate, it will negatively impact our business operations, results of operations and financial condition.

Changes in global economic and financial market conditions could impact our business operations in a number of ways including, but not limited to, the following:

- reduced demand in key customer segments, such as oil and gas, automotive, building, construction and electronics, compared to prior years;
- weak economic conditions in our primary regions of operations: U.S., Europe, and Asia;
- payment delays by customers and reduced demand for our products caused by customer insolvencies and/or the inability of customers to obtain adequate financing to maintain operations
- insolvency of suppliers or the failure of suppliers to meet their commitments resulting in product delays;
- more onerous credit and commercial terms from our suppliers such as shortening the required payment period for outstanding accounts receivable or reducing or eliminating the amount of trade credit available to us; and
- potential delays in accessing our senior secured asset based revolving credit facility (the “ABL Facility”) or obtaining new credit facilities on terms we deem commercially reasonable or at all, and the potential inability of one or more of the financial institutions included in our syndicated ABL Facility to fulfill their funding obligations. Should a bank in our syndicated ABL Facility be unable to fund a future draw request, we could find it difficult to replace that bank in the facility.

Due to worldwide economic volatility and uncertainty, the short-term outlook for our business is difficult to predict.

Fluctuations in direct or indirect raw material costs could have an adverse impact on our business.

Raw materials costs made up approximately 70% of our cost of sales in 2017. The prices of our direct and indirect raw materials have been, and we expect them to continue to be, volatile. If the cost of direct or indirect raw materials increases significantly and we are unable to offset the increased costs with higher selling prices, our profitability will decline. Increases in prices for our products could also hurt our ability to remain both competitive and profitable in the markets in which we compete.

Although some of our materials contracts include competitive price clauses that allow us to buy outside the contract if market pricing falls below contract pricing, and certain contracts have minimum-maximum monthly volume commitments that allow us to take advantage of spot pricing, we may be unable to purchase raw materials at market prices. In addition, some of our customer contracts have fixed prices for a certain term, and as a result, we may not be able to pass on raw material price increases to our customers immediately, if at all. Due to differences in timing of the pricing trigger points between our sales and purchase contracts, there is often a “lead-lag” impact. In many cases this “lead-lag” impact can negatively impact our margins in the short term in periods of rising raw material prices and positively impact them in the short term in periods of falling raw material prices. Future raw material prices may be impacted by new laws or regulations, suppliers’ allocations to other purchasers, changes in our supplier manufacturing processes as some of our products are byproducts of these processes, interruptions in production by suppliers, natural disasters, volatility in the price of crude oil and related petrochemical products and changes in exchange rates.

An inadequate supply of direct or indirect raw materials and intermediate products could have a material adverse effect on our business.

Our manufacturing operations require adequate supplies of raw materials and intermediate products on a timely basis. The loss of a key source or a delay in shipments could have a material adverse effect on our business. Raw material availability may be subject to curtailment or change due to, among other things:

- new or existing laws or regulations;
- suppliers’ allocations to other purchasers;
- interruptions in production by suppliers; and
- natural disasters.

Many of our raw materials and intermediate products are available in the quantities we require from a limited number of suppliers. Should any of our key suppliers fail to deliver these raw materials or intermediate products to us or no longer supply us, we may be unable to purchase these materials in necessary quantities, which could adversely affect our volumes, or may not be able to purchase them at prices that would allow us to remain competitive. During the past several years, certain of our suppliers have experienced force majeure events rendering them unable to deliver all, or a portion of, the contracted-for raw materials. On these occasions, we have been forced to limit production or were forced to purchase replacement raw materials in the open market at significantly higher costs or place our customers on an allocation of our products. In the past, some of our customers have chosen to discontinue or decrease the use of our products as a result of these measures. We have experienced force majeure events by certain of our suppliers which have had significant negative impacts on our business. For example, in 2014, Shell notified us of a supply interruption event at its Moerdijk, Netherlands facility, which provides key raw materials to us, and this event resulted in us allocating certain products to our customers through mid-2015, at which point the disruption was resolved. In addition, we cannot predict whether new regulations or restrictions may be imposed in the future which may result in reduced supply or further increases in prices. We cannot assure investors that we will be able to renew our current materials contracts or enter into replacement contracts on commercially acceptable terms, or at all. Fluctuations in the price of these or other raw materials or intermediate products, the loss of a key source of supply or any delay in the supply could result in a material adverse effect on our business.

Our production facilities are subject to significant operating hazards which could cause environmental contamination, personal injury and loss of life, and severe damage to, or destruction of, property and equipment.

Our production facilities are subject to hazards associated with the manufacturing, handling, storage and transportation of chemical materials and products, including human exposure to hazardous substances, pipeline and equipment leaks and ruptures, explosions, fires, inclement weather and natural disasters, mechanical failures, unscheduled downtime, transportation interruptions, remedial complications, chemical spills, discharges or releases of toxic or hazardous substances or gases, storage tank leaks and other environmental risks. Additionally, a number of our operations are adjacent to operations of independent entities that engage in hazardous and potentially dangerous activities. Our operations or adjacent operations could result in personal injury or loss of life, severe damage to or destruction of property or equipment, environmental damage, or a loss of the use of all or a portion of one of our key manufacturing facilities. Such events at our facilities, or adjacent third-party facilities, could have a material adverse effect on us.

We may incur losses beyond the limits or coverage of our insurance policies for liabilities that are associated with these hazards. In addition, various kinds of insurance for companies in the chemical industry have not been available on commercially acceptable terms, or, in some cases, have been unavailable altogether. In the future, we may not be able to obtain coverage at current levels, and our premiums may increase significantly on coverage that we maintain.

Environmental obligations and liabilities could have a substantial negative impact on our financial condition, cash flows and profitability.

Our operations involve the use, handling, processing, storage, transportation and disposal of hazardous materials and are subject to extensive and complex U.S. federal, state, local and non-U.S. supranational, national, provincial, and local environmental, health and safety laws and regulations. These environmental laws and regulations include those that govern the discharge of pollutants into the air and water, the generation, use, storage, transportation, treatment and disposal of hazardous materials and wastes, the cleanup of contaminated sites, occupational health and safety and those requiring permits, licenses, or other government approvals for specified operations or activities. Our products are also subject to a variety of international, national, regional, state, and provincial requirements and restrictions applicable to the manufacture, import, export or subsequent use of such products. In addition, we are required to maintain, and may be required to obtain in the future, environmental, health and safety permits, licenses, or government approvals to continue current operations at most of our manufacturing and research facilities throughout the world.

Compliance with environmental, health and safety laws and regulations, and maintenance of permits, can be costly and complex, and we have incurred and will continue to incur costs, including capital expenditures and costs associated with the issuance and maintenance of letters of credit, to comply with these requirements. In 2017, we incurred capital expenditures of $25 to comply with environmental, health and safety laws and regulations and to make other environmental improvements. If we are unable to comply with environmental, health and safety laws and regulations, or maintain our permits, we could incur substantial costs, including fines and civil or criminal sanctions, third party property damage or personal injury claims or costs associated with upgrades to our facilities or changes in our manufacturing processes in order to achieve and maintain compliance, and may also be required to halt permitted activities or operations until any necessary permits can be obtained or complied with, or decide to close the impacted facility. In addition, future developments or increasingly stringent regulations could require us to make additional unforeseen environmental expenditures, which could have a material adverse effect on our business.

Environmental, health and safety requirements change frequently and have tended to become more stringent over time. We cannot predict what environmental, health and safety laws and regulations or permit requirements will be enacted or amended in the future, how existing or future laws or regulations will be interpreted or enforced or the impact of such laws, regulations or permits on future production expenditures, supply chain or sales. Our costs of compliance with current and future environmental, health and safety requirements could be material. Such future requirements include legislation designed to reduce emissions of carbon dioxide and other substances associated with climate change ("greenhouse gases"). The European Union has enacted greenhouse gas emissions legislation and continues to expand the scope of such legislation. The U.S. Environmental Protection Agency (the "USEPA") has promulgated regulations applicable to projects involving greenhouse gas emissions above a certain threshold, and the United States and certain states within the United States have enacted, or are considering, limitations on greenhouse gas emissions. These requirements to limit greenhouse gas emissions could significantly increase our energy costs, and may also require us to incur material capital costs to modify our manufacturing facilities.

In addition, we are subject to liability associated with hazardous substances in soil, groundwater and elsewhere at a number of sites. These include sites that we formerly owned or operated and sites where hazardous wastes and other substances from our current and former facilities and operations have been sent, treated, stored, or recycled or disposed of, as well as sites that we currently own or operate. Depending upon the circumstances, our liability may be strict, joint and several, meaning that we may be held responsible for more than our proportionate share, or even all, of the liability involved regardless of our fault or whether we are aware of the conditions giving rise to the liability. Even where liability has been allocated among parties, we may be subject to material changes in such allocation in the future for a number of reasons, including the discovery of new contamination, the insolvency of a responsible party, or a heightened nexus to the remediation site. Environmental conditions at these sites can lead to environmental cleanup liability and claims against us for personal injury or wrongful death, property damages and natural resource damages, as well as to claims and obligations for the investigation and cleanup of environmental conditions. The extent of any of these liabilities is difficult to predict, but in the aggregate such liabilities could be material.

We have been notified that we are or may be responsible for environmental remediation at a number of sites in North America, Europe and South America. We are also performing a number of voluntary cleanups. The most significant sites at which we are performing or participating in environmental remediation are sites formerly owned by us in Geismar, Louisiana and Plant City, Florida. As the result of former, current or future operations, there may be additional environmental remediation or restoration liabilities or claims of personal injury by employees or members of the public due to exposure or alleged exposure to hazardous materials in connection with our operations, properties or products. Sites sold by us in past years may have significant site closure or remediation costs and our share, if any, may be unknown to us at this time. These environmental liabilities or obligations, or any that may arise or become known to us in the future, could have a material adverse effect on our financial condition, cash flows and profitability.

Future chemical regulatory actions may decrease our profitability.

Several governmental agencies have enacted, are considering or may consider in the future, regulations that may impact our ability to sell certain chemical products in certain geographic areas. The European Registration, Evaluation and Authorization of Chemicals (“REACH”) regulation requires manufacturers, importers and consumers of certain chemicals manufactured in, or imported into, the European Union to register such chemicals and evaluate their potential impacts on human health and the environment. REACH may result in certain chemicals being further regulated, restricted or banned from use in the European Union. In addition, the Frank R. Lautenberg Chemical Safety for the 21st Century Act (“LCSA”) was signed into law on June 22, 2016, and updates and revises the Toxic Substances Control Act. LCSA requires the implementing agency to conduct risk evaluations on high priority chemicals, which could include chemical products we manufacture. Other countries have implemented, or are considering implementation of, similar chemical regulatory programs. When fully implemented, REACH, LCSA and other similar regulatory programs may result in significant adverse market impacts on the affected chemical products. If we fail to comply with REACH, LCSA or other similar laws and regulations, we may be subject to penalties or other enforcement actions, including fines, injunctions, recalls or seizures, which would have a material adverse effect on our financial condition, cash flows and profitability. Additionally, studies conducted in association with these regulatory programs, or otherwise conducted through trade associations, may result in new information regarding the health effects and environmental impact of our products and raw materials. Such studies could result in future regulations restricting the manufacture or use of our products, liability for adverse environmental or health effects linked to our products, and/or de-selection of our products for specific applications. These restrictions, liability, and product de-selection could have a material adverse effect on our business, our financial condition and/or liquidity.

Because of certain government public health agencies’ concerns regarding the potential for adverse human health effects, formaldehyde is a regulated chemical and public health agencies continue to evaluate its safety. A division of the World Health Organization, the International Agency for Research on Cancer, or IARC, and the National Toxicology Program, or NTP, within the U.S. Department of Health and Human Services, have classified formaldehyde as being carcinogenic to humans. The USEPA, under its Integrated Risk Information System, or IRIS, released a draft of its toxicological review of formaldehyde in 2010, stating that formaldehyde meets the criteria to be described as “carcinogenic to humans.” The National Academy of Sciences peer reviewed the draft IRIS toxicological review and issued a report in April 2011 that criticized the draft IRIS toxicological review and stated that the methodologies and the underlying science used in the draft IRIS review did not clearly support a conclusion of a causal link between formaldehyde exposure and leukemia. USEPA may issue a revised draft IRIS toxicological review to reflect the NAS findings, including the conclusions regarding a causal link between formaldehyde exposure and leukemia. Effective January 1, 2016, ECHA classified formaldehyde as a Category 2 Mutagen, but rejected reclassification as a Category 1A Carcinogen. It is possible that new regulatory requirements could be promulgated to limit human exposure to formaldehyde, that we could incur substantial additional costs to meet any such regulatory requirements, and that there could be a reduction in demand for our formaldehyde-based products. These additional costs and reduced demand could have a material adverse effect on our operations and profitability.

BPA, which is manufactured and used as an intermediate at our Deer Park, Texas and Pernis, Netherlands manufacturing facilities, and is also sold directly to third parties, is currently considered under certain state and international regulatory programs as a reproductive toxicant and an “endocrine disrupter,” meaning BPA could disrupt normal biological processes. BPA continues to be subject to scientific, regulatory and legislative review and negative media attention. In Europe, the EU Committee for Risk Assessment adopted an opinion to change the existing harmonized classification and labeling of BPA from a category 2 reproductive Toxicant to a category 1B reproductive Toxicant. This classification change will become effective March 1, 2018. The EU Member State Committee agreed to add BPA to the Substance of Very High Concern (“SVHC”) candidate list based upon its classification as a reproductive toxicant, as well as for its endocrine disrupting properties to both human health and the environment. The REACH Risk Management Option Analysis (RMOA) was released July 6, 2017, in which BPA is identified as an endocrine disruptor for the environment with no safe threshold, and REACH restrictions are identified as the preferred risk management measure. The California Environmental Protection Agency’s Office of Environmental Health Hazard Assessment (“OEHHA”) listed BPA under Proposition 65 as a developmental and reproductive toxicant, requiring warning labels unless BPA exposures are shown to be less than a risk-based level (the maximum allowable dose level (“MADL”)). As of May 11, 2016, products containing BPA sold into California must comply with Proposition 65’s requirements. Despite these hazard designations and listings, the US Food and Drug Administration (“FDA”) is also actively engaged in the scientific and regulatory review of BPA and, in a letter submitted to OEHHA dated April 6, 2015, reaffirmed that BPA is safe as currently permitted in FDA-regulated food contact uses and concluded that FDA’s National Center for Toxicological Research study did not support the listing of BPA as a reproductive toxicant. In December 2012, France enacted a law that bans direct contact of packaging containing BPA with food and consumer products. In January 2015, the European Food Safety Authority (“EFSA”) concluded that BPA poses no health risk to consumers of any age group (including unborn children, infants and adolescents) at currently permitted exposure levels. EFSA confirmed this conclusion in October 2016. Regulatory and legislative initiatives such as these, or product de-selection resulting from such regulatory actions, may result in a reduction in demand for BPA and our products containing BPA and could also result in additional liabilities as well as an increase in operating costs to meet more stringent regulations. Such increases in operating costs and/or reduction in demand could have a material adverse effect on our operations and profitability.

Scientists periodically conduct studies on the potential human health and environmental impacts of chemicals, including products we manufacture and sell. Also, nongovernmental advocacy organizations and individuals periodically issue public statements alleging human health and environmental impacts of chemicals, including products we manufacture and sell. Based upon such studies or public statements, our customers may elect to discontinue the purchase and use of our products, even in the absence of any government regulation. Such actions could significantly decrease the demand for our products and, accordingly, have a material adverse effect on our business, financial condition, cash flows and profitability.

We are subject to certain risks related to litigation filed by or against us, and adverse results may harm our business.

We cannot predict with certainty the cost of defense, of prosecution or of the ultimate outcome of litigation and other proceedings filed by or against us, including penalties or other civil or criminal sanctions, or remedies or damage awards, and adverse results in any litigation and other proceedings may materially harm our business. Litigation and other proceedings may include, but are not limited to, actions relating to intellectual property, international trade, commercial arrangements, product liability, environmental, health and safety, joint venture agreements, labor and employment or other harms resulting from the actions of individuals or entities outside of our control. In the case of intellectual property litigation and proceedings, adverse outcomes could include the cancellation, invalidation or other loss of material intellectual property rights used in our business and injunctions prohibiting our use of business processes or technology that are subject to third-party patents or other third-party intellectual property rights. Litigation based on environmental matters or exposure to hazardous substances in the workplace or based upon the use of our products could result in significant liability for us, which could have a material adverse effect on our business, financial condition and/or profitability.

Because we manufacture and use materials that are known to be hazardous, we are subject to, or affected by, certain product and manufacturing regulations, for which compliance can be costly and time consuming. In addition, we may be subject to personal injury or product liability claims as a result of human exposure to such hazardous materials.

We produce hazardous chemicals that require care in handling and use that are subject to regulation by many U.S. and non-U.S. national, supra-national, state and local governmental authorities. In some circumstances, these authorities must review and, in some cases approve, our products and/or manufacturing processes and facilities before we may manufacture and sell some of these chemicals. To be able to manufacture and sell certain new chemical products, we may be required, among other things, to demonstrate to the relevant authority that the product does not pose an unreasonable risk during its intended uses and/or that we are capable of manufacturing the product in compliance with current regulations. The process of seeking any necessary approvals can be costly, time consuming and subject to unanticipated and significant delays. Approvals may not be granted to us on a timely basis, or at all. Any delay in obtaining, or any failure to obtain or maintain, these approvals would adversely affect our ability to introduce new products and to generate revenue from those products. New laws and regulations may be introduced in the future that could result in additional compliance costs, bans on product sales or use, seizures, confiscation, recall or monetary fines, any of which could prevent or inhibit the development, distribution or sale of our products and could increase our customers’ efforts to find less hazardous substitutes for our products. We are subject to ongoing reviews of our products and manufacturing processes.

As discussed above, we manufacture and sell products containing formaldehyde, and certain governmental bodies have stated that there is a causal link between formaldehyde exposure and certain types of cancer, including myeloid leukemia and NPC. These conclusions could adversely impact our business and also become the basis of product liability litigation.

Other products we have made or used have been and could be the focus of legal claims based upon allegations of harm to human health. While we cannot predict the outcome of pending suits and claims, we believe that we maintain adequate reserves, in accordance with our policy, to address currently pending litigation and are adequately insured to cover currently pending and foreseeable future claims. However, an unfavorable outcome in these litigation matters could have a material adverse effect on our business, financial condition and/or profitability and cause our reputation to decline.

We are subject to claims from our customers and their employees, environmental action groups and neighbors living near our production facilities.

We produce and use hazardous chemicals that require appropriate procedures and care to be used in handling them or in using them to manufacture other products. As a result of the hazardous nature of some of the products we produce and use, we may face claims relating to incidents that involve our customers' improper handling, storage and use of our products. We have historically faced lawsuits, including class action lawsuits that claim liability for death, injury or property damage caused by products that we manufacture or that contain our components. Additionally, we may face lawsuits alleging personal injury or property damage by neighbors living near our production facilities. These lawsuits, and any future lawsuits, could result in substantial damage awards against us, which in turn could encourage additional lawsuits and could cause us to incur significant legal fees to defend such lawsuits, either of which could have a material adverse effect on our business, financial condition and/or profitability. In addition, the activities of environmental action groups could result in litigation or damage to our reputation.

Our manufacturing facilities are subject to disruption due to operating hazards

The storage, handling, manufacturing and transportation of chemicals at our facilities and adjacent facilities could result in leaks, spills, fires or explosions, which could result in production downtime, production delays, raw material supply delays, interruptions and environmental hazards. We have experienced incidents at our own facilities and a raw material supplier located adjacent to our facility that have resulted mostly in short term, but some long term, production delays. Production interruption may also result from severe weather, particularly with respect to our southern U.S. operations near the Gulf Coast. Production lapses caused by any such delays can often be absorbed by our other manufacturing facilities, and we maintain insurance to cover such potential events. However, such events could negatively affect our operations.

As a global business, we are subject to numerous risks associated with our international operations that could have a material adverse effect on our business.

We have significant manufacturing and other operations outside the United States. Some of these operations are in jurisdictions with unstable political or economic conditions. There are numerous inherent risks in international operations, including, but not limited to:

- exchange controls and currency restrictions;
- currency fluctuations and devaluations;
- tariffs and trade barriers imposed by the current U.S. administration or foreign governments;
- renegotiation of trade agreements by the current U.S. administration;
- export duties and quotas;
- changes in local economic conditions;
- changes in laws and regulations;
- exposure to possible expropriation or other government actions;
- acts by national or regional banks, including the European Central Bank, to increase or restrict the availability of credit;
- hostility from local populations;
- diminished ability to legally enforce our contractual rights in non-U.S. countries;
- restrictions on our ability to repatriate dividends from our subsidiaries; and
- unsettled political conditions and possible terrorist attacks against U.S. interests.

Our international operations expose us to different local political and business risks and challenges. For example, we may face potential difficulties in staffing and managing local operations, and we may have to design local solutions to manage credit risks of local customers and distributors. In addition, some of our operations are located in regions that may be politically unstable, having particular exposure to riots, civil commotion or civil unrests, acts of war (declared or undeclared) or armed hostilities or other national or international calamity. In some of these regions, our status as a U.S. company also exposes us to increased risk of sabotage, terrorist attacks, interference by civil or military authorities or to greater impact from the national and global military, diplomatic and financial response to any future attacks or other threats.

In addition, intellectual property rights may be more difficult to enforce in non-U.S. or non-Western European countries.

If global economic and market conditions, or economic conditions in Europe, China, Brazil, Australia, the United States or other key markets remain uncertain or deteriorate further, the value of associated foreign currencies and the global credit markets may weaken. Additionally, general financial instability in countries where we do not transact a significant amount of business could have a contagion effect and contribute to the general instability and uncertainty within a particular region or globally. If this were to occur, it could adversely affect our customers and suppliers and in turn have a materially adverse effect on our international business and results of operations.

Our overall success as a global business depends, in part, upon our ability to succeed under different economic, social and political conditions. We may fail to develop and implement policies and strategies that are effective in each location where we do business, and failure to do so could have a material adverse effect on our business, financial condition and results of operations.

Our business is subject to foreign currency risk.

In 2017, approximately 60% of our net sales originated outside the United States. In our consolidated financial statements, we translate our local currency financial results into U.S. dollars based on average exchange rates prevailing during a reporting period or the exchange rate at the end of that period. During times of a strengthening U.S. dollar, at a constant level of business, our reported international revenues and earnings would be reduced because the local currency would translate into fewer U.S. dollars.

In addition to currency translation risks, we incur a currency transaction risk whenever we enter into a purchase or a sales transaction or indebtedness transaction using a different currency from the currency in which we record revenues. Given the recent volatility of exchange rates, we may not manage our currency transaction and/or translation risks effectively, and volatility in currency exchange rates may materially adversely affect our financial condition or results of operations, including our tax obligations. Since the vast majority of our indebtedness is denominated in U.S. dollars, a strengthening of the U.S. dollar could make it more difficult for us to repay our indebtedness.

We have entered and expect to continue to enter into various hedging and other programs in an effort to protect against adverse changes in the non-U.S. exchange markets and attempt to minimize potential material adverse effects. These hedging and other programs may be unsuccessful in protecting against these risks. Our results of operations could be materially adversely affected if the U.S. dollar strengthens against non-U.S. currencies and our protective strategies are not successful. Likewise, a strengthening U.S. dollar provides opportunities to source raw materials more cheaply from foreign countries.

Fluctuations in energy costs could have an adverse impact on our profitability and negatively affect our financial condition.

Oil and natural gas prices have fluctuated greatly over the past several years and we anticipate that they will continue to do so. Natural gas and electricity are essential to our manufacturing processes, which are energy-intensive. Our energy costs represented approximately 4% of our total cost of sales for the year ended December 31, 2017.

Our operating expenses will increase if our energy prices increase. Increased energy prices may also result in greater raw materials costs. If we cannot pass these costs through to our customers, our profitability may decline. Increased energy costs may also negatively affect our customers and the demand for our products. In addition, as oil and natural gas prices fall, while having a positive effect on our overall costs, such falling prices can have a negative impact on our oilfield business, as the number of oil and natural gas wells drilled declines in response to market condition.

If energy prices decrease, we expect benefits in the short-run with decreased operating expenses and increased operating income, but may face increased pricing pressure from competitors that are similarly impacted by energy prices. As a result, profitability may decrease over an extended period of time of lower energy prices. Moreover, any future increases in energy prices after a period of lower energy prices may have an adverse impact on our profitability for the reasons described above.

We face increased competition from other companies and from substitute products, which could force us to lower our prices, which would adversely affect our profitability and financial condition.

Several of the markets that we operate in are highly competitive, and this competition could harm our results of operations, cash flows and financial condition. Our competitors include major international producers as well as smaller regional competitors. We believe that the most significant competitive factor that impacts demand for certain of our products is selling price. We may be forced to lower our selling price based on our competitors' pricing decisions, which would reduce our profitability. Certain markets that we serve have become commoditized in recent years and have given rise to several industry participants, resulting in fierce price competition in these markets. In addition, we face competition from a number of products that are potential substitutes for our products. Growth in substitute products could adversely affect our market share, net sales and profit margins.

Additional trends include current and anticipated consolidation among our competitors and customers which may cause us to lose market share as well as put downward pressure on pricing. There is also a trend in our industries toward relocating manufacturing facilities to lower cost regions, such as Asia, which may permit some of our competitors to lower their costs and improve their competitive position. Furthermore, there has been an increase in new competitors based in these regions.

Some of our competitors are larger, have greater financial resources, have a lower cost structure, and/or have less debt than we do. As a result, those competitors may be better able to withstand a change in conditions within our industry and in the economy as a whole. If we do not compete successfully, our operating margins, financial condition, cash flows and profitability could be adversely affected. Furthermore, if we do not have adequate capital to invest in technology, including expenditures for research and development, our technology could be rendered uneconomical or obsolete, negatively affecting our ability to remain competitive.

We expect substantial cost savings from our ongoing strategic initiatives, and if we are unable to achieve these cost savings, or sustain our current cost structure, it could have a material adverse effect on our business operations, results of operations and financial condition.

We have not yet realized all of the cost savings and synergies we expect to achieve from our ongoing strategic initiatives. A variety of risks could cause us not to realize the expected cost savings and synergies, including but not limited to, higher than expected severance costs related to staff reductions; higher than expected retention costs for employees that will be retained; higher than expected stand-alone overhead expenses; delays in the anticipated timing of activities related to our cost-savings plans; and other unexpected costs associated with operating our business. In November 2017, we initiated new cost reduction programs that we expect to generate approximately $43 of annual savings once fully implemented. As of December 31, 2017, we had $50 of total in-process cost savings related to new and existing programs.

If we are unable to achieve these cost savings or synergies it could adversely affect our profitability and financial condition. In addition, while we have been successful in reducing costs and generating savings, factors may arise that may not allow us to sustain our current cost structure. As market and economic conditions change, we may also make changes to our operating cost structure.

Our success depends in part on our ability to protect our intellectual property rights, and our inability to enforce these rights could have a material adverse effect on our competitive position.

We rely on the patent, trademark, copyright and trade-secret laws of the United States and the countries where we do business to protect our intellectual property rights. We may be unable to prevent third parties from using our intellectual property without our authorization. The unauthorized use of our intellectual property could reduce any competitive advantage we have developed, reduce our market share or otherwise harm our business. In the event of unauthorized use of our intellectual property, litigation to protect or enforce our rights could be costly, and we may not prevail.

Many of our technologies are not covered by any patent or patent application, and our issued and pending U.S. and non-U.S. patents may not provide us with any competitive advantage and could be challenged by third parties. Our inability to secure issuance of our pending patent applications may limit our ability to protect the intellectual property rights these pending patent applications were intended to cover. Our competitors may attempt to design around our patents to avoid liability for infringement and, if successful, our competitors could adversely affect our market share. Furthermore, the expiration of our patents may lead to increased competition.

Our pending trademark applications may not be approved by the responsible governmental authorities and, even if these trademark applications are granted, third parties may seek to oppose or otherwise challenge these trademark applications. A failure to obtain trademark registrations in the United States and in other countries could limit our ability to protect our products and their associated trademarks and impede our marketing efforts in those jurisdictions.

In addition, effective patent, trademark, copyright and trade secret protection may be unavailable or limited in some foreign countries. In some countries we do not apply for patent, trademark or copyright protection. We also rely on unpatented proprietary manufacturing expertise, continuing technological innovation and other trade secrets to develop and maintain our competitive position. While we generally enter into confidentiality agreements with our employees and third parties to protect our intellectual property, these confidentiality agreements are limited in duration and could be breached, and may not provide meaningful protection of our trade secrets or proprietary manufacturing expertise. Adequate remedies may not be available if there is an unauthorized use or disclosure of our trade secrets and manufacturing expertise. In addition, others may obtain knowledge about our trade secrets through independent development or by legal means. The failure to protect our processes, apparatuses, technology, trade secrets and proprietary manufacturing expertise, methods and compounds could have a material adverse effect on our business by jeopardizing critical intellectual property.

Where a product formulation or process is kept as a trade secret, third parties may independently develop or invent and patent products or processes identical to our trade-secret products or processes. This could have an adverse impact on our ability to make and sell products or use such processes and could potentially result in costly litigation in which we might not prevail.

We could face intellectual property infringement claims that could result in significant legal costs and damages and impede our ability to produce key products, which could have a material adverse effect on our business, financial condition and results of operations.

Our production processes and products are specialized; however, we could face intellectual property infringement claims from our competitors or others alleging that our processes or products infringe on their proprietary technology. If we were subject to an infringement suit, we may be required to change our processes or products, or stop using certain technologies or producing the infringing product entirely. Even if we ultimately prevail in an infringement suit, the existence of the suit could cause our customers to seek other products that are not subject to infringement suits. Any infringement suit could result in significant legal costs and damages and impede our ability to produce key products, which could have a material adverse effect on our business, financial condition and results of operations.

We depend on certain of our key executives and our ability to attract and retain qualified employees.

Our ability to operate our business and implement our strategies depends, in part, on the skills, experience and efforts of key members of our leadership team. We do not maintain any key-man insurance on any of these individuals. In addition, our success will depend on, among other factors, our ability to attract and retain other managerial, scientific and technical qualified personnel, particularly research scientists, technical sales professionals, and engineers who have specialized skills required by our business and focused on the industries in which we compete. Competition for qualified employees in the chemicals industry is intense and the loss of the services of any of our key employees or the failure to attract or retain other qualified personnel could have a material adverse effect on our business or business prospects. Further, if any of these executives or employees joins a competitor, we could lose customers and suppliers and incur additional expenses to recruit and train personnel, who require time to become productive and to learn our business.

Our majority shareholder's interest may conflict with or differ from our interests.

Apollo controls our ultimate parent company, Hexion Holdings LLC, or Hexion Holdings, which indirectly owns 100% of our common equity. In addition, Apollo has significant representation on Hexion Holdings' Board of Managers. As a result, Apollo can significantly influence our ability to enter into significant corporate transactions such as mergers, tender offers and the sale of all or substantially all of our assets. The interests of Apollo and its affiliates could conflict with or differ from our interests. For example, the concentration of ownership held by Apollo could delay, defer or prevent a change of control of our company or impede a merger, takeover or other business combination which may otherwise be favorable for us.

Additionally, Apollo is in the business of making investments in companies and may, from time to time, acquire and hold interests in businesses that compete, directly or indirectly with us. Apollo may also pursue acquisition opportunities that may be complementary to our business, and as a result, those acquisition opportunities may not be available to us. Additionally, even if Apollo invests in competing businesses through Hexion Holdings, such investments may be made through a newly-formed subsidiary of Hexion Holdings. Any such investment may increase the potential for the conflicts of interest discussed in this risk factor.

So long as Apollo continues to indirectly own a significant amount of the equity of Hexion Holdings, even if such amount is less than 50%, they will continue to be able to substantially influence or effectively control our ability to enter into any corporate transactions.

Because our equity securities are not and will not be registered under the securities laws of the United States or in any other jurisdiction and are not listed on any U.S. securities exchange, we are not subject to certain of the corporate governance requirements of U.S. securities authorities or to any corporate governance requirements of any U.S. securities exchanges.

If we fail to extend or renegotiate our collective bargaining agreements with our works councils and labor unions as they expire from time to time, if disputes with our works councils or unions arise, or if our unionized or represented employees were to engage in a strike or other work stoppage, our business and operating results could be materially adversely affected.

As of December 31, 2017, approximately 37% of our employees were unionized or represented by works councils that were covered by collective bargaining agreements. In addition, some of our employees reside in countries in which employment laws provide greater bargaining or other employee rights than the laws of the United States. These rights may require us to expend more time and money altering or amending employees' terms of employment or making staff reductions. For example, most of our employees in Europe are represented by works councils, which generally must approve changes in conditions of employment, including restructuring initiatives and changes in salaries and benefits. A significant dispute could divert our management's attention and otherwise hinder our ability to conduct our business or to achieve planned cost savings.

We may be unable to timely extend or renegotiate our collective bargaining agreements as they expire. We have collective bargaining agreements which will expire during the next two years. We also may be subject to strikes or work stoppages by, or disputes with, our labor unions. If we fail to extend or renegotiate our collective bargaining agreements, if disputes with our works councils or unions arise or if our unionized or represented workers engage in a strike or other work stoppage, we could incur higher labor costs or experience a significant disruption of operations, which could have a material adverse effect on our business, financial position and results of operations.

Our pension plans are unfunded or under-funded and our required cash contributions could be higher than we expect, each of which could have a material adverse effect on our financial condition and liquidity.

We sponsor various pension and similar benefit plans worldwide.

Our U.S. and non-U.S. defined benefit pension plans were under-funded in the aggregate by $25 and $224, respectively, as of December 31, 2017. We are legally required to make contributions to our pension plans in the future, and those contributions could be material.

In 2018, we do not expect to make any contributions to our U.S. defined benefit pension plan and we expect to contribute approximately $23 to our non-U.S. defined benefit pension plans, which we believe is sufficient to meet the minimum funding requirements as set forth in employee benefit and tax laws.

Our future funding obligations for our employee benefit plans depend upon the levels of benefits provided for by the plans, the future performance of assets set aside for these plans, the rates of interest used to determine funding levels, the impact of potential business dispositions, actuarial data and experience, and any changes in government laws and regulations. In addition, certain of our funded employee benefit plans hold a significant amount of equity securities. If the market values of these securities decline, our pension expense and funding requirements would increase and, as a result, could have a material adverse effect on our business.

Any decrease in interest rates and asset returns, if and to the extent not offset by contributions, could increase our obligations under these plans. If the performance of assets in the funded plans does not meet our expectations, our cash contributions for these plans could be higher than we expect, which could have a material adverse effect on our financial condition and liquidity.

Natural or other disasters have, and could in the future, disrupt our business and result in loss of revenue or higher expenses.

Any serious disruption at any of our facilities or our suppliers' facilities due to hurricane, fire, earthquake, flood, terrorist attack or any other natural or man-made disaster could impair our ability to use our facilities and have a material adverse impact on our revenues and increase our costs and expenses. If there is a natural disaster or other serious disruption at any of our facilities or our suppliers' facilities, it could impair our ability to adequately supply our customers and negatively impact our operating results. For example, our manufacturing facilities in the U.S. Gulf Coast region were impacted by Hurricane Harvey in 2017. In addition, many of our current and potential customers are concentrated in specific geographic areas. A disaster in one of these regions could have a material adverse impact on our operations, operating results and financial condition. Our business interruption insurance may not be sufficient to cover all of our losses from a disaster, in which case our unreimbursed losses could be substantial. Some of our operations are located in regions with particular exposure to natural disasters such as storms, floods, fires and earthquakes. It would be difficult or impossible for us to relocate these operations and, as a result, any of the aforementioned occurrences could materially adversely affect our business.

Security breaches and other disruptions to our information technology infrastructure could interfere with our operations, and could compromise our information and the information of our customers and suppliers, exposing us to liability which would cause our business and reputation to suffer.

In the ordinary course of business, we rely upon information technology networks and systems, some of which are managed by third parties, to process, transmit and store electronic information, and to manage or support a variety of business processes and activities, including supply chain, manufacturing, distribution, invoicing, and collection of payments from customers. We use information technology systems to record, process and summarize financial information and results of operations for internal reporting purposes and to comply with regulatory financial reporting, legal and tax requirements. Additionally, we collect and store sensitive data, including intellectual property, proprietary business information, the propriety business information of our customers, suppliers and Momentive Performance Materials Inc. ("MPM") under the Shared Services Agreement, as well as personally identifiable information of our customers and employees and MPM, in data centers and on information technology networks. The secure operation of these information technology networks, and the processing and maintenance of this information is critical to our business operations and strategy. Despite security measures and business continuity plans, our information technology networks and infrastructure may be vulnerable to damage, disruptions or shutdowns due to attacks by hackers or breaches due to employee error or malfeasance, or other disruptions during the process of upgrading or replacing computer software or hardware, power outages, computer viruses, telecommunication or utility failures or natural disasters or other catastrophic events. The occurrence of any of these events could compromise our networks and the information stored there could be accessed, publicly disclosed, lost or stolen. Any such access, disclosure or other loss of information could result in legal claims or proceedings, liability or regulatory penalties under laws protecting the privacy of personal information, disrupt operations, and damage our reputation, which could adversely affect our business, financial condition and results of operations.

Divestitures that we pursue may present unforeseen obstacles and costs and alter the synergies we expect to continue to achieve from our ongoing cost reduction programs. Acquisitions and joint ventures that we pursue may present unforeseen integration obstacles and costs, increase our leverage and negatively impact our performance.

We have selectively made, and may in the future, pursue divestitures of certain of our businesses as one element of our portfolio optimization strategy. Divestitures may require us to separate integrated assets and personnel from our retained businesses and devote our resources to transitioning assets and services to purchasers, resulting in disruptions to our ongoing business and distraction of management. Divestitures may alter synergies we expect to continue to achieve from our ongoing cost reduction programs. In the event of a large divestiture, we could use a significant amount of net operating losses which could result in our U.S. Company incurring future cash taxes. In addition, divestitures may result in the retention of certain current and future liabilities as well as obligations to indemnify or reimburse a buyer for certain liabilities of a divested business. These potential obligations could have an adverse effect on our results of operations and financial condition if triggered.

In addition, we have made acquisitions of related businesses, and entered into joint ventures in the past and could selectively pursue acquisitions of, and joint ventures with, related businesses as one element of our growth strategy. If such acquisitions are consummated, the risk factors we describe above and below, and for our business generally, may be intensified.

We could face additional income tax obligations based on tax reform.

On December 22, 2017, the United States enacted tax reform legislation ("Tax Reform") that included a broad range of business tax provisions, including but not limited to a reduction in the U.S. federal tax rate from 35% to 21% as well as provisions that limit or eliminate various deductions or credits. The legislation also causes U.S. expenses, such as interest and general administrative expenses, to be taxed and imposes a new tax on U.S. cross-border payments. Furthermore, the legislation includes a one-time transition tax on accumulated foreign earnings and profits.

Many aspects of the Tax Reform are unclear, and although additional clarifying guidance is expected to be issued in the future (by the Internal Revenue Service ("IRS"), the U.S. Treasury Department or via a technical correction law change), it may not be clarified for some time. In addition, many U.S. states have not yet updated their laws to take into account the new federal legislation. Aspects of U.S. tax reform may lead foreign jurisdictions to respond by enacting additional tax legislation that is unfavorable to us. As a result, we have not yet been able to determine the full impact of the new laws on our results of operations and financial condition. It is possible that U.S. tax reform, or interpretations under it, could change and could have an adverse effect on us, and such effect could be material.

If we fail to establish and maintain an effective internal control environment, our ability to both timely and accurately report our financial results could be adversely affected.

Section 404 of the Sarbanes-Oxley Act of 2002 requires companies to conduct a comprehensive evaluation of their internal control over financial reporting. To comply with this statute, each year we are required to document and test our internal control over financial reporting, our management is required to assess and issue a report concerning our internal control over financial reporting.

The existence of one or more material weaknesses has resulted in, and could continue to result in, errors in our financial statements, and substantial costs and resources may be required to rectify these errors or other internal control deficiencies and may cause us to incur other costs, including potential legal expenses. If we cannot produce reliable financial reports, investors could lose confidence in our reported financial information, and we may be unable to obtain additional financing to operate and expand our business and our business and financial condition could be harmed.

We have an established process to remediate identified control deficiencies timely and we continue to take appropriate actions to strengthen our internal control over financial reporting, but we cannot assure you that the measures we have taken to date, or any measures we may take in the future, will be sufficient to avoid potential future material weaknesses.

Risks Related to Our Indebtedness

We may be unable to generate sufficient cash flows from operations to meet our consolidated debt service payments.

During the first quarter of 2017, we issued $485 aggregate principal amount of 10.375% First Priority Senior Secured Notes due 2022 (the "New First Lien Notes") and $225 aggregate principal amount of 13.75% Senior Secured Notes due 2022 (the "New Senior Secured Notes"). Upon the closing of these offerings, we satisfied and discharged our obligations under the 8.875% Senior Secured Notes due 2018 (the "Old Senior Secured Notes"). During the second quarter of 2017, we issued $75 aggregate principal amount of New First Lien Notes at an issue price of 100.5%. These notes mature in February 2022 and have substantially the same terms as the New First Lien Notes issued in February 2017. We used the net proceeds for general corporate purposes. In December 2016, we amended and restated our ABL Facility, with modifications to, among other things, permit the refinancing of the Old Senior Secured Notes. In connection with the issuance of the new notes in February 2017, certain lenders under the ABL Facility provided extended revolving facility commitments in an aggregate principal amount of $350 with a maturity date of December 5, 2021 (subject to early maturity triggers), the existing commitments were terminated and the size of the ABL facility was reduced from $400 to $350. Collectively, we refer to these transactions as the "2017 Refinancing Transactions."

We have substantial consolidated indebtedness. As of December 31, 2017, we had approximately $3.7 billion of consolidated outstanding indebtedness, including payments due within the next twelve months and short-term borrowings. In addition, we had a $227 undrawn revolver under our ABL Facility, subject to a borrowing base, after giving effect to $42 of outstanding letters of credit. In 2018, our annualized cash interest expense is projected to be approximately $313 based on consolidated indebtedness and interest rates at December 31, 2017, of which $305 represents cash interest expense on fixed-rate obligations.

As of December 31, 2017, approximately $129, or 4%, of our borrowings were at variable interest rates and expose us to interest rate risk. If interest rates increase, our debt service obligations on the variable rate indebtedness would increase even though the amount borrowed remained the same. Assuming our consolidated variable interest rate indebtedness outstanding as of December 31, 2017 remains the same, an increase of 1% in the interest rates payable on our variable rate indebtedness would increase our annual estimated debt service requirements by approximately $1.

Our ability to generate sufficient cash flows from operations to make scheduled debt service payments depends on a range of economic, competitive and business factors, many of which are outside of our control. We maintain normal commercial terms with our major vendors and customers. If certain of our commercial counterparties request changes to our terms, it could put additional pressure on our liquidity position and our business may generate insufficient cash flows from operations to meet our debt service and other obligations, and currently anticipated cost savings, working capital reductions and operating improvements may not be realized on schedule, or at all. If we are unable to meet our expenses and debt service obligations, we may need to refinance all or a portion of our indebtedness on or before maturity, sell assets or issue additional equity securities. We may be unable to refinance any of our indebtedness, sell assets or issue equity securities on commercially reasonable terms, or at all, which could cause us to default on our obligations and result in the acceleration of our debt obligations. Our inability to generate sufficient cash flows to satisfy our outstanding debt obligations, or to refinance our obligations on commercially reasonable terms, would have a material adverse effect on our business, financial condition and results of operations.

Our substantial indebtedness could adversely affect our ability to raise additional capital to fund our operations and limit our ability to react to changes in the economy or our industry.

Our substantial consolidated indebtedness could have other important consequences, including but not limited to the following:

- it may limit our flexibility in planning for, or reacting to, changes in our operations or business;
- we are more highly leveraged than many of our competitors, which may place us at a competitive disadvantage;
- it may make us more vulnerable to downturns in our business or in the economy;
- a substantial portion of our cash flows from operations will be dedicated to the repayment of our indebtedness and will not be available for other purposes;
- it may restrict us from making strategic acquisitions, introducing new technologies or exploiting business opportunities;
- it may make it more difficult for us to satisfy our obligations with respect to our existing indebtedness;
- it may adversely affect terms under which suppliers provide material and services to us;
- it may limit our ability to borrow additional funds or dispose of assets; and
- it may limit our ability to fully achieve possible cost savings from the Shared Services Agreement with MPM.

There would be a material adverse effect on our business and financial condition if we were unable to service our indebtedness or obtain additional financing, as needed.

Despite our substantial indebtedness, we may still be able to incur additional indebtedness. This could intensify the risks described above and below.

We may be able to incur additional indebtedness in the future. Although the terms governing our indebtedness contain restrictions on our ability to incur additional indebtedness, these restrictions are subject to numerous qualifications and exceptions, and the indebtedness we may incur in compliance with these restrictions could be substantial. Increasing our indebtedness could intensify the risks described above and below.

The terms governing our outstanding debt, including restrictive covenants, may adversely affect our operations.

The terms governing our outstanding debt contain, and any future indebtedness we incur would likely contain, numerous restrictive covenants that impose significant operating and financial restrictions on our ability to, among other things:

- incur or guarantee additional debt;
- pay dividends and make other distributions to our shareholders;
- create or incur certain liens;
- make certain loans, acquisitions, capital expenditures or investments;
- engage in sales of assets and subsidiary stock;
- enter into sale/leaseback transactions;
- enter into transactions with affiliates; and
- transfer all or substantially all of our assets or enter into merger or consolidation transactions.

In addition, the credit agreement governing our ABL Facility requires us to maintain a minimum fixed charge coverage ratio of 1.0 to 1.0 at any time when the availability is less than the greater of (x) $35 and (y) 12.5% of the lesser of the borrowing base and the total ABL Facility commitments at such time. The fixed charge coverage ratio under the credit agreement governing the ABL Facility is generally defined as the ratio of (a) Adjusted EBITDA minus non-financed capital expenditures and cash taxes to (b) debt service plus cash interest expense plus certain restricted payments, each measured for the four most recent quarters for which financial statements have been delivered. We may not be able to satisfy such ratio in future periods. If we anticipate we will be unable to meet such ratio, we expect not to allow our availability under the ABL Facility to fall below such levels.

A breach of our fixed charge coverage ratio covenant, if in effect, would result in an event of default under our ABL Facility. Pursuant to the terms of our ABL Facility, our direct parent company will have the right, but not the obligation, to cure such default through the purchase of additional equity in up to two of any four consecutive quarters and seven total during the term of the ABL Facility. If a breach of a fixed charge coverage ratio covenant is not cured or waived, or if any other event of default under the ABL Facility occurs, the lenders under such credit facility:

- would not be required to lend any additional amounts to us;
- could elect to declare all borrowings outstanding under the ABL Facility, together with accrued and unpaid interest and fees, due and payable and could demand cash collateral for all letters of credit issued thereunder;
- could apply all of our available cash that is subject to the cash sweep mechanism of the ABL Facility to repay these borrowings; and/or
- could prevent us from making payments on our notes;

any or all of which could result in an event of default under our notes.

The ABL Facility provides for “springing control” over the cash in our deposit accounts constituting collateral for the ABL Facility, and such cash management arrangements includes a cash sweep at any time that availability under the ABL Facility is less than the greater of (x) $35 and (y) 12.5% of the lesser of the borrowing base and the total ABL Facility commitments at such time. Such cash sweep, if in effect, will cause all our available cash to be applied to outstanding borrowings under our ABL Facility. If we satisfy the conditions to borrowings under the ABL Facility while any such cash sweep is in effect, we may be able to make additional borrowings under the ABL Facility to satisfy our working capital and other operational needs. If we do not satisfy the conditions to borrowing, we will not be permitted to make additional borrowings under our ABL Facility, and we will not have sufficient cash to satisfy our working capital and other operational needs.

In addition, the terms governing our indebtedness limit our ability to sell assets and also restrict the use of proceeds from that sale. We may be unable to sell assets quickly enough or for sufficient amounts to enable us to meet our obligations. Furthermore, a substantial portion of our assets is, and may continue to be, intangible assets. Therefore, it may be difficult for us to pay our consolidated debt obligations in the event of an acceleration of any of our consolidated indebtedness.

Repayment of our debt, including required principal and interest payments, depends on cash flows generated by our subsidiaries, which may be subject to limitations beyond our control.

Our subsidiaries own a significant portion of our consolidated assets and conduct a significant portion of our consolidated operations. Repayment of our indebtedness depends, to a significant extent, on the generation of cash flows and the ability of our subsidiaries to make cash available to us by dividend, debt repayment or otherwise. Our subsidiaries may not be able to, or may not be permitted to, make distributions to enable us to make payments on our indebtedness. Each subsidiary is a distinct legal entity and, under certain circumstances, legal and contractual restrictions may limit our ability to obtain cash from subsidiaries. While there are limitations on the ability of our subsidiaries to incur consensual restrictions on their ability to pay dividends or make intercompany payments, these limitations are subject to certain qualifications and exceptions. In the event that we are unable to receive distributions from our subsidiaries, we may be unable to make required principal and interest payments on our indebtedness.

A downgrade in our debt ratings could restrict our access to, and negatively impact the terms of, current or future financings or trade credit.

Standard & Poor’s Ratings Services (“S&P”) and Moody’s Investors Service (“Moody’s”) maintain credit ratings on us and certain of our debt. Each of these ratings is currently below investment grade. Any decision by these or other ratings agencies to downgrade such ratings in the future could restrict our access to, and negatively impact the terms of, current or future financings and trade credit extended by our suppliers of raw materials or other vendors.

ITEM 1B - UNRESOLVED STAFF COMMENTS

None.

ITEM 2 - PROPERTIES

Our headquarters are in Columbus, Ohio and we have executive offices in Rotterdam, Netherlands and Shanghai, China. Our major manufacturing facilities are primarily located in North America and Europe. As of December 31, 2017, we operated 22 domestic production and manufacturing facilities in 12 states and 30 foreign production and manufacturing facilities in Australia, Brazil, Canada, China, Colombia, Finland, Germany, Italy, Korea, Malaysia, Netherlands, New Zealand, Spain, the United Kingdom and Uruguay.

The majority of our facilities are used for the production of thermosetting resins, and most of them manufacture more than one type of thermosetting resin, the nature of which varies by site. These facilities typically use batch technology, and range in size from small sites, with a limited number of reactors, to larger sites, with dozens of reactors. One exception to this is our plant in Deer Park, Texas, the only continuous-process epoxy resins plant in the world, which provides us with a cost advantage over conventional technology.

In addition, we have the ability to internally produce key intermediate materials such as formaldehyde, BPA, ECH, and versatic acid. This backward integration provides us with cost advantages and facilitates our adequacy of supply. These facilities are usually co-located with downstream resin manufacturing facilities they serve. As these intermediate materials facilities are often much larger than a typical resins plant, we can capture the benefits of manufacturing efficiency and scale by selling material that we do not use internally to third parties.

We believe our production and manufacturing facilities are well maintained and effectively utilized and are adequate to operate our business. Following are our more significant production and manufacturing facilities and executive offices:

Location	Nature of Ownership	Reporting Segment
Argo, IL*	Owned	Epoxy, Phenolic and Coating Resins
Barry, UK*	Owned	Epoxy, Phenolic and Coating Resins
Brady, TX	Owned	Epoxy, Phenolic and Coating Resins
Deer Park, TX*	Owned	Epoxy, Phenolic and Coating Resins
Duisburg-Meiderich, Germany	Owned	Epoxy, Phenolic and Coating Resins
Iserlohn-Letmathe, Germany	Owned	Epoxy, Phenolic and Coating Resins
Lakeland, FL	Owned	Epoxy, Phenolic and Coating Resins
Louisville, KY	Owned	Epoxy, Phenolic and Coating Resins
Moerdijk, Netherlands*	Owned	Epoxy, Phenolic and Coating Resins
Onsan, South Korea	Owned	Epoxy, Phenolic and Coating Resins
Pernis, Netherlands*	Owned	Epoxy, Phenolic and Coating Resins
Solbiate Olona, Italy	Owned	Epoxy, Phenolic and Coating Resins
Zhenjiang, China*	Owned	Epoxy, Phenolic and Coating Resins
Curitiba, Brazil	Owned	Forest Products Resins
Montenegro, Brazil	Owned	Forest Products Resins
Edmonton, AB, Canada	Owned	Forest Products Resins
Fayetteville, NC	Owned	Forest Products Resins
Kitee, Finland	Owned	Forest Products Resins
Luling, LA*	Owned	Forest Products Resins
Geismar, LA‡	Owned	Forest Products Resins
Gonzales, LA	Owned	Forest Products Resins
Hope, AR	Owned	Forest Products Resins
Springfield, OR	Owned	Forest Products Resins
St. Romuald, QC, Canada	Owned	Forest Products Resins
Columbus, OH†	Leased	Corporate and Other
Rotterdam, Netherlands†	Leased	Corporate and Other
Shanghai, China†	Leased	Corporate and Other

* We own all of the assets at this location. The land is leased.
‡ A portion of this location is leased.
† Executive offices.

ITEM 3 - LEGAL PROCEEDINGS

Legal Proceedings

We are involved in various product liability, commercial and employment litigation, personal injury, property damage and other legal proceedings in the ordinary course of business, including actions that allege harm caused by products the Company has allegedly made or used, containing silica, vinyl chloride monomer and asbestos. The following claims represent material proceedings outstanding that are not in the ordinary course of business.

Environmental Damages to the Port of Paranagua, Brazil

On August 10, 2005, the Environmental Institute of Paraná (IAP), an environmental agency in the State of Paraná, provided Hexion Quimica Industria, the Company's Brazilian subsidiary, with notice of an environmental assessment in the amount of 12 Brazilian reals. The assessment related to alleged environmental damages to the Paranagua Bay caused in November 2004 from an explosion on a shipping vessel carrying methanol purchased by the Company. The investigations performed by the public authorities have not identified any actions of the Company that contributed to or caused the accident. The Company responded to the assessment by filing a request to have it cancelled and by obtaining an injunction precluding execution of the assessment pending adjudication of the issue. In November 2010, the Court denied the Company's request to cancel the assessment and lifted the injunction that had been issued. The Company responded to the ruling by filing an appeal in the State of Paraná Court of Appeals. In March 2012, the Company was informed that the Court of Appeals had denied the Company's appeal, and on June 4, 2012 the Company filed appeals to the Superior Court of Justice and the Supreme Court of Brazil. In September 2016, the Superior Court of Justice decided that strict liability does not apply to administrative fines issued by environmental agencies and reversed the decision of the State of Paraná Court of Appeals. The Superior Court of Justice remanded the case back to the Court of Appeals to determine if the IAP met its burden of proving negligence by the Company. In September 2017, the State of Paraná Court of Appeals decided that IAP did not prove that the Company was negligent and granted the Company's request to annul the environmental assessment. IAP filed a motion for clarification regarding the Court of Appeals' analysis of the case and the Company filed a motion for clarification regarding attorney fees. After the pending motions are resolved, IAP will have 15 business days to file an appeal with the Superior Court of Justice. The Company does not believe that a loss is probable. At December 31, 2017, the amount of the assessment, including tax, penalties, monetary correction and interest, is 44 Brazilian reals, or approximately $13.

Louisville Air Pollution Control District Matter

The Louisville Air Pollution Control District (the "District") assessed the Company penalties totaling $346,000 associated with alleged violations of the District's air pollution laws and the Company's air permit in 2016, 2017 and 2018. The Company is actively cooperating with the District to resolve this matter.

Other Litigation

For a discussion of certain other legal contingencies, refer to Note 8 in Item 8 of Part II of this Annual Report on Form 10-K.

ITEM 4 - MINE SAFETY DISCLOSURES

This item is not applicable to the registrant.

PART II

(dollars in millions, except per share data, or as otherwise noted)

ITEM 5 - MARKET FOR THE REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

There is no established public trading market for our common stock. As of March 1, 2018, 82,556,847 common shares were held by our direct parent, Hexion LLC.

We have no compensation plans that authorize issuing our common stock to employees or non-employees. In addition, there have been no sales or repurchases of our equity securities during the past fiscal year. However, we and our direct and indirect parent companies have in the past issued, and may issue from time to time, equity awards that are denominated in or based upon the common units of our direct or ultimate parent to our employees and directors. As the awards were granted in exchange for service to us, these awards are included in our Consolidated Financial Statements. For a discussion of these equity plans, see Note 10 in Item 8 of Part II and Item 11 of Part III of this Annual Report on Form 10-K.

ITEM 6 - SELECTED FINANCIAL DATA

The following table presents our selected historical consolidated and combined financial data. The following information should be read in conjunction with, and is qualified by reference to, our "Management's Discussion and Analysis of Financial Condition and Results of Operations," and our audited Consolidated Financial Statements, as well as the other financial information included elsewhere herein.

The consolidated balance sheet data at December 31, 2017 and 2016 and the consolidated statement of operations data for the years ended December 31, 2017, 2016 and 2015 have been derived from our audited Consolidated Financial Statements included elsewhere herein. The consolidated balance sheet data at December 31, 2015, 2014 and 2013 and the consolidated statement of operations data for the years ended December 31, 2014 and 2013 have been derived from audited consolidated financial statements not included herein.

	Year ended December 31,				
	2017	2016	2015	2014	2013
	(dollars in millions, except per share data)				
Statements of Operations:					
Net sales	$ 3,591	$ 3,438	$ 4,140	$ 5,137	$ 4,890
Cost of sales (1)	3,090	3,038	3,540	4,576	4,282
Gross profit	501	400	600	561	608
Selling, general and administrative expense	307	328	306	399	304
Gain on dispositions	—	(240)	—	—	—
Asset impairments	13	—	6	5	181
Business realignment costs	52	55	16	47	21
Other operating expense (income), net	17	13	12	(8)	1
Operating income	112	244	260	118	101
Interest expense, net	329	310	326	308	303
Loss (gain) on extinguishment of debt	3	(48)	(41)	—	6
Other non-operating (income) expense, net	—	(7)	(3)	32	2
Loss from continuing operations before income tax and earnings from unconsolidated entities	(220)	(11)	(22)	(222)	(210)
Income tax expense	18	38	34	22	379
Loss from continuing operations before earnings from unconsolidated entities	(238)	(49)	(56)	(244)	(589)
Earnings from unconsolidated entities, net of taxes	4	11	17	20	17
Net loss	(234)	(38)	(39)	(224)	(572)
Net (income) loss attributable to noncontrolling interest	—	—	(1)	1	1
Net loss attributable to Hexion Inc.	$ (234)	$ (38)	$ (40)	$ (223)	$ (571)
Dividends declared per common share	$ —	$ —	$ —	$ —	$ 0.01
Cash Flows (used in) provided by:					
Operating activities	$ (153)	$ (20)	$ 213	$ (50)	$ 80
Investing activities	(109)	210	(155)	(233)	(150)
Financing activities	174	(235)	24	69	52
Balance Sheet Data (at end of period):					
Cash and cash equivalents	$ 115	$ 196	$ 236	$ 172	$ 393
Short-term investments	—	—	—	7	7
Working capital (2)	135	146	283	422	570
Total assets	2,097	2,055	2,382	2,617	2,804
Total long-term debt	3,584	3,397	3,698	3,678	3,598
Total net debt (3)	3,635	3,346	3,593	3,655	3,374
Total liabilities	4,839	4,594	4,859	4,967	4,877
Total deficit	(2,742)	(2,539)	(2,477)	(2,350)	(2,073)

(1) Cost of sales for the year ended December 31, 2017 and 2016 includes accelerated depreciation of $14 and $129, respectively, related primarily to facility rationalizations within the Epoxy, Phenolic and Coatings Resins segment.

(2) Working capital is defined as current assets less current liabilities.

(3) Net debt is defined as long-term debt (excluding unamortized deferred financing fees) plus short-term debt less cash and cash equivalents and short-term investments.

ITEM 7 - MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of our results of operations and financial condition for the years ended December 31, 2017, 2016 and 2015 with the audited Consolidated Financial Statements and related notes included elsewhere herein. The following discussion and analysis contains forward-looking statements that reflect our plans, estimates and beliefs, and which involve numerous risks and uncertainties, including, but not limited to, the risks and uncertainties described in Item 1A, "Risk Factors." Actual results may differ materially from those contained in any forward-looking statements.

Overview and Outlook

We are a large participant in the specialty chemicals industry, and a leading producer of adhesive and structural resins and coatings. Thermosets are a critical ingredient for most paints, coatings, glues and other adhesives produced for consumer or industrial uses. We provide a broad array of thermosets and associated technologies and have significant market positions in all of the key markets that we serve.

Our products are used in thousands of applications and are sold into diverse markets, such as forest products, architectural and industrial paints, packaging, consumer products and automotive coatings, as well as higher growth markets, such as wind energy and electrical composites. Major industry sectors that we serve include industrial/marine, construction, consumer/durable goods, automotive, wind energy, aviation, electronics, architectural, civil engineering, repair/remodeling and oil and gas drilling. Key drivers for our business include general economic and industrial conditions, including housing starts, auto build rates and active oil and gas drilling rigs. In addition, due to the nature of our products and the markets we serve, competitor capacity constraints and the availability of similar products in the market may impact our results. As is true for many industries, our financial results are impacted by the effect on our customers of economic upturns or downturns, as well as by the impact on our own costs to produce, sell and deliver our products. Our customers use most of our products in their production processes. As a result, factors that impact their industries can and have significantly affected our results.

Through our worldwide network of strategically located production facilities we serve more than 3,300 customers in approximately 90 countries. Our global customers include large companies in their respective industries, such as 3M, Akzo Nobel, BASF, Bayer, Dow, Louisiana Pacific, Monsanto, Owens Corning, PPG Industries, Valspar and Weyerhaeuser.

Business Strategy

As a significant player in the specialty chemicals industry, we believe we have unique opportunities to strategically grow our business over the long term. We continue to develop new products with an emphasis on innovation and expanding our product solutions for our existing global customer base, while growing our businesses in potential high growth regions in the world, such as Asia-Pacific, Latin America and the Middle East. Through these growth strategies we strive to create shareholder value and generate solid operating cash flow.

Reportable Segments

Our business segments are based on the products that we offer and the markets that we serve. In the fourth quarter of 2017, we added Corporate and Other as a reportable segment.

At December 31, 2017, we had three reportable segments: Epoxy, Phenolic and Coating Resins; Forest Products Resins; and Corporate and Other. A summary of the major products and items associated with the Company's reportable segments are as follows:

- **Epoxy, Phenolic and Coating Resins:** epoxy specialty resins, phenolic encapsulated substrates, versatic acids and derivatives, basic epoxy resins and intermediates, phenolic specialty resins and molding compounds
- **Forest Products Resins:** forest products resins and formaldehyde applications
- **Corporate and Other:** primarily corporate general and administrative expenses that are not allocated to the other segments, such as shared service and administrative functions, foreign exchange gains and losses and legacy company costs.

2017 Overview

Following are highlights from our results of operations for the years ended December 31, 2017 and 2016:

	2017	2016	$ Change	% Change
Statements of Operations:				
Net sales	$ 3,591	$ 3,438	$ 153	4 %
Gross profit (1)	501	400	101	25 %
Operating income	112	244	(132)	(54)%
Loss before income tax	(220)	(11)	(209)	(1,900)%
Net loss	(234)	(38)	(196)	(516)%
Segment EBITDA:				
Epoxy, Phenolic and Coating Resins	$ 174	$ 258	$ (84)	(33)%
Forest Products Resins	257	240	17	7 %
Corporate and Other	(66)	(65)	(1)	2 %
Total	$ 365	$ 433	$ (68)	(16)%

(1) Gross profit for the year ended December 31, 2017 and 2016 includes the negative impact of $14 and $129, respectively, of accelerated depreciation related primarily to facility rationalizations within our Epoxy, Phenolic and Coatings Resins segment.

- ***Net Sales***—Net sales in 2017 were $3.6 billion, a increase of 4% compared with $3.4 billion in 2016. Excluding $185 of net sales in 2016 from our divested Performance Adhesives, Powder Coatings, Additives & Acrylic Coatings and Monomers businesses (“PAC Business”), net sales increased by 10%. These increases were driven by pricing, which positively impacted sales by $182 due largely to raw material price increases passed through to customers across many of our businesses, partially offset by competitive pricing pressures in our epoxy specialty business. Overall, volumes positively impacted net sales by $131 driven by strong market demand in our North American formaldehyde business, as well as the additional capacity from our new formaldehyde plants. Additionally, volumes increased in our North American forest products resins business due to modest growth in the U.S. housing market and in our base epoxy resins business as it continues to recover from cyclical trough conditions. These increases were partially offset by volume decreases in our epoxy specialty business driven by an ongoing destocking of wind blades and lower installations. The impact of foreign exchange translation positively impacted net sales by $25, due to an overall strengthening of various foreign currencies against the U.S. dollar in 2017 compared to 2016.

- ***Net Loss***—Net loss in 2017 was $234, an increase of $196 as compared with a net loss of $38 in 2016. This increase was primarily driven by the absence of gains on the disposition of our PAC Business and HA-International, LLC (“HAI”) joint venture interest of $240 and gains on debt buybacks of $48 that positively impacted 2016. These increases to net loss were partially offset by increased gross margin of $101. Higher gross margin is primarily driven by a reduction in accelerated depreciation of $115 related to our Norco, LA facility closure that occurred in 2016, partially offset by the absence of gross margin from our divested PAC Business in 2017 results.

- ***Segment EBITDA***—In 2017, Segment EBITDA was $365, a decrease of 16% compared with $433 in 2016. Excluding Segment EBITDA of $23 in 2016 from our divested PAC Business and HAI joint venture, Segment EBITDA decreased by 11%. This decrease was primarily driven by volume decreases and margin compression in our specialty epoxy business discussed above, $15 of insurance recoveries received in 2016 in our versatic acids business that did not recur in 2017 and $6 of negative impact related to the hurricanes that occurred in the U.S. during 2017. These decreases were partially offset by volume increases in our North American formaldehyde business discussed above, as well as continued cost efficiencies associated with our new North American formaldehyde plants. Additionally, year over year improvements in our oilfield and base epoxy resins businesses positively impacted Segment EBITDA, as both of these businesses continue to recover from cyclical trough conditions.

- ***Restructuring and Cost Reduction Programs—***In November 2017, we initiated new cost reduction programs that will be completed in the first half of 2018. We expect these programs to generate approximately $43 of incremental annual savings once fully implemented. During 2017, we have achieved $26 in cost savings related to our new and ongoing productivity and cost reduction programs. With the addition of the new programs discussed above, we have a total of approximately $50 of in-process cost savings. We’ve taken the majority of the actions and the impact will be essentially realized over the next 12 months.

- ***Growth Initiatives—***Our new North American formaldehyde plants, the last of which was completed in the first quarter of 2016, have provided us with additional capacity to support expected long-term growth in this business and has helped drive improved results in 2017. In addition, we continue to focus on new product development and have taken steps to improve our analytical and product development services for our global grid, such as the recently completed expansion of our technology center in Edmonton. Further, we continue to invest in environmentally friendly coatings technologies and capacity in response to recent volatile organic compounds regulation in China.

- ***2017 Refinancing Transactions*****—**In February 2017, we issued $485 aggregate principal amount of New First Lien Notes and $225 aggregate principal amount of New Senior Secured Notes. We used the net proceeds from these notes, together with cash on our balance sheet, to redeem all of our outstanding Old Senior Secured Notes. In May 2017, we issued an additional $75 aggregate principal amount of New First Lien Notes. We also amended and restated our ABL Facility, which effectively extended the maturity date of the facility from March 2018 to December 2021 and reduced the existing commitments under the facility from $400 to $350.

2018 Outlook

During 2018, we expect strong market demand to continue to drive volume increases in our North American formaldehyde business. Additionally, we continue to expect improved demand in our North American forest products resins business due to ongoing growth in U.S. housing starts and remodeling. Further, we anticipate modest overall improvement in our Latin American forest products resins business due to recovery in the Brazilian economy.

We expect our base epoxy business to continue to improve in 2018 due to our restructuring initiatives and favorable market conditions. Additionally, we expect demand in our epoxy specialty business to remain below historical levels due to softness in the China wind energy market, although demand is expected to stabilize in the first half of 2018. We also expect this business to benefit from significant improvements in market demand for waterborne coatings over the next few years, primarily in China. Lastly, we expect our phenolic resins business to benefit from cost reductions associated with our recently completed grid optimization efforts in Germany.

We expect raw material prices to stabilize into 2018, following large increases in 2017.

Portfolio Optimization Initiatives

In January 2018, we announced the sale of our Additives Technology Group business (“ATG”) business to MÜNZING CHEMIE GmbH. We received approximately $50 million in proceeds from the transaction, or approximately twelve times Segment EBITDA over the last twelve months. We will use the sale proceeds for general corporate purposes.

In addition, we have initiated a process for the potential sale of a portion of our Epoxy, Phenolic and Coatings Resins segment. Should a sale occur, we expect that proceeds will be used to reduce our debt.

Tax Reform Implications

The 2017 U.S. tax reform reduced the U.S. corporate tax rate and included beneficial depreciation provisions, while other provisions could have an adverse effect on our results. Specifically, new provisions that cause U.S. expenses, such as interest and general administrative expenses, to be taxed and also imposes a tax on U.S. cross-border payments that could adversely impact our effective tax rate. We continue to evaluate the impacts as additional guidance becomes available. See Note 14 in Item 8 of this Annual Report on Form 10-K for more information.

Shared Services Agreement

In October 2010, we entered into a shared services agreement with MPM (which, from October 1, 2010 through October 24, 2014, was a subsidiary of Hexion Holdings), as amended in October 2014 (the “Shared Services Agreement”), pursuant to which we provide to MPM, and MPM provides to us, certain services, including, but not limited to, executive and senior management, administrative support, human resources, information technology support, accounting, finance, legal and procurement services. The Shared Services Agreement was renewed for one year starting in October 2017 and is subject to termination by either the Company or MPM, without cause, on not less than 30 days’ written notice, and expires in October 2018 (subject to one-year renewals every year thereafter; absent contrary notice from either party). The Shared Services Agreement establishes certain criteria upon which the costs of such services are allocated between us and MPM and requires that the Shared Services Steering Committee formed under the agreement meet no less than annually to evaluate and determine an equitable allocation percentage. The allocation percentage for both 2017 and 2016 was 56% for us and 44% for MPM. We periodically review the scope of services provided under this agreement.

Matters Impacting Comparability of Results

Our Consolidated Financial Statements include the accounts of the Company and its majority-owned subsidiaries in which minority shareholders hold no substantive participating rights. Intercompany accounts and transactions are eliminated in consolidation.

Dispositions of PAC Business and HAI Joint Venture Interest

As discussed above, during the second quarter of 2016, we completed the sales of both our PAC Business and our 50% interest in the HAI joint venture. Our results in 2017 exclude these divested businesses, while our results in 2015 and 2016 include net sales of $369 and $185, respectively, and Segment EBITDA of $50 and $30, respectively, related to these divested businesses. Additionally, in 2016 we recorded a gain of $240 on the disposition of these businesses.

Raw Material Prices

Raw materials comprised approximately 70% of our cost of sales in 2017. The three largest raw materials used in our production processes are phenol, methanol and urea. These materials represented approximately 50% of our total raw material costs in 2017. Fluctuations in energy costs, such as volatility in the price of crude oil and related petrochemical products, as well as the cost of natural gas, have caused volatility in our raw material costs and utility costs. In 2017, the average price increase of phenol, methanol and urea increased by approximately 15%, 46% and 4%, respectively, as compared to 2016. In 2016, the average prices of phenol remained flat, and the average prices of methanol and urea decreased by approximately 30% and 27%, respectively, as compared to 2015. The impact of passing through raw material price changes to customers can result in significant variances in sales comparisons from year to year.

We expect long-term raw material cost volatility to continue because of price movements of key feedstocks. To help mitigate raw material volatility, we have purchase and sale contracts and commercial arrangements with many of our vendors and customers that contain periodic price adjustment mechanisms. Due to differences in timing of the pricing trigger points between our sales and purchase contracts, there is often a “lead-lag” impact. In many cases this “lead-lag” impact can negatively impact our margins in the short term in periods of rising raw material prices and positively impact them in the short term in periods of falling raw material prices.

Other Comprehensive Income

Our other comprehensive income is significantly impacted by foreign currency translation, and to a lesser degree by defined benefit pension and postretirement benefit adjustments. The impact of foreign currency translation is driven by the translation of assets and liabilities of our foreign subsidiaries which are denominated in functional currencies other than the U.S. dollar. The primary assets and liabilities driving the adjustments are cash and cash equivalents; accounts receivable; inventory; property, plant and equipment; accounts payable; pension and other postretirement benefit obligations and certain intercompany loans payable and receivable. The primary currencies in which these assets and liabilities are denominated are the euro, Brazilian real, Chinese yuan, Canadian dollar and Australian dollar. The impact of defined benefit pension and postretirement benefit adjustments is primarily driven by unrecognized prior service cost related to our defined benefit and other non-pension postretirement benefit plans (“OPEB”), as well as the subsequent amortization of these amounts from accumulated other comprehensive income in periods following the initial recording of such amounts.

Pension and OPEB MTM Adjustments

Under our accounting policy related to the recognition of gains and losses for pension and OPEB plans, upon the annual remeasurement of our pension and OPEB plans in the fourth quarter, or on an interim basis as triggering events warrant, we immediately recognize gains and losses as a mark-to-market (“MTM”) gain or loss through net income. The largest component of our pension and OPEB expense typically relates to these MTM adjustments, which were recognized in the Consolidated Statements of Operations for the years ended, December 31, 2017, 2016 and 2015 as follows:

	Year Ended December 31,		
MTM (Gain) Loss	**2017**	**2016**	**2015**
Cost of sales	$ 2	$ 19	$ (8)
Selling, general and administrative expense	(6)	15	(5)
Total	$ (4)	$ 34	$ (13)

In 2017, favorable pension plan asset returns in 2017 resulted in an increase in unrealized gains of $38, from an unrealized loss of $34 in 2016 to an unrealized gain of $4 in 2017. The change in unrealized gains decreased Cost of sales by $17 and Selling, general and administrative expense by $21.

In 2016, an overall decrease in the discount rates used to calculate our pension and OPEB liabilities at December 31, 2016 resulted in a increase in unrealized losses of $47, from an unrealized gain of $13 in 2015 to an unrealized loss of $34 in 2016. The change in unrealized losses increased Cost of sales by $27 and Selling, general and administrative expense by $20.

Results of Operations

CONSOLIDATED STATEMENTS OF OPERATIONS

	Year Ended December 31,		
(In millions)	**2017**	**2016**	**2015**
Net sales	$ 3,591	$ 3,438	$ 4,140
Cost of sales	3,076	2,909	3,538
Accelerated depreciation	14	129	2
Gross profit	501	400	600
Gross profit as a percentage of net sales	*14%*	*12%*	*14%*
Selling, general and administrative expense	307	328	306
Gain on dispositions	—	(240)	—
Asset impairments	13	—	6
Business realignment costs	52	55	16
Other operating expense, net	17	13	12
Operating income	112	244	260
Operating income as a percentage of net sales	*3%*	*7%*	*6%*
Interest expense, net	329	310	326
Loss (gain) on extinguishment of debt	3	(48)	(41)
Other non-operating income, net	—	(7)	(3)
Total non-operating expense	332	255	282
Loss before income tax and earnings from unconsolidated entities	(220)	(11)	(22)
Income tax expense	18	38	34
Loss before earnings from unconsolidated entities	(238)	(49)	(56)
Earnings from unconsolidated entities, net of taxes	4	11	17
Net loss	(234)	(38)	(39)
Net income attributable to noncontrolling interest	—	—	(1)
Net loss attributable to Hexion Inc.	$ (234)	$ (38)	$ (40)
Other comprehensive income (loss)	$ 31	$ (24)	$ (88)

Net Sales

In 2017, net sales increased by $153, or 4%, compared to 2016. Excluding $185 of net sales from the disposition of our PAC Business in 2016, net sales increased by 10%. Pricing positively impacted net sales by $182 due largely to raw material price increases passed through to customers across many of our businesses, partially offset by competitive pricing pressures in our epoxy specialty business. Overall, volumes positively impacted net sales by $131 driven by strong market demand in our North American formaldehyde business, as well as the additional capacity from our new formaldehyde plants. Additionally, volumes increased in our North American forest products resins business due to modest growth in the U.S. housing market and in our base epoxy resins business as it continues to recover from cyclical trough conditions. These increases were partially offset by volume decreases in our epoxy specialty business driven by an ongoing destocking of wind blades and lower installations. The impact of foreign exchange translation positively impacted net sales by $25, due to an overall strengthening of various foreign currencies against the U.S. dollar in 2017 compared to 2016.

In 2016, net sales decreased by $702, or 17%, compared to 2015. Pricing negatively impacted net sales by $373 due to raw material price decreases passed through to customers in most of our businesses. The disposition of our PAC Business in the second quarter of 2016 negatively impacted net sales by $177. Volume decreases negatively impacted net sales by $82, and were primarily driven by reduced volumes in our oilfield business, which were the result of lower natural gas and oil drilling activity caused by lower oil prices. Also contributing to the overall volume decrease were volume reductions in our Latin American forest products resins business due to the continued economic downturn in Brazil. These decreases were partially offset by higher volumes in our phenolic resins business, driven by the acquisition of the remaining 50% of our previous Chinese joint venture and increased demand within certain industrial markets in North America, as well as higher volumes in our epoxy specialty business, which were primarily driven by strong demand in the Chinese and European wind energy markets in the first half of 2016. In addition, foreign currency translation negatively impacted net sales by $70, primarily as a result of the strengthening of the U.S. dollar against the Brazilian real, Chinese yuan and euro in 2016 compared to 2015.

Gross Profit

Gross profit increased $101 in 2017 compared to 2016, primarily due to a decrease in accelerated depreciation of $115 driven by the closure of our Norco, LA facility in 2016 and the impact of the MTM adjustments on pension and OPEB liabilities (losses of $2 in 2017 and losses of $19 in 2016). Gross profit as a percentage of net sales increased by 2%, primarily due to the impact of the accelerated depreciation discussed above, which had a negative impact of 3% on 2016 gross profit. This impact was partially offset by margin compression driven by competitive pricing pressures discussed above, as well as unfavorable raw material price inflation.

Gross profit decreased $200 in 2016 compared to 2015, primarily due to an increase in accelerated depreciation of $127 related to the rationalization of our Norco, LA facility and the indefinite idling of two manufacturing facilities in our oilfield business, as well as an increase of $27 related to MTM adjustments on pension and OPEB liabilities (losses of $19 in 2016 and gains of $8 in 2015). Gross profit as a percentage of net sales decreased by 2%, primarily due to the impact of the accelerated depreciation and MTM adjustments discussed above, which had a combined negative impact of 4%. These decreases were partially offset by favorable raw material deflation and raw material productivity initiatives.

Operating Income

Operating income decreased by $132 in 2017 compared to 2016. This decrease was primarily driven by the absence of gains on the disposition of our PAC Business and HAI joint venture interest of $240 that positively impacted 2016 and a goodwill impairment of $13 recognized in 2017 as a result of the estimated fair value of our oilfield reporting unit being less than the carrying value of its net assets. These decreases to operating income were partially offset by the increase in gross profit of $101, discussed above, as well as decreases in selling, general and administrative expense of $21 and in business realignment costs of $3. The decrease in selling, general and administrative expense was due primarily to lower compensation and benefits expense driven by our recent cost savings and productivity actions and the impact of the MTM adjustments on pension and OPEB liabilities (gains of $6 in 2017 and losses of $15 in 2016), as well as the sale of our PAC Business in the second quarter of 2016, partially offset by $19 of insurance recoveries in 2016 related to the supplier disruption in our European versatic acids business. The decrease in business realignment costs in 2017 is largely attributable to costs in 2016 related to the Norco, LA facility closure that did not recur, primarily offset by costs associated with our 2017 cost reduction programs.

Operating income decreased by $16 in 2016 compared to 2015. This decrease was primarily due to the decrease in gross profit of $200 discussed above. Also contributing to the decrease in operating income was a increase in business realignment costs of $39 and increases in selling, general and administrative expense of $22. The increase in business realignment costs was largely due to one-time closure expenses related to our Norco, LA facility rationalization, primarily consisting of charges related to the early termination of certain contracts for utilities, site services and raw materials. The increase in selling, general and administrative expense was due primarily to the impact of the MTM adjustments on pension and OPEB liabilities (losses of $15 in 2016 and gains of $5 in 2015), costs related to the sale of our PAC Business and lower insurance recoveries in 2016 related to the supplier disruption in our European versatic acids business, partially offset by lower compensation and benefits expense driven by our recent cost savings and productivity actions. These negative impacts to operating income were partially offset by gains of $240 in the second quarter 2016 related to the sale of our PAC Business and our ownership interest in the HAI joint venture (see Note 12 in Item 8 of Part II of this Annual Report on Form 10-K), as well as reductions of $6 in asset impairment charges.

Non-Operating Expense

In 2017, total non-operating expense increased by $77 compared to 2016, primarily due to gains on debt extinguishment of $48 in 2016 that did not recur in 2017, an increase in interest expense of $19 driven by higher average debt levels and higher weighted average interest rates and a decrease of $7 in other non-operating income due to decreased realized and unrealized foreign currency transaction gains.

In 2016, total non-operating expense decreased by $27 compared to 2015, primarily due to a decrease in interest expense of $16 driven by lower average debt levels, as well as an increase of $7 in gains on debt buyback transactions and an increase of $4 in realized and unrealized foreign currency transaction gains.

Income Tax Expense

On December 22, 2017, the United States enacted tax reform legislation that included a broad range of business tax provisions, including but not limited to a reduction in the U.S. federal tax rate from 35% to 21% as well as provisions that limit or eliminate various deductions or credits. The legislation also causes U.S. expenses, such as interest and general administrative expenses, to be taxed and imposes a new tax on U.S. cross-border payments. Furthermore, the legislation includes a one-time transition tax on accumulated foreign earnings and profits.

In response to the enactment of U.S. tax reform, the SEC issued guidance (referred to as “SAB 118”) to address the complexity in accounting for this new legislation. When the initial accounting for items under the new legislation is incomplete, the guidance allows companies to recognize provisional amounts when reasonable estimates can be made or to continue to apply the prior tax law if a reasonable estimate of the impact cannot be made. The SEC has provided up to a one-year window for companies to finalize the accounting for the impacts of this new legislation and we anticipate finalizing our accounting during 2018.

While our accounting for the new U.S. tax legislation is not complete, we have made reasonable estimates for certain provisions and recognized no net tax expense in our 2017 financial statements. We continue to evaluate the accounting impacts of the legislation, assemble and analyze the required information, and await additional guidance from the U.S. Treasury Department, the IRS or other standard-setting bodies. Additionally, we continue to analyze other information and regulatory guidance, and accordingly we may record additional provisional amounts or adjustments to provisional amounts in future periods. See Note 14 in Item 8 of this Annual Report on Form 10-K for further details on the impacts of U.S. tax reform.

In 2017, income tax expense decreased by $20 compared to 2016 primarily due to reduction in foreign earnings. In 2017, the Company recognized total income tax expense of $18 primarily related to income from certain foreign operations. The provisional income tax expense of $167 associated with revaluing our net U.S. deferred tax attributes to reflect the new U.S. corporate tax rate of 21%, as well as an additional $65 provisional income tax expense associated with the estimated transition tax was fully offset by net operating losses and the release of valuation allowance. Further, in 2017, losses in the United States and certain foreign jurisdictions had no impact on income tax expense due to the maintenance of a full valuation allowance. In 2016, the income tax expense related to the gain on dispositions was substantially reduced by net operating loss utilization which was offset by a decrease to the related valuation allowance.

In 2016, income tax expense increased by $4 compared to 2015. In 2016, the Company recognized income tax expense of $38 primarily as a result of income from certain foreign operations. Losses in the United States created a deferred income tax benefit which was completely offset by an increase to the related valuation allowance.

Due to the newly enacted U.S. tax rate change, our estimated balances as of December 31, 2017 represent timing differences, which may change when those estimates are finalized with the filing of our 2017 income tax return. At this time, we have not yet gathered, prepared and analyzed the information in sufficient detail to complete the calculations necessary to finalize the amount of our transition tax. As we complete the analysis of accumulated foreign earnings and profits and related foreign taxes paid on an entity by entity basis and finalize the amounts held in cash or other specified assets, we will update our provisional estimate of the transition tax and assess the impact on our valuation allowance.

Other Comprehensive Loss

In 2017, other comprehensive income of $31 relates to the $33 positive impact of foreign currency translation, primarily due to the overall strengthening of various foreign currencies against the U.S. dollar, partially offset by $2 of amortization of prior service costs on defined benefit pension and postretirement benefits.

In 2016, other comprehensive loss of $24 relates to the $23 negative impact of foreign currency translation, primarily driven by the strengthening of the U.S. dollar against the Chinese yuan and the euro, and to $1 of amortization of prior service costs on defined benefit pension and postretirement benefits.

In 2015, foreign currency translation negatively impacted other comprehensive income by $88, primarily due to the strengthening of the U.S. dollar against the euro, Brazilian real and Canadian dollar.

Results of Operations by Segment

Following are net sales and Segment EBITDA (earnings before interest, income taxes, depreciation and amortization) by reportable segment. Segment EBITDA is defined as EBITDA adjusted for certain non-cash items, other income and expenses and discontinued operations. Segment EBITDA is the primary performance measure used by our senior management, the chief operating decision-maker and the board of directors to evaluate operating results and allocate capital resources among segments. Segment EBITDA is also the profitability measure used to set management and executive incentive compensation goals. Segment EBITDA should not be considered a substitute for net loss or other results reported in accordance with U.S. GAAP. Segment EBITDA may not be comparable to similarly titled measures reported by other companies.

	Year Ended December 31,		
	2017	**2016**	**2015**
Net Sales [(1)]:			
Epoxy, Phenolic and Coating Resins	$ 2,052	$ 2,094	$ 2,589
Forest Products Resins	1,539	1,344	1,551
Total	$ 3,591	$ 3,438	$ 4,140
Segment EBITDA:			
Epoxy, Phenolic and Coating Resins	$ 174	$ 258	$ 307
Forest Products Resins	257	240	233
Corporate and Other	(66)	(65)	(74)
Total	$ 365	$ 433	$ 466

(1) Intersegment sales are not significant and, as such, are eliminated within the selling segment.

2017 vs. 2016 Segment Results

Following is an analysis of the percentage change in sales by segment from 2016 to 2017:

	Volume	Price/Mix	Currency Translation	Impact of Dispositions	Total
Epoxy, Phenolic and Coating Resins	3%	3%	1%	(9)%	(2)%
Forest Products Resins	5%	9%	1%	— %	15 %

Epoxy, Phenolic and Coating Resins

Net sales in 2017 decreased by $42, or 2%, compared to 2016. The majority of the decrease is due to the disposition of our PAC Business in 2016, which negatively impacted net sales by $185. Higher volumes positively impacted net sales by $68, primarily due to volume growth in our base epoxy resins and oilfield businesses, market driven volume increases in our phenolic resins business in North America and China and continued volume recovery in our European versatic acids business, partially offset by volume decreases in our epoxy specialty business largely driven by an ongoing destocking of wind blades and lower installations. Pricing positively impacted net sales by $66 due primarily to raw material price increases passed through to customers in most of our businesses, partially offset by competitive pricing pressures in our epoxy specialty business. Foreign exchange translation positively impacted net sales by $9, primarily due to the strengthening of the euro against the US dollar, partially offset by the strengthening of the U.S. dollar against the Chinese yuan, in 2017 compared to 2016.

Segment EBITDA in 2017 decreased by $84 to $174 compared to 2016. The impact of the disposition of our PAC Business and HAI joint venture interest in the second quarter of 2016 contributed to $30 of this decrease. The remaining decrease was primarily driven by margin compression and volume decreases in our epoxy specialty business, as well as a Segment EBITDA impact of $15 related to insurance recoveries received in 2016 in our versatic acids business that did not recur in 2017 and $6 of negative impact related to the hurricanes that occurred in the U.S during the third quarter of 2017. These decreases were partially offset by improvements in our oilfield and base epoxy resins businesses, as both continue to recover from cyclical trough conditions.

Forest Products Resins

Net sales in 2017 increased by $195, or 15%, when compared to 2016. Pricing positively impacted net sales by $116, which was primarily due to raw material price increases passed through to customers across many of our businesses. Volumes positively impacted net sales by $63, and were primarily driven by strong market demand in our North America formaldehyde business combined with the additional capacity from our new formaldehyde plants. Additionally, volumes increased in our North American forest products resins business due to modest growth in the U.S. housing market. The impact of foreign exchange translation positively impacted net sales by $16, primarily due to an overall strengthening of various foreign currencies against the U.S. dollar in 2017 compared to 2016.

Segment EBITDA in 2017 increased by $17 to $257 compared to 2016. This increase was primarily due to increased volumes in our North American formaldehyde business discussed above, as well as cost efficiencies associated with our new North American formaldehyde plants.

Corporate and Other

Corporate and Other is primarily corporate, general and administrative expenses that are not allocated to the other segments, such as shared service and administrative functions, unallocated foreign exchange gains and losses and legacy company costs not allocated to continuing segments. Corporate and Other charges increased by $1 to $66 compared to 2016, due primarily to higher information technology costs and annual merit increases, largely offset by our ongoing cost savings efforts.

2016 vs. 2015 Segment Results

The table below provides additional detail of the percentage change in sales by segment from 2015 to 2016:

	Volume	Price/Mix	Currency Translation	Impact of Dispositions	Total
Epoxy, Phenolic and Coating Resins	(2)%	(9)%	(1)%	(7)%	(19)%
Forest Products Resins	(1)%	(10)%	(2)%	— %	(13)%

Epoxy, Phenolic and Coating Resins

Net sales in 2016 decreased by $495, or 19%, compared to 2015. Pricing negatively impacted net sales by $221 due primarily to raw material price decreases passed through to customers in most of our businesses. The disposition of our PAC Business in the second quarter of 2016 negatively impacted net sales by $177. Lower volumes negatively impacted net sales by $64, which were primarily driven by continued decreases in volumes within our oilfield business, as well as volume decreases in our base epoxy business due to increased competition. These decreases were partially offset by higher volumes in our phenolic resins business due to the acquisition of the remaining 50% of our previous Chinese joint venture and increased demand within certain industrial markets in North America, as well as overall higher volumes in our epoxy specialty business, which were primarily driven by strong demand in the Chinese and European wind energy markets in the first half of 2016. Foreign exchange translation negatively impacted net sales by $33, primarily due to the strengthening of the U.S. dollar against the Chinese yuan and the euro in 2016 compared to 2015.

Segment EBITDA in 2016 decreased by $49 to $258 compared to 2015. The impact of the disposition of our PAC Business and HAI joint venture interest in the second quarter of 2016 contributed to $23 of this decrease. The remaining decrease was primarily driven by the volume declines in our oilfield and base epoxy businesses discussed above. These decreases were partially offset by the growth in our epoxy specialty business discussed above, combined with margin expansion in our versatic acids business and cost reductions related to the rationalization at our Norco, LA manufacturing facility.

Forest Products Resins

Net sales in 2016 decreased by $207, or 13%, when compared to 2015. Pricing negatively impacted net sales by $152, which was primarily due to raw material price decreases contractually passed through to customers across many of our businesses. Lower volumes negatively impacted net sales by $18, and were primarily driven by weaker demand in our Latin American forest products resins business as a result of the continued economic downturn in Brazil. These decreases were partially offset by volume increases in certain industrial markets within our European forest products business. Foreign exchange translation negatively impacted net sales by $37, primarily due to the strengthening of the U.S. dollar against the Brazilian real, Canadian dollar and the euro in 2016 compared to 2015.

Segment EBITDA in 2016 increased by $7 to $240 compared to 2015. This increase was primarily due to increased volumes and cost efficiencies associated with our new North American formaldehyde plants, as well as increased raw material productivity. These increases were partially offset by the volume reductions in our Latin American forest products resins business discussed above.

Corporate and Other

Corporate and Other is primarily corporate, general and administrative expenses that are not allocated to the other segments, such as shared service and administrative functions, unallocated foreign exchange gains and losses and legacy company costs not allocated to continuing segments. Corporate and Other charges decreased by $9 to $65 compared to 2015, due primarily to lower compensation and benefits expense driven by our recent cost savings actions.

Reconciliation of Net Loss to Segment EBITDA:

	Year Ended December 31,		
	2017	**2016**	**2015**
Net loss	$ (234)	$ (38)	$ (39)
Income tax expense	18	38	34
Interest expense, net	329	310	326
Depreciation and amortization	115	131	137
Accelerated depreciation	14	129	2
EBITDA	$ 242	$ 570	$ 460
Items not included in Segment EBITDA:			
Asset impairments	$ 13	$ —	$ 6
Business realignment costs	52	55	16
Realized and unrealized foreign currency losses (gains)	3	(11)	10
Gain on dispositions	—	(240)	—
Loss (gain) on extinguishment of debt	3	(48)	(41)
Unrealized (gains) losses on pension and OPEB plan liabilities	(4)	34	(13)
Other	56	73	28
Total adjustments	123	(137)	6
Segment EBITDA	$ 365	$ 433	$ 466
Segment EBITDA:			
Epoxy, Phenolic and Coating Resins	$ 174	$ 258	$ 307
Forest Products Resins	257	240	233
Corporate and Other	(66)	(65)	(74)
Total	$ 365	$ 433	$ 466

Items Not Included in Segment EBITDA

Not included in Segment EBITDA are certain non-cash items and other income and expenses. For 2017 and 2016, these other items primarily included certain professional fees related to strategic projects and expenses from retention programs. For 2015, these other items primarily included expenses from retention programs, certain professional fees related to strategic projects and management fees, partially offset by gains on the disposal of assets and a gain on a step acquisition.

Business realignment costs for 2017 primarily included costs related to in-process cost reduction programs and certain in-process and recently completed facility rationalizations. Business realignment costs for 2016 primarily included costs related to certain in-process cost reduction programs. Business realignment costs for 2015 primarily included costs related to certain in-process cost reduction programs.

Liquidity and Capital Resources

We are a highly leveraged company. Our primary sources of liquidity are cash flows generated from operations and availability under our ABL Facility. Our primary liquidity requirements are interest, working capital and capital expenditures.

At December 31, 2017, we had $3,709 of outstanding debt and $346 in liquidity consisting of the following:

- $97 of unrestricted cash and cash equivalents (of which $84 is maintained in foreign jurisdictions);
- $227 of borrowings available under our ABL Facility ($350 borrowing base less $81 of outstanding borrowings and $42 of outstanding letters of credit); and
- $22 of time drafts and borrowings available under credit facilities at certain international subsidiaries.

Our net working capital (defined as accounts receivable and inventories less accounts payable) at December 31, 2017 and 2016 was $373 and $309, respectively. A summary of the components of our net working capital as of December 31, 2017 and 2016 is as follows:

	December 31, 2017	% of LTM Net Sales	December 31, 2016	% of LTM Net Sales (1)
Accounts receivable	$ 462	13 %	$ 390	12 %
Inventories	313	9 %	287	9 %
Accounts payable	(402)	(12)%	(368)	(11)%
Net working capital(2)	$ 373	10 %	$ 309	10 %

(1) The percentage of LTM Net Sales at December 31, 2016 exclude net sales related to our PAC Business, which was sold on June 30, 2016.

(2) The components of net working capital at December 31, 2017 exclude $6 of net working capital related to the ATG business. The assets and liabilities of ATG are classified as held for sale in the December 31, 2017 Consolidated Balance Sheet.

The increase in net working capital of $64 from December 31, 2016 was the result of a increase of $72 in accounts receivable and $26 in inventory. The increase in accounts receivable and inventory were primarily the result of increased volumes in 2017 compared to 2016 due to market conditions as well as raw material price inflation. These increases to net working capital were partially offset by an increase in accounts payable of $34, largely related to raw material price inflation and the timing of vendor payments. To minimize the impact of net working capital changes on cash flows, we continue to review inventory safety stock levels, focus on receivable collections by offering incentives to customers to encourage early payment or acceleration of receipts through the sale of receivables and negotiate with vendors to contractually extend payment terms whenever possible.

We periodically borrow from the ABL Facility to support our short-term liquidity requirements, particularly around payments for interest obligations and when net working capital requirements increase in response to seasonality of our volumes. As of December 31, 2017, there were $81 of outstanding borrowings under the ABL Facility.

2017 Refinancing Transactions

In February 2017, we issued $485 aggregate principal amount of New First Lien Notes and $225 aggregate principal amount of New Senior Secured Notes. Upon the closing of these offerings, we used the net proceeds from these offerings, together with cash on our balance sheet, to redeem all of our outstanding 8.875% Senior Secured Notes due 2018 (the “Old Senior Secured Notes”), which occurred in March 2017.

In May 2017, we issued an additional $75 aggregate principal amount of New First Lien Notes at an issue price of 100.5%. These notes mature on February 1, 2022 and have substantially the same terms as the New First Lien Notes issued in February 2017. We used the net proceeds from these notes for general corporate purposes.

In December 2016, we amended and restated the ABL Facility, with modifications to, among other things, permit the refinancing of the Old Senior Secured Notes. In connection with the issuance of the new notes in February 2017, certain lenders under the ABL Facility provided extended revolving facility commitments in an aggregate principal amount of $350 with a maturity date of December 5, 2021 (subject to early maturity triggers), the existing commitments were terminated and the size of the ABL Facility was reduced from $400 to $350.

2018 Outlook

The following factors will impact 2018 cash flows:

- **Interest and Income Taxes:** We expect cash outflows in 2018 related to interest payments on our debt of approximately $315 and income tax payments between $15 and $25.

- **Capital Spending:** Capital spending in 2018 is expected to be between $80 and $90, a decrease from 2017 due to our recent divestitures and restructuring activities at certain facilities.

- **Working Capital:** We anticipate working capital to increase modestly during 2018, as compared to 2017, based on expected increased volumes. During the year, we expect an increase in the first half and a decrease in the second half, consistent with historical trends.

- **Restructuring Activities:** We expect that the 2018 cost savings associated with our recently announced cost reduction programs, as well as our other ongoing and recently completed restructuring and cost reduction activities, will exceed the one-time cash costs in 2018 associated with these programs and have a net positive impact on our liquidity.

- **Sales of Assets:** We regularly review our portfolio and are currently exploring potential divestitures. While there is no guarantee of a transaction, it could include a specific business unit or combination of several businesses. As mentioned above, we completed the sale of our ATG business in January 2018 for cash proceeds of approximately $50. Also, we continue to evaluate additional sales of miscellaneous or idle assets, which would further increase our liquidity.

We plan to fund these outflows with available cash and cash equivalents, cash from operations and, if necessary, through available borrowings under our ABL Facility. Following a usage of cash from operating activities in 2017, we expect significant improvement in our 2018 operating cash flows driven by anticipated improvement in business performance, the impact of our cost reduction programs and lower restructuring spend. Based on our liquidity position as of December 31, 2017, and projections of operating cash flows in 2018, we believe we have the ability to continue as a going concern for the next twelve months.

Sources and Uses of Cash

Following are highlights from our Consolidated Statements of Cash Flows for the years ended December 31:

	Year Ended December 31,		
	2017	2016	2015
Sources (uses) of cash:			
Operating activities	$ (153)	$ (20)	$ 213
Investing activities	(109)	210	(155)
Financing activities	174	(235)	24
Effect of exchange rates on cash flow	6	(4)	(10)
Net (decrease) increase in cash and cash equivalents	$ (82)	$ (49)	$ 72

Operating Activities

In 2017, operating activities used $153 of cash. Net loss of $234 included $151 of net non-cash expense items, consisting of depreciation and amortization of $115, non-cash asset impairments and accelerated depreciation of $27, amortization of deferred financing fees $16, loss on debt extinguishment of $3 and unrealized foreign currency losses of $3, partially offset by $4 of unrealized gains related to the remeasurement of our pension and OPEB liabilities, gain on sale of assets of $1 and a deferred tax benefit of $3. Net working capital used $41, which was largely driven by increases in accounts receivable and inventories due primarily to volume increases related to market conditions as well as raw material price inflation. Changes in other assets and liabilities and income taxes payable used $29 due to the timing of when items were expensed versus paid, which primarily included interest expense, employee retention programs, restructuring reserves, incentive compensation, pension plan contributions and taxes.

In 2016, operating activities used $20 of cash. Net loss of $38 included $34 of net non-cash income items, of which $240 related to gains on the HAI and PAC dispositions, $52 was for unrealized foreign currency gains and $48 related to gains on debt extinguishments. These items were partially offset by $131 of depreciation and amortization, $129 of accelerated depreciation, $34 of unrealized losses related to the remeasurement of our pension and OPEB liabilities and $2 related to deferred tax expense. Working capital provided $18, which was driven by decreases in accounts payable due to timing of vendor payments, partially offset by smaller decreases in accounts receivable and inventory due to sales volume decreases, lower raw material prices and increased efficiency in accounts receivable collections. Changes in other assets and liabilities and income taxes payable provided $34 due to the timing of when items were expensed versus paid, which primarily included interest expense, restructuring costs, employee retention programs, pension plan contributions and taxes.

In 2015, operating activities provided $213 of cash. Net loss of $39 included $97 of net non-cash expense items, of which $137 was for depreciation and amortization, $12 related to unrealized foreign currency losses, $8 was for non-cash asset impairments and accelerated depreciation and $7 related to deferred tax expense. These expense items were partially offset by a $41 gain on extinguishment of debt, $13 of unrealized gains related to the remeasurement of our pension and OPEB liabilities, a $5 gain on step acquisition and a $4 gain on sale of assets. Working capital provided $135, which was driven by decreases in accounts receivable and inventory due to sales volume decreases, lower raw material prices and increased efficiency in accounts receivable collections, which were partially offset by decreases in accounts payable, driven by volume decreases, lower raw material prices and the timing of vendor payments. Changes in other assets and liabilities and income taxes payable provided $20 due to the timing of when items were expensed versus paid, which primarily included interest expense, employee retention programs, pension plan contributions and taxes.

Investing Activities

In 2017, investing activities used $109, primarily driven by capital expenditures of $118 (including capitalized interest), partially offset by net proceeds from the sale of assets of $8 and an increase of $1 in restricted cash.

In 2016, investing activities provided $210, primarily driven by net cash proceeds of $356 related to the HAI and PAC dispositions and cash received on the HAI buyer's note, as well as $5 in proceeds from the sale of other assets. These items were partially offset by capital expenditures (including capitalized interest) of $141 and increase of $9 in restricted cash.

In 2015, investing activities used $155. We spent $179 for capital expenditures (including capitalized interest), which primarily related to plant expansions, improvements and maintenance related capital expenditures. Additionally, we spent $7, net of cash received, on the step acquisition of a joint venture. The sale of certain assets and investments provided cash of $23, and the decrease in restricted cash provided $8.

Financing Activities

In 2017, financing activities provided $174. Net short-term debt borrowings were $21 and net long-term debt borrowings were $178. Our long-term debt borrowings primarily consisted of $81 in borrowings under our ABL Facility, the refinancing of our Old Senior Secured Notes in February 2017, an additional $75 aggregate principal amount of New First Lien Notes issued in May 2017 and $43 related to the sale-leaseback financing of certain equipment at plants within our Forest Products Resins segment that occurred in the second half of 2017. We also paid $25 of financing fees related to these debt transactions.

In 2016, financing activities used $235. Net short-term debt repayments were $22 and net long-term debt repayments were $212. Our long-term debt repayments primarily consisted of $240 used to repurchase a portion of our Old Senior Secured Notes on the open market. We also paid $1 of financing fees.

In 2015, financing activities provided $24. Net short-term debt repayments were $3, and net long term borrowings were $38, which primarily consisted of proceeds from the issuance of an aggregate principal amount of $315 of 10.00% First-Priority Senior Secured Notes due 2020 ("10.00% First Lien Notes"), which was partially offset by the redemption or repayment of approximately $40 of our outstanding Sinking Fund Debentures and all amounts outstanding on the ABL Facility at the time of the issuance. Additionally, we used $160 to repurchase a portion of our Old Senior Secured Notes on the open market. We also paid $11 of financing fees related to these debt transactions.

There are certain restrictions on the ability of certain of our subsidiaries to transfer funds to the parent in the form of cash dividends, loans or otherwise, which primarily arise as a result of certain foreign government regulations or as a result of restrictions within certain subsidiaries' financing agreements limiting such transfers to the amounts of available earnings and profits or otherwise limit the amount of dividends that can be distributed. In either case, we have alternative methods to obtain cash from these subsidiaries in the form of intercompany loans and/or returns of capital in such instances where payment of dividends is limited to the extent of earnings and profits.

Outstanding Debt

Following is a summary of our cash and cash equivalents and outstanding debt at December 31, 2017 and December 31, 2016:

	As of December 31,	
	2017	2016
Cash and cash equivalents	$ 115	$ 196
Debt:		
ABL Facility	$ 81	$ —
Senior Secured Notes:		
6.625% First-Priority Senior Secured Notes due 2020 (includes $2 and $3 of unamortized debt premium at December 31, 2017 and 2016, respectively)	1,552	1,553
10.00% First-Priority Senior Secured Notes due 2020	315	315
10.375% First-Priority Senior Secured Notes due 2022	560	—
8.875% Senior Secured Notes due 2018 (includes $1 of unamortized debt discount at December 31, 2016)	—	706
13.75% Senior Secured Notes due 2022	225	—
9.00% Second-Priority Senior Secured Notes due 2020	574	574
Debentures:		
9.2% debentures due 2021	74	74
7.875% debentures due 2023	189	189
Other Borrowings:		
Australia Term Loan Facility due 2018	50	51
Brazilian bank loans	43	40
Lease obligations	49	9
Other	38	31
Unamortized debt issuance costs	(41)	(38)
Total	$ 3,709	$ 3,504

We have $1.9 billion of First Priority Senior Secured Notes maturing in April 2020 and $0.6 billion of Second Priority Notes maturing in November 2020. Additionally, if 91 days prior to the scheduled maturity of these notes, more than $50 aggregate principal amount is outstanding, our ABL Facility, which matures in December 2021, will accelerate and become immediately due and payable.

We regularly review our portfolio and are currently exploring potential divestitures. While there is no guarantee of a transaction, it could include a specific business unit or combination of several businesses. We expect that the proceeds from a transaction or transactions upon completion would be used to help reduce the absolute amount of our debt.

Further, depending upon market, pricing and other conditions, including the current state of the high yield bond market, as well as cash balances and available liquidity, we or our affiliates, may seek to acquire notes or other indebtedness of the Company through open market purchases, privately negotiated transactions, tender offers, redemption or otherwise, upon such terms and at such prices as we or our affiliates may determine (or as may be provided for in the indentures governing the notes), for cash or other consideration.

Covenant Compliance

The instruments that govern our indebtedness contain, among other provisions, restrictive covenants (and incurrence tests in certain cases) regarding indebtedness, dividends and distributions, mergers and acquisitions, asset sales, affiliate transactions, capital expenditures and, in the case of our ABL Facility, the maintenance of a financial ratio (depending on certain conditions). Payment of borrowings under the ABL Facility and our notes may be accelerated if there is an event of default as determined under the governing debt instrument. Events of default under the credit agreement governing our ABL Facility includes the failure to pay principal and interest when due, a material breach of representations or warranties, most covenant defaults, events of bankruptcy and a change of control. Events of default under the indentures governing our notes include the failure to pay principal and interest, a failure to comply with covenants, subject to a 30-day grace period in certain instances, and certain events of bankruptcy.

The indentures that govern our 6.625% First-Priority Senior Secured Notes, 10.00% First Lien Notes, New First Lien Notes, New Senior Secured Notes and 9.00% Second-Priority Senior Secured Notes (the “Secured Indentures”) contain an Adjusted EBITDA to Fixed Charges ratio incurrence test which may restrict our ability to take certain actions such as incurring additional debt or making acquisitions if we are unable to meet this ratio (measured on a last twelve months, or LTM, basis) of at least 2.0:1. The Adjusted EBITDA to Fixed Charges Ratio under the Secured Indentures is generally defined as the ratio of (a) Adjusted EBITDA to (b) net interest expense excluding the amortization or write-off of deferred financing costs, each measured on an LTM basis. See below for our Adjusted EBITDA to Fixed Charges Ratio calculation.

Our ABL Facility, which is subject to a borrowing base does not have any financial maintenance covenant other than a minimum fixed charge coverage ratio of 1.0 to 1.0 that would only apply if our availability under the ABL Facility at any time is less than the greater of (a) $35 and (b) 12.5% of the lesser of the borrowing base and the total ABL Facility commitments at such time. The fixed charge coverage ratio under the credit agreement governing the ABL Facility is generally defined as the ratio of (a) Adjusted EBITDA minus non-financed capital expenditures and cash taxes to (b) debt service plus cash interest expense plus certain restricted payments, each measured for the four most recent quarters for which financial statements have been delivered. At December 31, 2017, our availability under the ABL Facility exceeded such levels; therefore, the minimum fixed charge coverage ratio did not apply. As of December 31, 2017, we were in compliance with all covenants that govern the ABL Facility. We believe that a default under the ABL Facility is not reasonably likely to occur in the foreseeable future.

Reconciliation of Last Twelve Months Net Loss to Adjusted EBITDA

Adjusted EBITDA is defined as EBITDA adjusted for certain non-cash and certain non-recurring items and other adjustments calculated on a pro-forma basis, including the expected future cost savings from business optimization programs or other programs and the expected future impact of acquisitions, in each case as determined under the governing debt instrument. As we are highly leveraged, we believe that including the supplemental adjustments that are made to calculate Adjusted EBITDA provides additional information to investors about our ability to comply with our financial covenants and to obtain additional debt in the future. Adjusted EBITDA and Fixed Charges are not defined terms under U.S. GAAP. Adjusted EBITDA is not a measure of financial condition, liquidity or profitability, and should not be considered as an alternative to net income (loss) determined in accordance with U.S. GAAP or operating cash flows determined in accordance with U.S. GAAP. Additionally, EBITDA is not intended to be a measure of free cash flow for management's discretionary use, as it does not take into account certain items such as interest and principal payments on our indebtedness, depreciation and amortization expense (because we use capital assets, depreciation and amortization expense is a necessary element of our costs and ability to generate revenue), working capital needs, tax payments (because the payment of taxes is part of our operations, it is a necessary element of our costs and ability to operate), non-recurring expenses and capital expenditures. Fixed Charges under the Secured Indentures should not be considered an alternative to interest expense.

The following table reconciles Net loss to EBITDA and Adjusted EBITDA, and calculates the ratio of Adjusted EBITDA to Fixed Charges as calculated under certain of our indentures for the period presented:

	Year Ended December 31, 2017
Net loss	$ (234)
Interest expense, net	329
Income tax expense	18
Depreciation and amortization	115
Accelerated depreciation	14
EBITDA	242
Adjustments to EBITDA:	
Asset impairments	13
Loss on extinguishment of debt	3
Business realignment costs [1]	52
Realized and unrealized foreign currency losses	3
Unrealized gains on pension and OPEB plan liabilities [2]	(4)
Other [3]	65
Cost reduction programs savings [4]	50
Adjusted EBITDA	$ 424
Pro forma fixed charges [5]	$ 313
Ratio of Adjusted EBITDA to Fixed Charges [6]	1.35

(1) Primarily represents costs related to headcount reduction expenses and plant rationalization costs related to in-process and recently completed cost reduction programs, termination costs and other costs associated with business realignments.

(2) Represents non-cash gains from pension and postretirement benefit plan liability remeasurements.

(3) Primarily includes certain professional fees related to strategic projects, retention program costs, business optimization expenses, management fees and expenses related to legacy liabilities.

(4) Represents pro forma impact of in-process cost reduction programs savings. Cost reduction program savings represent the unrealized headcount reduction savings and plant rationalization savings related to cost reduction programs and other unrealized savings associated with the Company's business realignments activities, and represent our estimate of the unrealized savings from such initiatives that would have been realized had the related actions been completed at the beginning of the period presented. The savings are calculated based on actual costs of exiting headcount and elimination or reduction of site costs.

(5) Reflects pro forma interest expense based on interest rates at December 31, 2017, as if the 2017 Refinancing Transactions had taken place at the beginning of the period.

(6) The Company's ability to incur additional indebtedness, among other actions, is restricted under the indentures governing certain notes, unless the Company has an Adjusted EBITDA to Fixed Charges ratio of 2.0 to 1.0. As of December 31, 2017, we did not satisfy this test. As a result, we are subject to restrictions on our ability to incur additional indebtedness or to make investments; however, there are exceptions to these restrictions, including exceptions that permit indebtedness under the ABL Facility (available borrowings of which were $227 at December 31, 2017).

Contractual Obligations

The following table presents our contractual cash obligations at December 31, 2017. Our contractual cash obligations consist of legal commitments at December 31, 2017 that require us to make fixed or determinable cash payments, regardless of the contractual requirements of the specific vendor to provide us with future goods or services. This table does not include information about most of our recurring purchases of materials used in our production; our raw material purchase contracts do not meet this definition since they generally do not require fixed or minimum quantities. Contracts with cancellation clauses are not included, unless a cancellation would result in a major disruption to our business. For example, we have contracts for information technology support that are cancelable, but this support is essential to the operation of our business and administrative functions; therefore, amounts payable under these contracts are included. These contractual obligations are grouped in the same manner as they are classified in the Consolidated Statements of Cash Flows in order to provide a better understanding of the nature of the obligations.

	Payments Due By Year						
Contractual Obligations	**2018**	**2019**	**2020**	**2021**	**2022**	**2023 and beyond**	**Total**
Operating activities:							
Purchase obligations [1]	$ 199	$ 97	$ 97	$ 10	$ 9	$ 68	$ 480
Interest on fixed rate debt obligations	304	303	233	110	61	8	1,019
Interest on variable rate debt obligations [2]	5	1	—	—	—	—	6
Operating lease obligations	24	19	13	9	5	13	83
Funding of pension and other postretirement obligations [3]	30	30	30	30	31	—	151
Financing activities:							
Long-term debt, including current maturities	120	5	2,524	76	785	189	3,699
Capital lease obligations	11	10	14	10	22	1	68
Total	$ 693	$ 465	$ 2,911	$ 245	$ 913	$ 279	$ 5,506

(1) Purchase obligations are comprised of the fixed or minimum amounts of goods and/or services under long-term contracts and assumes that certain contracts are terminated in accordance with their terms after giving the requisite notice which is generally two to three years for most of these contracts; however, under certain circumstances, some of these minimum commitment term periods could be further reduced which would significantly decrease these contractual obligations.

(2) Based on applicable interest rates in effect at December 31, 2017.

(3) Pension and other postretirement contributions have been included in the above table for the next five years. These amounts include estimated benefit payments to be made for unfunded foreign defined benefit pension plans as well as estimated contributions to our funded defined benefit plans. The assumptions used by our actuaries in calculating these projections includes a weighted average annual return on pension assets of approximately 4% for the years 2018 – 2022 and the continuation of current law and plan provisions. These estimated payments may vary based on the actual return on our plan assets or changes in current law or plan provisions. See Note 9 to the Consolidated Financial Statements in Item 8 of Part II of this Annual Report on Form 10-K for more information on our pension and postretirement obligations.

The table above excludes payments for income taxes and environmental obligations since, at this time, we cannot determine either the timing or the amounts of all payments beyond 2017. At December 31, 2017, we recorded unrecognized tax benefits and related interest and penalties of $129. We estimate that we will pay between $15 and $25 in 2018 for U.S. Federal, state and international income taxes. We expect non-capital environmental expenditures for 2018 through 2022 totaling $17. See Notes 8 and 14 to the Consolidated Financial Statements in Item 8 of Part II of this Annual Report on 10-K for more information on these obligations.

Off Balance Sheet Arrangements

We had no off-balance sheet arrangements as of December 31, 2017.

Critical Accounting Estimates

In preparing our financial statements in conformity with U.S. GAAP, we have to make estimates and assumptions about future events that affect the amounts of reported assets, liabilities, revenues and expenses, as well as the disclosure of contingent assets and liabilities in the financial statements and accompanying notes. Some of these accounting policies require the application of significant judgment by management to select the appropriate assumptions to determine these estimates. By their nature, these judgments are subject to an inherent degree of uncertainty; therefore, actual results may differ significantly from estimated results. We base these judgments on our historical experience, advice from experienced consultants, forecasts and other available information, as appropriate. Our significant accounting policies are more fully described in Note 2 to the Consolidated Financial Statements in Item 8 of Part II of this Annual Report on Form 10-K.

Our most critical accounting policies, which reflect significant management estimates and judgment to determine amounts in our audited Consolidated Financial Statements, are as follows:

Environmental Remediation and Restoration Liabilities

Accruals for environmental matters are recorded when we believe that it is probable that a liability has been incurred and we can reasonably estimate the amount of the liability. We have accrued $52 and $57 at December 31, 2017 and 2016, respectively, for all probable environmental remediation and restoration liabilities, which is our best estimate of these liabilities. Based on currently available information and analysis, we believe that it is reasonably possible that the costs associated with these liabilities may fall within a range of $43 to $92. This estimate of the range of reasonably possible costs is less certain than the estimates that we make to determine our reserves. To establish the upper limit of this range, we used assumptions that are less favorable to Hexion among the range of reasonably possible outcomes, but we did not assume that we would bear full responsibility for all sites to the exclusion of other potentially responsible parties.

Some of our facilities are subject to environmental indemnification agreements, where we are generally indemnified against damages from environmental conditions that occurred or existed before the closing date of our acquisition of the facility, subject to certain limitations. In other cases we have sold facilities subject to an environmental indemnification agreement pursuant to which we retain responsibility for certain environmental conditions that occurred or existed before the closing date of the sale of the facility.

Income Tax Assets and Liabilities and Related Valuation Allowances

On December 22, 2017, the United States enacted tax reform legislation that included a broad range of business tax provisions, including but not limited to a reduction in the U.S. federal tax rate from 35% to 21% as well as provisions that limit or eliminate various deductions or credits. The legislation also causes U.S. expenses, such as interest and general administrative expenses, to be taxed and imposes a new tax on U.S. cross-border payments. Furthermore, the legislation includes a one-time transition tax on accumulated foreign earnings and profits.

In response to the enactment of U.S. tax reform, the SEC issued guidance (referred to as “SAB 118”) to address the complexity in accounting for this new legislation. When the initial accounting for items under the new legislation is incomplete, the guidance allows companies to recognize provisional amounts when reasonable estimates can be made or to continue to apply the prior tax law if a reasonable estimate of the impact cannot be made. The SEC has provided up to a one-year window for companies to finalize the accounting for the impacts of this new legislation and we anticipate finalizing our accounting during 2018.

While our accounting for the new U.S. tax legislation is not complete, we have made reasonable estimates for certain provisions and recognized no net tax expense in our 2017 financial statements. The tax expense related to U.S. tax reform is fully offset by the release of the associated valuation allowance. We continue to evaluate the accounting impacts of the legislation, assemble and analyze the required information, and await additional guidance from the U.S. Treasury Department, the IRS or other standard-setting bodies. Additionally, we continue to analyze other information and regulatory guidance, and accordingly we may record additional provisional amounts or adjustments to provisional amounts in future periods. See Note 14 for further details on the impacts of U.S. tax reform.

We incurred a provisional income tax expense of $167 associated with revaluing our net U.S. deferred tax attributes to reflect the new U.S. corporate tax rate of 21%, as well as an additional $65 provisional income tax expense associated with the estimated transition tax. Our valuation allowance was reduced by $234 as a result of the impact Tax Reform had on reducing our net deferred tax assets.

Due to the newly enacted U.S. tax rate change, our estimated balances as of December 31, 2017 represent timing differences, which may change when those estimates are finalized with the filing of our 2017 income tax return. At this time, we have not yet gathered, prepared and analyzed the information in sufficient detail to complete the calculations necessary to finalize the amount of our transition tax. As we complete the analysis of accumulated foreign earnings and profits and related foreign taxes paid on an entity by entity basis and finalize the amounts held in cash or other specified assets, we will update our provisional estimate of the transition tax.

At December 31, 2017, we had a valuation allowance of $522 against our deferred income tax assets. This valuation allowance is made up of a $377 valuation allowance against all of our net U.S. federal and state deferred income tax assets, as well as a valuation allowance of $145 against a portion of our net foreign deferred income tax assets, primarily in Germany and the Netherlands.

At December 31, 2016, we had a valuation allowance of $651 against our deferred income tax assets. This valuation allowance is made up of a $531 valuation allowance against all of our net U.S. federal and state deferred income tax assets, as well as a valuation allowance of $120 against a portion of our net foreign deferred income tax assets, primarily in Germany and the Netherlands.

The valuation allowances require an assessment of both negative and positive evidence, such as operating results during the most recent three-year period. This evidence is given more weight than our expectations of future profitability, which are inherently uncertain.

The Company considered all available evidence, both positive and negative, in assessing the need for a valuation allowance for deferred tax assets. The Company evaluated four possible sources of taxable income when assessing the realization of deferred tax assets:

- Taxable income in prior carryback years;
- Future reversals of existing taxable temporary differences;
- Tax planning strategies; and
- Future taxable income exclusive of reversing temporary differences and carryforwards.

Under SAB 118, we continue to evaluate our valuation allowance against our net deferred tax assets. At this time, we have not yet gathered, prepared and analyzed the necessary information in sufficient detail to estimate future taxable income. Furthermore, as we complete the analysis of accumulated foreign earnings and profits and related foreign taxes paid on an entity by entity basis and finalize the amounts held in cash or other specified assets, we will update our provisional estimate of the transition tax and assess the impact on our valuation allowance. In 2017, our losses in the U.S. and certain foreign operations in recent periods provisionally provided sufficient negative evidence to maintain a full valuation allowance against the net federal, state, and certain foreign deferred tax assets.

Uncertainty in income taxes is recognized in the financial statements in accordance with the applicable accounting guidance. The guidance prescribes a recognition threshold and measurement attribute for the financial statement recognition and measurement of tax positions taken or expected to be taken in its tax return. We also apply the guidance relating to de-recognition, classification, interest and penalties, accounting in interim periods, disclosure and transition.

The calculation of our income tax liabilities involves dealing with uncertainties in the application of complex domestic and foreign income tax regulations. Unrecognized tax benefits are generated when there are differences between tax positions taken in a tax return and amounts recognized in the Consolidated Financial Statements. Tax benefits are recognized in the Consolidated Financial Statements when it is more likely than not that a tax position will be sustained upon examination. Tax benefits are measured as the largest amount of benefit that is greater than 50% likely to be realized upon settlement. To the extent we prevail in matters for which liabilities have been established, or are required to pay amounts in excess of our liabilities, our effective income tax rate in a given period could be materially impacted. An unfavorable income tax settlement may require the use of cash and result in an increase in our effective income tax rate in the year it is resolved. A favorable income tax settlement would be recognized as a reduction in the effective income tax rate in the year of resolution. At December 31, 2017 and 2016, we recorded unrecognized tax benefits and related interest and penalties of $129 and $116, respectively.

Pensions

The amounts that we recognize in our financial statements for pension benefit obligations are determined by actuarial valuations. Inherent in these valuations are certain assumptions, the more significant of which are:

- The weighted average rate used for discounting the liability;
- The weighted average expected long-term rate of return on pension plan assets;
- The method used to determine market-related value of pension plan assets;
- The weighted average rate of future salary increases; and
- The anticipated mortality rate tables.

The discount rate reflects the rate at which pensions could be effectively settled. When selecting a discount rate, our actuaries provide us with a cash flow model that uses the yields of high-grade corporate bonds with maturities consistent with our anticipated cash flow projections. Our pension and OPEB liabilities and related service and interest cost are calculated using a split-rate interest discounting methodology, whereby expected future cash flows related to these liabilities are discounted using multiple interest rates on a forward curve that correspond to the timing of the expected cash flows.

The expected long-term rate of return on plan assets is determined based on the various plans’ current and projected asset mix. To determine the expected overall long-term rate of return on assets, we take into account the rates on long-term debt investments that are held in the portfolio, as well as expected trends in the equity markets, for plans including equity securities.

The rate of increase in future compensation levels is determined based on salary and wage trends in the chemical and other similar industries, as well as our specific compensation targets.

The mortality tables that are used represent the most commonly used mortality projections for each particular country, and reflect projected mortality improvements.

We believe the current assumptions used to estimate plan obligations and pension expense are appropriate in the current economic environment. However, as economic conditions change, we may change some of our assumptions, which could have a material impact on our financial condition and results of operations.

The following table presents the sensitivity of our projected pension benefit obligation ("PBO"), accumulated benefit obligation ("ABO"), deficit ("Deficit") and 2017 pension expense to the following changes in key assumptions:

	Increase / (Decrease) at December 31, 2017		Increase / (Decrease)
	PBO	ABO	2018 Expense
Assumption:			
Increase in discount rate of 0.5%	$ (81)	$ (73)	$ 1
Decrease in discount rate of 0.5%	70	61	(2)
Increase in estimated return on assets of 1.0%	N/A	N/A	(6)
Decrease in estimated return on assets of 1.0%	N/A	N/A	6

Impairment of Long-Lived Assets, Goodwill and Other Intangible Assets

Goodwill

Our reporting units include epoxy, phenolic specialty resins, oilfield, versatics and forest products. Our reporting units are generally one level below our operating segments for which discrete financial information is available and reviewed by segment management. However, components of an operating segment can be aggregated as one reporting unit if the components have similar economic characteristics. We perform an annual assessment of qualitative factors to determine whether the existence of any events or circumstances leads to a determination that it is more likely than not that the fair value of a reporting unit is less than the carrying amount of the reporting unit's net assets. If, after assessing all events and circumstances, we determine it is more likely than not that the fair value of a reporting unit is less than the carrying amount of the reporting unit's net assets, we use a probability weighted market and income approach to estimate the fair value of the reporting unit. Our market approach is a comparable analysis technique commonly used in the investment banking and private equity industries based on the EBITDA multiple technique. Under this technique, estimated fair value is the result of a market based EBITDA multiple that is applied to an appropriate historical EBITDA amount, adjusted for the additional fair value that would be assigned by a market participant obtaining control over the reporting unit. Our income approach is a discounted cash flow model. The discounted cash flow model requires management to project revenues, operating expenses, working capital investment, taxes, capital spending and cash flows over a multi-year period, as well as determine the weighted average cost of capital to be used as a discount rate. Applying this discount rate to the multi-year projections provides an estimate of fair value for the reporting unit. If the estimated fair value of the reporting unit is less than the carrying value of the reporting unit's net assets, an impairment loss is recognized for the difference.

In 2017, due to the Company lowering its forecast of estimated earnings and cash flows for its oilfield business from those previously projected and indefinitely idling a manufacturing facility within its oilfield business, and due to the slower than previously assumed recovery in the oil and gas market, the estimated fair value of the Company's oilfield reporting unit was less than the carrying value of the net assets of the reporting unit. In estimating the fair value of the oilfield reporting unit, the Company relied solely on a discounted cash flow model income approach. This was due to the Company's belief that the reporting unit's EBITDA, a key input under the market approach, was not representative and consistent with the reporting unit's historical performance and long-term outlook and, therefore, was not consistent with assumptions that a market participant would use in determining the fair value of the reporting unit. To measure the amount of the goodwill impairment, the Company allocated the estimated fair value of the reporting unit to the reporting unit's assets and liabilities. As a result of this allocation, the Company estimated that the implied fair value of the oilfield reporting unit's goodwill was $0. As such, the entire oilfield reporting unit's goodwill balance of $13 was impaired during the third quarter of 2017, and the Company recognized a goodwill impairment charge of $13 in its Epoxy, Phenolic and Coating Resins segment, which is included in "Asset impairments" in the Consolidated Statements of Operations. Significant unobservable inputs in the discounted cash flow analysis included projected long-term future cash flows, projected growth rates and discount rates associated with this reporting unit. Future projected long-term cash flows and growth rates were derived from models based upon forecasts prepared by the Company's management. These projected cash flows were discounted using a rate of 13.5%.

As of October 1, 2017 and 2016, the estimated fair value of each of our remaining reporting units was deemed to be substantially in excess of the carrying amount of assets and liabilities assigned to each unit. A 20% decrease in the EBITDA multiple or a 20% increase in the interest rate used to calculate the discounted cash flows would not result in any of our remaining reporting units failing the step one goodwill impairment test.

Long-Lived Assets

As events warrant, we evaluate the recoverability of long-lived assets, other than goodwill and other indefinite-lived intangibles, by assessing whether the carrying value can be recovered over their remaining useful lives through the expected future undiscounted operating cash flows of the underlying business. Impairment indicators include, but are not limited to, a significant decrease in the market price of a long-lived asset; a significant adverse change in the manner in which the asset is being used or in its physical condition; a significant adverse change in legal factors or the business climate that could affect the value of a long-lived asset; an accumulation of costs significantly in excess of the amount originally expected for the acquisition or construction of a long-lived asset; current period operating or cash flow losses combined with a history of operating or cash flow losses associated with the use of the asset; or a current expectation that it is more likely than not that a long-lived asset will be sold or otherwise disposed of significantly before the end of its previously estimated useful life. As a result, future decisions to change our manufacturing process, exit certain businesses, reduce excess capacity, temporarily idle facilities and close facilities could result in material impairment charges. Long-lived assets are grouped together at the lowest level for which identifiable cash flows are largely independent of cash flows of other groups of long-lived assets. Any impairment loss that may be required is determined by comparing the carrying value of the assets to their estimated fair value. We do not have any indefinite-lived intangible assets, other than goodwill.

Recently Issued Accounting Standards

See Note 2 in Item 8 of Part II of this Annual Report on Form 10-K for a detailed description of recently issued accounting pronouncements.

ITEM 7A - QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to market risk, including changes in currency exchange rates, interest rates and certain commodity prices. To manage the volatility related to these exposures we use various financial instruments, including some derivatives, to help us hedge our foreign currency exchange risk and interest rate risk. We also use raw material purchasing contracts and pricing contracts with our customers to help mitigate commodity price risks. These contracts generally do not contain minimum purchase requirements.

We do not use derivative instruments for trading or speculative purposes. We manage counterparty credit risk by entering into derivative instruments only with financial institutions with investment-grade ratings.

Foreign Exchange Risk

Our international operations accounted for approximately 60% of our sales in both 2017 and 2016. As a result, we have significant exposure to foreign exchange risk on transactions that can potentially be denominated in many foreign currencies. These transactions include foreign currency denominated imports and exports of raw materials and finished goods (both intercompany and third party) and loan repayments. The functional currency of our operating subsidiaries is the related local currency.

We reduce foreign currency cash flow exposure from exchange rate fluctuations where economically feasible by hedging firmly committed foreign currency transactions. Our use of forward contracts is designed to protect our cash flows against unfavorable movements in exchange rates, to the extent of the amount that is under contract. We do not attempt to hedge foreign currency exposure in a manner that would entirely eliminate the effect of changes in foreign currency exchange rates on net income and cash flow. We do not speculate in foreign currency nor do we hedge the foreign currency translation of our international businesses to the U.S. dollar for purposes of consolidating our financial results, or other foreign currency net asset or liability positions.

We are party to various foreign exchange rate swaps in Brazil in order to reduce the foreign currency risk associated with certain assets and liabilities of our Brazilian subsidiary that are denominated in U.S. dollars. The counter-parties to the foreign exchange rate swap agreements are financial institutions with investment grade ratings. We do not apply hedge accounting to these derivative instruments.

Our foreign exchange risk is also mitigated because we operate in many foreign countries, which reduces the concentration of risk in any one currency. In addition, our foreign operations have limited imports and exports, which reduces the potential impact of foreign currency exchange rate fluctuations.

A 5% strengthening of the U.S. dollar against the primary currencies in which we conduct our non-U.S. operations in 2017 would generate an approximate $104 negative impact to our estimated net sales. Conversely, a 5% weakening of the U.S. dollar against the same currencies would benefit our estimated net sales by an equal amount.

Interest Rate Risk

The interest rates on approximately 97% of our outstanding debt are fixed. Assuming the amount of our variable debt remains the same, an increase of 1% in the interest rates on our variable rate debt would increase our 2018 estimated debt service requirements by approximately $1.

Following is a summary of our outstanding debt as of December 31, 2017 and 2016 (see Note 7 in Item 8 of Part II of this Annual Report on Form 10-K for additional information on our debt). The fair value of our publicly held debt is based on the price at which the bonds are traded or quoted at December 31, 2017 and 2016. All other debt fair values are based on other similar financial instruments, or based upon interest rates that are currently available to us for the issuance of debt with similar terms and maturities.

	2017			2016		
Year	**Debt Maturities**	**Weighted Average Interest Rate**	**Fair Value**	**Debt Maturities**	**Weighted Average Interest Rate**	**Fair Value**
2017				$ 107	7.9%	$ 107
2018	$ 125	7.5%	$ 125	713	7.8%	705
2019	11	7.5%	10	6	7.6%	6
2020	2,534	8.2%	2,206	2,446	6.6%	2,138
2021	83	10.6%	61	77	7.8%	55
2022	805	10.3%	725	20	8.7%	20
2023 and beyond	190	7.2%	128	195	9.3%	128
	$ 3,748		$ 3,255	$ 3,564		$ 3,159

We do not use derivative financial instruments in our investment portfolios. Our cash equivalent investments and short-term investments are made in instruments that meet the credit quality standards that are established in our investment policies, which also limits the exposure to any one investment. At December 31, 2017 and 2016, we had $9 and $7, respectively, invested at average rates of 5.3% and 9.6%, respectively, primarily in interest-bearing time deposits. Due to the short maturity of our cash equivalents, the carrying value of these investments approximates fair value. Our short-term investments are recorded at cost which approximates fair value. Our interest rate risk is not significant; a 1% increase or decrease in interest rates on invested cash would not have had a material effect on our net income or cash flows for the years ended December 31, 2017 and 2016.

Commodity Risk

We are exposed to price risks on raw material purchases, most significantly with phenol, methanol, urea, acetone, propylene and chlorine. For our commodity raw materials, we have purchase contracts that have periodic price adjustment provisions. Commitments with certain suppliers, including our phenol and urea suppliers, provide up to 100% of our estimated requirements but also provide us with the flexibility to purchase a certain portion of our needs in the spot market, when it is favorable to us. We rely on long-term agreements with key suppliers for most of our raw materials. The loss of a key source of supply or a delay in shipments could have an adverse effect on our business. Should any of our suppliers fail to deliver or should any key long-term supply contracts be cancelled, we would be forced to purchase raw materials in the open market, and no assurances can be given that we would be able to make these purchases or make them at prices that would allow us to remain competitive. Our largest supplier provided approximately 10% of our raw material purchases in 2017, and we could incur significant time and expense if we had to replace this supplier. In addition, several feedstocks at various facilities are transported through a pipeline from one supplier. If we were unable to receive these feedstocks through these pipeline arrangements, we may not be able to obtain them from other suppliers at competitive prices or in a timely manner. See the discussion about the risk factor on raw materials in Item 1A of Part I of this Annual Report on Form 10-K.

Natural gas is essential in our manufacturing processes, and its cost can vary widely and unpredictably. To help control our natural gas costs, we hedge a portion of our natural gas purchases for North America by entering into futures contracts for natural gas. These contracts are settled for cash each month based on the closing market price on the last day that the contract trades on the New York Mercantile Exchange. We also enter into fixed price forward contracts for the purchase of electricity at certain of our manufacturing plants to offset the risk associated with increases in the prices of the underlying commodities.

We recognize gains and losses on these contracts each month as gas and electricity is used. Our future commitments are marked-to-market on a quarterly basis. We have not applied hedge accounting to these contracts.

Our commodity risk is moderated through our selected use of customer contracts with selling price provisions that are indexed to publicly available indices for the relevant commodity raw materials.

ITEM 8 - FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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HEXION INC.
CONSOLIDATED BALANCE SHEETS

(In millions, except share data)	December 31, 2017	December 31, 2016
Assets		
Current assets:		
Cash and cash equivalents (including restricted cash of $18 and $17, respectively)	$ 115	$ 196
Accounts receivable (net of allowance for doubtful accounts of $19 and $17, respectively)	462	390
Inventories:		
Finished and in-process goods	221	199
Raw materials and supplies	92	88
Current assets held for sale (see Note 11)	6	—
Other current assets	44	45
Total current assets	940	918
Investments in unconsolidated entities	20	18
Deferred income taxes (see Note 14)	8	10
Long-term assets held for sale (see Note 11)	2	—
Other long-term assets	49	43
Property and equipment:		
Land	84	79
Buildings	291	273
Machinery and equipment	2,327	2,353
	2,702	2,705
Less accumulated depreciation	(1,778)	(1,812)
	924	893
Goodwill (see Note 5)	112	121
Other intangible assets, net (see Note 5)	42	52
Total assets	$ 2,097	$ 2,055
Liabilities and Deficit		
Current liabilities:		
Accounts payable	$ 402	$ 368
Debt payable within one year (see Note 7)	125	107
Interest payable	82	70
Income taxes payable	12	13
Accrued payroll and incentive compensation	47	55
Current liabilities associated with assets held for sale (see Note 11)	2	—
Other current liabilities	135	159
Total current liabilities	805	772
Long-term liabilities:		
Long-term debt (see Note 7)	3,584	3,397
Long-term pension and postretirement benefit obligations (see Note 9)	262	246
Deferred income taxes (see Note 14)	11	13
Other long-term liabilities	177	166
Total liabilities	4,839	4,594
Commitments and contingencies (see Notes 7 and 8)		
Deficit		
Common stock—$0.01 par value; 300,000,000 shares authorized, 170,605,906 issued and 82,556,847 outstanding at December 31, 2017 and 2016	1	1
Paid-in capital	526	526
Treasury stock, at cost—88,049,059 shares	(296)	(296)
Accumulated other comprehensive loss	(8)	(39)
Accumulated deficit	(2,964)	(2,730)
Total Hexion Inc. shareholders' deficit	(2,741)	(2,538)
Noncontrolling interest	(1)	(1)
Total deficit	(2,742)	(2,539)
Total liabilities and deficit	$ 2,097	$ 2,055

See Notes to Consolidated Financial Statements

HEXION INC.
CONSOLIDATED STATEMENTS OF OPERATIONS

	Year Ended December 31,		
(In millions)	2017	2016	2015
Net sales	$ 3,591	$ 3,438	$ 4,140
Cost of sales	3,090	3,038	3,540
Gross profit	501	400	600
Selling, general and administrative expense	307	328	306
Gain on dispositions (see Note 12)	—	(240)	—
Asset impairments (see Note 2)	13	—	6
Business realignment costs (see Note 3)	52	55	16
Other operating expense, net	17	13	12
Operating income	112	244	260
Interest expense, net	329	310	326
Loss (gain) on extinguishment of debt	3	(48)	(41)
Other non-operating income, net	—	(7)	(3)
Loss before income tax and earnings from unconsolidated entities	(220)	(11)	(22)
Income tax expense (see Note 14)	18	38	34
Loss before earnings from unconsolidated entities	(238)	(49)	(56)
Earnings from unconsolidated entities, net of taxes	4	11	17
Net loss	(234)	(38)	(39)
Net income attributable to noncontrolling interest	—	—	(1)
Net loss attributable to Hexion Inc.	$ (234)	$ (38)	$ (40)

See Notes to Consolidated Financial Statements

HEXION INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS

(In millions)	Year Ended December 31, 2017	2016	2015
Net loss	$ (234)	$ (38)	$ (39)
Other comprehensive income (loss), net of tax:			
Foreign currency translation adjustments	33	(23)	(88)
Loss recognized from pension and postretirement benefits	(2)	(1)	—
Other comprehensive income (loss)	31	(24)	(88)
Comprehensive loss	(203)	(62)	(127)
Comprehensive income attributable to noncontrolling interest	—	—	(1)
Comprehensive loss attributable to Hexion Inc.	$ (203)	$ (62)	$ (128)

See Notes to Consolidated Financial Statements

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HEXION INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS

(In millions)	Year Ended December 31, 2017	2016	2015
Cash flows (used in) provided by operating activities			
Net loss	$ (234)	$ (38)	$ (39)
Adjustments to reconcile net loss to net cash (used in) provided by operating activities:			
Depreciation and amortization	115	131	137
Non-cash asset impairments and accelerated depreciation	27	129	8
Deferred tax (benefit) expense	(3)	2	7
Gain on dispositions (see Note 12)	—	(240)	—
(Gain) loss on sale of assets	(1)	7	(4)
Amortization of deferred financing fees	16	15	15
Loss (gain) on extinguishment of debt	3	(48)	(41)
Gain on step acquisition (see Note 13)	—	—	(5)
Unrealized foreign currency losses (gains)	3	(52)	12
Unrealized (gains) losses on pension and postretirement benefit plan liabilities	(4)	34	(13)
Other non-cash adjustments	(5)	3	(4)
Net change in assets and liabilities:			
Accounts receivable	(50)	(1)	91
Inventories	(10)	(8)	65
Accounts payable	19	27	(21)
Income taxes payable	9	17	8
Other assets, current and non-current	1	(22)	24
Other liabilities, current and non-current	(39)	24	(27)
Net cash (used in) provided by operating activities	(153)	(20)	213
Cash flows (used in) provided by investing activities			
Capital expenditures	(117)	(140)	(175)
Capitalized interest	(1)	(1)	(4)
Purchase of businesses, net of cash acquired	—	—	(7)
Proceeds from dispositions, net	—	281	—
Cash received on buyer’s note	—	75	—
Proceeds from sale of investments, net	—	—	6
Change in restricted cash	1	(9)	8
Investment in affiliates	—	(1)	—
Proceeds from sale of assets, net	8	5	17
Net cash (used in) provided by investing activities	(109)	210	(155)
Cash flows provided by (used in) financing activities			
Net short-term debt borrowings (repayments)	21	(22)	(3)
Borrowings of long-term debt	1,429	644	523
Repayments of long-term debt	(1,251)	(856)	(485)
Long-term debt and credit facility financing fees	(25)	(1)	(11)
Net cash provided by (used in) financing activities	174	(235)	24
Effect of exchange rates on cash and cash equivalents	6	(4)	(10)
(Decrease) increase in cash and cash equivalents	(82)	(49)	72
Cash and cash equivalents (unrestricted) at beginning of year	179	228	156
Cash and cash equivalents (unrestricted) at end of year	$ 97	$ 179	$ 228
Supplemental disclosures of cash flow information			
Cash paid for:			
Interest, net	$ 302	$ 306	$ 312
Income taxes, net of cash refunds	13	24	17
Non-cash investing activities:			
Non-cash assumption of debt on step acquisition (see Note 13)	$ —	$ —	$ 18
Acceptance of buyer’s note (see Note 12)	—	75	—

HEXION INC.
CONSOLIDATED STATEMENTS OF DEFICIT

(In millions)	Common Stock	Paid-in Capital	Treasury Stock	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Hexion Inc. Deficit	Non-controlling Interest	Total
Balance at December 31, 2014	$ 1	$ 526	$ (296)	$ 73	$ (2,652)	$ (2,348)	$ (2)	$ (2,350)
Net (loss) income	—	—	—	—	(40)	(40)	1	(39)
Other comprehensive loss	—	—	—	(88)	—	(88)	—	(88)
Balance at December 31, 2015	1	526	(296)	(15)	(2,692)	(2,476)	(1)	(2,477)
Net loss	—	—	—	—	(38)	(38)	—	(38)
Other comprehensive loss	—	—	—	(24)	—	(24)	—	(24)
Balance at December 31, 2016	1	526	(296)	(39)	(2,730)	(2,538)	(1)	(2,539)
Net loss	—	—	—	—	(234)	(234)	—	(234)
Other comprehensive income	—	—	—	31	—	31	—	31
Balance at December 31, 2017	$ 1	$ 526	$ (296)	$ (8)	$ (2,964)	$ (2,741)	$ (1)	$ (2,742)

See Notes to Consolidated Financial Statements

HEXION INC.

Notes to Consolidated Financial Statements
(In millions, except share data)

1. Background and Basis of Presentation

Based in Columbus, Ohio, Hexion Inc. (“Hexion” or the “Company”), serves global industrial markets through a broad range of thermoset technologies, specialty products and technical support for customers in a diverse range of applications and industries. At December 31, 2017, the Company had 52 production and manufacturing facilities, with 22 located in the United States. The Company’s business is organized based on the products offered and the markets served. At December 31, 2017, the Company had three reportable segments: Epoxy, Phenolic and Coating Resins; Forest Products Resins; and Corporate and Other.

The Company’s direct parent is Hexion LLC, a holding company and wholly owned subsidiary of Hexion Holdings LLC (“Hexion Holdings”), the ultimate parent entity of Hexion. Hexion Holdings is controlled by investment funds managed by affiliates of Apollo Management Holdings, L.P. (together with Apollo Global Management, LLC and its subsidiaries, “Apollo”).

As of December 31, 2017, the Company has elected not to apply push-down accounting of its parent’s basis as a result of the prior combination of Hexion and Momentive Performance Materials Inc. (“MPM”), a former subsidiary of Hexion Holdings.

2. Summary of Significant Accounting Policies

Principles of Consolidation—The Consolidated Financial Statements include the accounts of the Company, its majority-owned subsidiaries in which minority shareholders hold no substantive participating rights. Intercompany accounts and transactions are eliminated in consolidation. The Company’s share of the net earnings of 20% to 50% owned companies, for which it has the ability to exercise significance influence over operating and financial policies (but not control), are included in “Earnings from unconsolidated entities, net of taxes” in the Consolidated Statements of Operations. Investments in the other companies are carried at cost.

The Company has recorded a noncontrolling interest for the equity interests in consolidated subsidiaries that are not 100% owned.

The Company’s unconsolidated investments accounted for under the equity method of accounting include the following as of December 31, 2017:

- 49.99% interest in Momentive UV Coatings (Shanghai) Co., Ltd, a joint venture that manufactures UV-curable coatings and adhesives in China;
- 50% ownership interest in Hexion Shchekinoazot Holding B.V., a joint venture that manufactures forest products resins in Russia;
- 49% ownership interest in Sanwei Hexion Company Limited, a joint venture that manufactures versatic acid derivatives in China;
- 50% ownership interest in Hexion Australia Pty Ltd, a joint venture which provides urea formaldehyde resins and other products to industrial customers in western Australia; and
- 50% ownership interest in MicroBlend Columbia S.A.S, a joint venture that distributes custom point-of-sale paint mixing systems and paint bases to consumer retail stores in Latin America.

Foreign Currency Translations and Transactions—Assets and liabilities of foreign affiliates are translated at the exchange rates in effect at the balance sheet date. Income, expenses and cash flows are translated at average exchange rates during the year. The Company recognized transaction losses of $4, gains of $10 and losses of $9 for the years ended December 31, 2017, 2016 and 2015, respectively, which are included as a component of “Net loss.” In addition, gains or losses related to the Company’s intercompany loans payable and receivable denominated in a foreign currency other than the subsidiary’s functional currency that are deemed to be permanently invested are remeasured to cumulative translation and recorded in “Accumulated other comprehensive loss” in the Consolidated Balance Sheets. The effect of translation is included in “Accumulated other comprehensive loss.”

Use of Estimates—The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and also the disclosure of contingent assets and liabilities at the date of the financial statements. In addition, it requires management to make estimates and assumptions that affect the reported amounts of revenues and expenses during the reporting period. The most significant estimates that are included in the financial statements are environmental remediation liabilities, legal liabilities, deferred tax assets and liabilities and related valuation allowances, income tax accruals, pension and postretirement assets and liabilities, valuation allowances for accounts receivable and inventories, general insurance liabilities, asset impairments and fair values of assets acquired and liabilities assumed in business acquisitions. Actual results could differ from these estimates.

Cash and Cash Equivalents—The Company considers all highly liquid investments that are purchased with an original maturity of three months or less to be cash equivalents. At December 31, 2017 and 2016, the Company had interest-bearing time deposits and other cash equivalent investments of $9 and $7, respectively. The Company's restricted cash balances consist primarily of amounts on deposit to secure various international lines of credit, as well as amounts deposited to secure certain bank guarantees issued to third parties to guarantee potential obligations of the Company primarily related to the completion of tax audits and environmental liabilities. These balances will remain restricted as long as the underlying exposures exist. These amounts are included in the Consolidated Balance Sheets as a component of "Cash and cash equivalents."

Allowance for Doubtful Accounts—The allowance for doubtful accounts is estimated using factors such as customer credit ratings and past collection history. Receivables are charged against the allowance for doubtful accounts when it is probable that the receivable will not be collected.

Inventories—Inventories are stated at lower of cost or net realizable value using the first-in, first-out method. Costs include direct material, direct labor and applicable manufacturing overheads, which are based on normal production capacity. Abnormal manufacturing costs are recognized as period costs and fixed manufacturing overheads are allocated based on normal production capacity. An allowance is provided for excess and obsolete inventories based on management's review of inventories on-hand compared to estimated future usage and sales. Inventories in the Consolidated Balance Sheets are presented net of an allowance for excess and obsolete inventory of $9 at both December 31, 2017 and 2016.

Deferred Expenses—Deferred debt financing costs are included in "Long-term debt" in the Consolidated Balance Sheets, with the exception of deferred financing costs related to revolving line of credit arrangements, which are included in "Other long-term assets" in the Consolidated Balance Sheets. These costs are amortized over the life of the related debt or credit facility using the effective interest method. Upon extinguishment of any debt, the related debt issuance costs are written off. At December 31, 2017 and 2016, the Company's unamortized deferred financing costs included in "Other long-term assets" were $8 and $9, respectively, and unamortized deferred financing costs included in "Long-term debt" were $41 and $38, respectively.

Property and Equipment—Land, buildings and machinery and equipment are stated at cost less accumulated depreciation. Depreciation is recorded on a straight-line basis over the estimated useful lives of properties (the average estimated useful lives for buildings and machinery and equipment are 20 years and 15 years, respectively). Assets under capital leases are amortized over the lesser of their useful life or the lease term. Major renewals and betterments are capitalized. Maintenance, repairs, minor renewals and turnarounds (periodic maintenance and repairs to major units of manufacturing facilities) are expensed as incurred. When property and equipment is retired or disposed of, the asset and related depreciation are removed from the accounts and any gain or loss is reflected in operating income. The Company capitalizes interest costs that are incurred during the construction of property and equipment. Depreciation expense was $103, $119 and $124 for the years ended December 31, 2017, 2016 and 2015, respectively. Additionally, for the years ended December 31, 2017, 2016, and 2015, $14, $129, and $2, respectively, of accelerated depreciation was recorded as a result of shortening the estimated useful lives of certain long-lived assets related to planned facility rationalizations. Lastly, for the years ended December 31, 2017, 2016 and 2015, "Capitalized expenditures" in the Consolidated Statements of Cash Flows were increased by $2, increased by $4 and decreased by $4, respectively, to reflect the change in invoiced but unpaid capital expenditures at each respective year-end as a non-cash investing activity.

Capitalized Software—The Company capitalizes certain costs, such as software coding, installation and testing, that are incurred to purchase or create and implement computer software for internal use. Amortization is recorded on the straight-line basis over the estimated useful lives, which range from 1 to 5 years.

Goodwill and Intangibles—The excess of purchase price over net tangible and identifiable intangible assets of businesses acquired is carried as "Goodwill" in the Consolidated Balance Sheets. Separately identifiable intangible assets that are used in the operations of the business (e.g., patents and technology, tradenames, customer lists and contracts) are recorded at cost (fair value at the time of acquisition) and reported as "Other intangible assets, net" in the Consolidated Balance Sheets. Costs to renew or extend the term of identifiable intangible assets are expensed as incurred. The Company does not amortize goodwill. Intangible assets with determinable lives are amortized on a straight-line basis over the shorter of the legal or useful life of the assets, which range from 1 to 30 years (see Note 5).

Impairment—The Company reviews property and equipment and all amortizable intangible assets for impairment whenever events or changes in circumstances indicate that the carrying amount of these assets may not be recoverable. Recoverability is based on estimated undiscounted cash flows or other relevant observable measures. The Company tests goodwill for impairment annually, or when events or changes in circumstances indicate impairment may exist, by comparing the estimated fair value of each reporting unit to its carrying value to determine if there is an indication that a potential impairment may exist.

Long-Lived Assets and Amortizable Intangible Assets

There were no long-lived asset impairments recorded during the years ended December 31, 2017 and 2016. During the year ended December 31, 2015, the Company recorded long-lived asset impairments of $6 which are included in "Asset impairments" in the Consolidated Statements of Operations (see Note 6).

Goodwill

The Company performs an annual assessment of qualitative factors to determine whether the existence of any events or circumstances leads to a determination that it is more likely than not that the fair value of a reporting unit is less than the carrying amount of the reporting unit's net assets. If, after assessing all events and circumstances, the Company determines it is more likely than not that the fair value of a reporting unit is less than the carrying amount of the reporting unit's net assets, the Company uses a probability weighted market and income approach to estimate the fair value of the reporting unit. The Company's market approach is a comparable analysis technique commonly used in the investment banking and private equity industries based on the EBITDA (earnings before interest, income taxes, depreciation and amortization) multiple technique. Under this technique, estimated fair value is the result of a market-based EBITDA multiple that is applied to an appropriate historical EBITDA amount, adjusted for the additional fair value that would be assigned by a market participant obtaining control over the reporting unit. The Company's income approach is a discounted cash flow model. When the carrying amount of the reporting unit's goodwill is greater than the estimated fair value of the reporting unit's goodwill, an impairment loss is recognized for the difference.

In 2017, the Company lowered its forecast of estimated earnings and cash flows for its oilfield business from those previously projected, and indefinitely idled a manufacturing facility within its oilfield business. This was due to the slower than previously assumed recovery in the oil and gas market. As of September 30, 2017, the estimated fair value of the Company's oilfield reporting unit was less than the carrying value of the net assets of the reporting unit. In estimating the fair value of the oilfield reporting unit, the Company relied solely on a discounted cash flow model income approach. This was due to the Company's belief that the reporting unit's EBITDA, a key input under the market approach, was not representative and consistent with the reporting unit's historical performance and long-term outlook and, therefore, was not consistent with assumptions that a market participant would use in determining the fair value of the reporting unit. When the fair value of the reporting unit was determined, an impairment charge was recognized for the amount by which the carrying amount of oilfield's net assets exceeded its fair value. As such, the entire oilfield reporting unit's goodwill balance of $13 was impaired during the third quarter of 2017, and the Company recognized a goodwill impairment charge of $13 in its Epoxy, Phenolic and Coating Resins segment, which is included in "Asset impairments" in the Consolidated Statements of Operations. Significant unobservable inputs in the discounted cash flow analysis included projected long-term future cash flows, projected growth rates and discount rates associated with this reporting unit. Future projected long-term cash flows and growth rates were derived from models based upon forecasts prepared by the Company's management. These projected cash flows were discounted using a rate of 13.5%.

As of October 1, 2017 and 2016, the estimated fair value of each of the Company's remaining reporting units was deemed to be substantially in excess of the carrying amount of assets (including goodwill) and liabilities assigned to each reporting unit.

Assets and Liabilities Held for Sale - The assets and liabilities at December 31, 2017 related to the proposed sale of the Company's Additive Technology Group business ("ATG") are classified as "Current assets held for sale", "Long-term assets held for sale", and "Current liabilities associated with assets held for sale" within the Consolidated Balance Sheets. See Note 11 for more information.

General Insurance—The Company is generally insured for losses and liabilities for workers' compensation, physical damage to property, business interruption and comprehensive general, product and vehicle liability under high-deductible insurance policies. The Company records losses when they are probable and reasonably estimable and amortizes insurance premiums over the life of the respective insurance policies.

Legal Claims and Costs—The Company accrues for legal claims and costs in the period in which a claim is made or an event becomes known, if the amounts are probable and reasonably estimable. Each claim is assigned a range of potential liability and the most likely amount is accrued. If there is no amount in the range of potential liability that is most likely, the low end of the range is accrued. The amount accrued includes all costs associated with the claim, including settlements, assessments, judgments and fines. Legal fees are expensed as incurred (see Note 8).

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. Environmental accruals are reviewed on a quarterly basis and as events and developments warrant (see Note 8).

Asset Retirement Obligations—Asset retirement obligations are initially recorded at their estimated net present values in the period in which the obligation occurs, with a corresponding increase to the related long-lived asset. Over time, the liability is accreted to its settlement value and the capitalized cost is depreciated over the useful life of the related asset. When the liability is settled, a gain or loss is recognized for any difference between the settlement amount and the liability that was recorded.

Revenue Recognition—Revenue for product sales, net of estimated allowances and returns, is recognized as risk and title to the product transfer to the customer, which either occurs at the time shipment is made or upon delivery. In situations where product is delivered by pipeline, risk and title transfers when the product moves across an agreed-upon transfer point, which is typically the customers' property line. Product sales delivered by pipeline are measured based on daily flow meter readings. The Company's standard terms of delivery are included in its contracts of sale or on its invoices. On January 1, 2018, the Company adopted Accounting Standards Board Update No. 2014-09: *Revenue from Contracts with Customers (Topic 606).* See further discussion below.

Shipping and Handling—Freight costs that are billed to customers are included in "Net sales" in the Consolidated Statements of Operations. Shipping costs are incurred to move the Company's products from production and storage facilities to the customer. Handling costs are incurred from the point the product is removed from inventory until it is provided to the shipper and generally include costs to store, move and prepare the products for shipment. Shipping and handling costs are recorded in "Cost of sales" in the Consolidated Statements of Operations.

Research and Development Costs—Funds are committed to research and development activities for technical improvement of products and processes that are expected to contribute to future earnings. All costs associated with research and development are charged to expense as incurred. Research and development and technical service expense was $58, $59 and $65 for the years ended December 31, 2017, 2016 and 2015, respectively, and is included in "Selling, general and administrative expense" in the Consolidated Statements of Operations.

Business Realignment Costs—The Company incurred "Business realignment costs" totaling $52, $55 and $16 for the years ended December 31, 2017, 2016 and 2015, respectively. For the year ended December 31, 2017, these costs primarily included costs related to in-process cost reduction programs and certain in-process and recently completed facility rationalizations. For the year ended December 31, 2016, these costs primarily included costs related to the rationalization at our Norco, LA manufacturing facility and costs related to certain cost reduction programs. For the year ended December 31, 2015, these costs primarily included expenses related to certain cost reduction programs, as well as costs for environmental remediation at certain formerly owned locations.

Pension and Other Non-Pension Postretirement Benefit Liabilities—Pension and other non-pension postretirement benefit ("OPEB") assumptions are significant inputs to the actuarial models that measure pension and OPEB benefit obligations and related effects on operations. Two assumptions, discount rate and expected return on assets, are important elements of plan expense and asset/liability measurement. The Company evaluates these critical assumptions at least annually on a plan and country-specific basis. The Company periodically evaluates other assumptions involving demographic factors, such as retirement age, mortality and turnover, and updates them to reflect the Company's experience and expectations for the future. Actual results in any given year will often differ from actuarial assumptions because of economic and other factors.

Accumulated and projected benefit obligations are measured as the present value of future cash payments. The Company discounts these cash payments using a split-rate interest approach. This approach uses multiple interest rates from market-observed forward yield curves which correspond to the estimated timing of the related benefit payments. Lower discount rates increase present values and subsequent-year pension expense; higher discount rates decrease present values and subsequent-year pension and OPEB expense.

To determine the expected long-term rate of return on pension plan assets, the Company considers current and expected asset allocations, as well as historical and expected returns on various categories of plan assets. In developing future return expectations for the principal benefit plans' assets, the Company evaluates general market trends as well as key elements of asset class returns such as expected earnings growth, yields and spreads across a number of potential scenarios.

Upon the Company's annual remeasurement of its pension and OPEB liabilities in the fourth quarter, or on an interim basis as triggering events warrant remeasurement, the Company immediately recognizes gains and losses as a mark-to-market ("MTM") gain or loss through earnings. As such, the Company's net periodic pension and OPEB expense consists of i) service cost, interest cost, expected return on plan assets, amortization of prior service cost/credits recognized on a quarterly basis and ii) MTM adjustments recognized annually in the fourth quarter upon remeasurement of pension and OPEB liabilities or when triggering events warrant remeasurement.

Income Taxes—The Company recognizes deferred tax assets and liabilities for the expected future tax consequences of temporary differences between the financial statement carrying amounts and the tax bases of the assets and liabilities.

Deferred tax balances are adjusted to reflect tax rates, based on current tax laws, which will be in effect in the years in which temporary differences are expected to reverse. Deferred tax assets are reduced by a valuation allowance when, in the opinion of management, it is more likely than not that some portion or all of the deferred tax assets will not be realized (see Note 14).

Unrecognized tax benefits are generated when there are differences between tax positions taken in a tax return and amounts recognized in the consolidated financial statements. Tax benefits are recognized in the consolidated financial statements when it is more likely than not that a tax position will be sustained upon examination. Tax benefits are measured as the largest amount of benefit that is greater than 50% likely of being realized upon settlement. The Company classifies interest and penalties as a component of tax expense.

The Company monitors changes in tax laws and reflects the impact of tax law changes in the period of enactment. In response to the United States tax reform legislation enacted on December 22, 2017, the SEC issued guidance that allows companies to record provisional amounts for the impacts of U.S. tax reform if the full accounting cannot be completed before filing its 2017 financial statements. For provisions of the tax law where companies are unable to make a reasonable estimate of the impact, the guidance allows companies to continue to apply the historical tax provisions in computing its income tax liability and deferred tax assets and liabilities as of December 31, 2017. The guidance also allows companies to finalize accounting for the U.S. tax reform changes within one year of the enactment date. See Note 14 for additional information on how the Company recorded the impacts of the U.S. tax reform.

Derivative Financial Instruments— Periodically, **t**he Company is a party to forward exchange contracts, foreign exchange rate swaps, interest rate swaps, natural gas futures and electricity forward contracts to reduce its cash flow exposure to changes in interest rates and natural gas and electricity prices. The Company does not hold or issue derivative financial instruments for trading purposes. These instruments are not accounted for using hedge accounting, but are measured at fair value and recorded in the balance sheet as an asset or liability, depending upon the Company's underlying rights or obligations. Changes in fair value are recognized in earnings.

Stock-Based Compensation—Stock-based compensation cost is measured at the grant date based on the fair value of the award which is amortized as expense over the requisite service period on a graded-vesting basis (see Note 10).

Transfers of Financial Assets—The Company executes factoring and sales agreements with respect to its trade accounts receivable to support its working capital requirements. The Company accounts for these transactions as either sales-type or financing-type transfers of financial assets based on the terms and conditions of each agreement. For the portion of the sales price that is deferred in a reserve account and subsequently collected, the Company's policy is to classify the cash in-flows as cash flows from operating activities as the predominant source of the cash flows pertains to the Company's trade accounts receivable. When the Company retains the servicing rights on the transfers of accounts receivable, it measures these rights at fair value, if material.

Concentrations of Credit Risk—Financial instruments that potentially subject the Company to concentrations of credit risk are primarily temporary investments and accounts receivable. The Company places its temporary investments with high quality institutions and, by policy, limits the amount of credit exposure to any one institution. Concentrations of credit risk for accounts receivable are limited due to the large number of customers in the Company's customer base and their dispersion across many different industries and geographies. The Company generally does not require collateral or other security to support customer receivables.

Concentrations of Supplier Risk—The Company relies on long-term agreements with key suppliers for most of its raw materials. The loss of a key source of supply or a delay in shipments could have an adverse effect on its business. Should any of the suppliers fail to deliver or should any of the key long-term supply contracts be canceled, the Company would be forced to purchase raw materials at current market prices. The Company's largest supplier provides approximately 10% of raw material purchases. In addition, several of the feedstocks at various facilities are transported through a pipeline from one supplier.

Subsequent Events—The Company has evaluated events and transactions subsequent to December 31, 2017 through the date of issuance of its Consolidated Financial Statements.

Reclassifications—Certain prior period balances have been reclassified to conform with current presentations.

Standard Guarantees / Indemnifications—In the ordinary course of business, the Company enters into a number of agreements that contain standard guarantees and indemnities where the Company may indemnify another party for, among other things, breaches of representations and warranties. These guarantees or indemnifications are granted under various agreements, including those governing (i) purchases and sales of assets or businesses, (ii) leases of real property, (iii) licenses of intellectual property, (iv) long-term supply agreements, (v) employee benefits services agreements and (vi) agreements with public authorities on subsidies for designated research and development projects. These guarantees or indemnifications are for the benefit of the (i) buyers in sale agreements and sellers in purchase agreements, (ii) landlords or lessors in lease contracts, (iii) licensors or licensees in license agreements, (iv) vendors or customers in long-term supply agreements, (v) service providers in employee benefits services agreements and (vi) governments or agencies subsidizing research or development. In addition, the Company guarantees some of the payables of its subsidiaries to purchase raw materials in the ordinary course of business.

These parties may also be indemnified against any third party claim resulting from the transaction that is contemplated in the underlying agreement. Additionally, in connection with the sale of assets and the divestiture of businesses, the Company may agree to indemnify the buyer for liabilities related to the pre-closing operations of the assets or businesses sold. Indemnities for pre-closing operations generally include tax liabilities, environmental liabilities and employee benefit liabilities that are not assumed by the buyer in the transaction.

Indemnities related to the pre-closing operations of sold assets normally do not represent additional liabilities to the Company, but simply serve to protect the buyer from potential liability associated with the Company's existing obligations at the time of sale. As with any liability, the Company has accrued for those pre-closing obligations that it considers to be probable and reasonably estimable. The amounts recorded at December 31, 2017 and 2016 are not significant.

While some of these guarantees extend only for the duration of the underlying agreement, many survive the expiration of the term of the agreement or extend into perpetuity (unless they are subject to a legal statute of limitations). There are no specific limitations on the maximum potential amount of future payments that the Company could be required to make under its guarantees, nor is the Company able to estimate the maximum potential amount of future payments to be made under these guarantees because the triggering events are not predictable.

Our corporate charter also requires us to indemnify, to the extent allowed by New Jersey state corporate law, our directors and officers as well as directors and officers of our subsidiaries and other agents against certain liabilities and expenses incurred by them in carrying out their obligations.

Warranties—The Company does not make express warranties on its products, other than that they comply with the Company's specifications; therefore, the Company does not record a warranty liability. Adjustments for product quality claims are not material and are charged against net sales.

Recently Issued Accounting Standards

Newly Issued Accounting Standards

In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Board Update No. 2014-09: *Revenue from Contracts with Customers (Topic 606)* ("ASU 2014-09"). ASU 2014-09 supersedes the existing revenue recognition guidance and most industry-specific guidance applicable to revenue recognition. According to the new guidance, an entity will apply a principles-based five step model to recognize revenue upon the transfer of promised goods or services to customers and in an amount that reflects the consideration for which the entity expects to be entitled in exchange for those goods or services. The effective date for ASU 2014-09 is for annual and interim periods beginning on or after December 15, 2017. Entities have the option of using either a full retrospective approach or a modified approach to adopt the guidance in ASU 2014-09. The Company adopted ASU 2014-09 utilizing a modified retrospective approach, which resulted in a cumulative adjustment to equity on the adoption date of January 1, 2018. The implementation of this standard resulted only in timing differences for certain revenue items, which will not have a material impact on the Company's financial statements. Additionally, ASU 2014-09 contains expanded footnote disclosure requirements, which will be reflected in the Company's SEC filings beginning with the Quarterly Report on Form 10-Q for the three months ended March 31, 2018.

In February 2016, the FASB issued Accounting Standards Board Update No. 2016-02: *Leases (Topic 842)* ("ASU 2016-02"). ASU 2016-02 supersedes the existing lease guidance in Topic 840. According to the new guidance, all leases, with limited scope exceptions, will be recorded on the balance sheet in the form of a liability to make lease payments (lease liability) and a right-of-use asset representing the right to use the underlying asset for the lease term. The guidance is effective for annual and interim periods beginning on or after December 15, 2018, and early adoption is permitted. The Company is assessing the potential impact of this standard on its financial statements through a formalized implementation project.

In August 2016, the FASB issued Accounting Standards Board Update No. 2016-15: *Statement of Cash Flows (Topic 230)* ("ASU 2016-15") as part of the FASB simplification initiative. ASU 2016-15 provides guidance on treatment in the statement of cash flows for eight specific cash flow topics, with the objective of reducing existing diversity in practice. Of the eight cash flow topics addressed in the new guidance, the topics which could have an impact on the Company include debt prepayment or debt extinguishment costs, accounts receivable factoring, proceeds from the settlement of insurance claims and distributions received from equity method investees. The guidance is effective for annual periods beginning after December 15, 2017, including interim periods within that reporting period. The Company is currently assessing the potential impact of ASU 2016-15 on its financial statements.

In November 2016, the FASB issued Accounting Standards Board Update No. 2016-18: *Statement of Cash Flows (Topic 230) Restricted Cash* ("ASU 2016-18") as part of the FASB simplification initiative. ASU 2016-18 requires that amounts generally described as restricted cash and restricted cash equivalents should be included with cash and cash equivalents when reconciling the beginning-of-period and end-of period total amounts shown on the statement of cash flows. ASU 2016-18 also requires supplemental disclosure regarding the nature of restrictions on a company's cash and cash equivalents, such as the purpose and terms of the restriction, expected duration of the restriction and the amount of cash subject to restriction. The guidance is effective for annual periods beginning after December 15, 2017, including interim periods within that reporting period. Based on restricted cash balances at December 31, 2017 and 2016, beginning and ending cash balances in the Consolidated Statements of Cash Flows would include $18 and $17, respectively, of restricted cash upon adoption of this standard.

In January 2017, the FASB issued Accounting Standards Board Update No. 2017-01: *Clarifying the Definition of a Business (Topic 805)* ("ASU 2017-01"). ASU 2017-01 clarifies the definition of a business with the objective of adding guidance to assist entities with evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. The definition of a business affects many areas of accounting including acquisitions, disposals, goodwill, and consolidation. The guidance is effective for annual periods beginning after December 15, 2017, including interim periods within that reporting period. The Company is currently assessing the potential impact of ASU 2017-01 on its financial statements.

In March 2017, the FASB issued Accounting Standards Board Update No. 2017-07: *Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost* ("ASU 2017-07"). ASU 2017-07 requires that an employer report the service cost component of its net periodic pension and postretirement benefit costs ("net benefit cost") in the same line item or items as other compensation costs arising from services rendered by employees during the period. Additionally, ASU 2017-07 only allows the service cost component of net benefit cost to be eligible for capitalization into inventory. All other components of net benefit cost, which primarily include interest cost, expected return on assets and the annual mark-to-market liability remeasurement, are required to be presented in the income statement separately from the service cost component and outside of income from operations. The guidance is effective for annual periods beginning after December 15, 2017, including interim periods within that reporting period. Based on the non-service cost components of net benefit cost in the Consolidated Statements of Operations for the years ended December 31, 2017, 2016 and 2015, gains of $13, losses of $29 and gains of $22, respectively, would be reclassified from "Operating income" to "Other non-operating income, net" upon adoption of this standard.

Newly Adopted Accounting Standards

In July 2015, the FASB issued Accounting Standards Board Update No. 2015-11: *Simplifying the Measurement of Inventory (Topic 330)* ("ASU 2015-11") as part of the FASB simplification initiative. ASU 2015-11 replaces the existing concept of market value of inventory (where market was defined as replacement cost, with a ceiling of net realizable value and floor of net realizable value less a normal profit margin) with the single measurement of net realizable value. The guidance was effective for annual periods beginning after December 15, 2016, including interim periods within that reporting period. The Company adopted ASU 2015-11 as of January 1, 2017 and adoption of this standard had no impact on the Company's financial statements.

In March 2016, the FASB issued Accounting Standards Board Update No. 2016-07: *Simplifying the Transition to the Equity Method of Accounting (Topic 323)* ("ASU 2016-07") as part of the FASB simplification initiative. ASU 2016-07 eliminates the requirement that when an existing investment qualifies for use of the equity method, an investor adjust the investment, results of operations and retained earnings retroactively as if the equity method has been in effect in all previous periods that the investment had been held. Under the new guidance, the equity method investor is only required to adopt the equity method as of the date the investment qualifies for the equity method, with no retrospective adjustment required. The guidance was effective for annual periods beginning after December 15, 2016, including interim periods within that reporting period. The Company adopted ASU 2016-07 as of January 1, 2017 and adoption of this standard had no impact on the Company's financial statements.

In March 2016, the FASB issued Accounting Standards Board Update No. 2016-09: *Improvements to Employee Share-Based Payment Accounting (Topic 718)* ("ASU 2016-09") as part of the FASB simplification initiative. ASU 2016-09 simplifies various aspects of share-based payment accounting, including the income tax consequences, classification of equity awards as either equity or liabilities and classification on the statement of cash flows. The guidance was effective for annual periods beginning after December 15, 2016, including interim periods within that reporting period. The Company adopted ASU 2016-09 as of January 1, 2017 and adoption of this standard had no impact on the Company's financial statements.

In January 2017, the FASB issued Accounting Standards Board Update No. 2017-04: *Simplifying the Test for Goodwill Impairment (Topic 350)* ("ASU 2017-04") as part of the FASB simplification initiative. To simplify the subsequent measurement of goodwill, ASU 2017-04 eliminated Step 2 from the goodwill impairment test. Instead, under the amendments in ASU 2017-04, an entity should perform its annual, or interim, goodwill impairment test by comparing the fair value of the reporting unit with its carrying amount, which is Step 1 of the goodwill impairment test. An impairment charge should be recognized for the amount by which the carrying amount exceeds the reporting unit's fair value, not to exceed the total amount of goodwill allocated to that reporting unit. The guidance is effective for goodwill impairment tests performed after December 15, 2019 and early adoption is permitted. The Company early adopted ASU 2017-04 during the third quarter 2017. See Note 5 for more information.

3. Restructuring and Business Realignment

2017 Restructuring Activities

In November 2017, the Company initiated new restructuring actions with the intent to optimize its cost structure. The Company expects these restructuring actions to generate a total of $43 of incremental annual savings once fully implemented. The total one-time cash costs expected to be incurred for these restructuring activities are estimated at $28, consisting primarily of workforce reduction costs.

The following table summarizes restructuring information by reporting segment:

	Epoxy, Phenolic and Coating Resins	Forest Products Resins	Corporate and Other	Total
Total restructuring costs expected to be incurred	$ 16	$ 4	$ 8	$ 28
Restructuring costs incurred through December 31, 2017	$ 12	$ 5	$ 3	$ 20
Accrued liability at December 31, 2016	$ —	$ —	$ —	$ —
Restructuring charges	12	5	3	20
Payments	(1)	(2)	—	(3)
Accrued liability at December 31, 2017	$ 11	$ 3	$ 3	$ 17

Oilfield

During the third quarter of 2017, the Company indefinitely idled an oilfield manufacturing facility within its Epoxy, Phenolic and Coating Resins segment, and production was ceased at this facility. As a result, the estimated useful lives of certain long-lived assets related to this facility were shortened, and consequently, the Company incurred $14 of accelerated depreciation related to these assets, which is included in "Cost of sales" in the unaudited Condensed Consolidated Statements of Operations.

In addition, during the third quarter of 2016, the Company indefinitely idled two oilfield manufacturing facilities within its Epoxy, Phenolic and Coating Resins segment, and production was ceased at these facilities. As a result, the estimated useful lives of certain long-lived assets related to these facilities were shortened, and consequently, during the year ended December 31, 2016, the Company incurred $21 of accelerated depreciation related to these assets, which is included in “Cost of sales” in the Consolidated Statements of Operations.

Norco

In the first quarter of 2016, the Company announced a planned rationalization at its Norco, LA manufacturing facility within its Epoxy, Phenolic and Coating Resins segment, and production was ceased at this facility during the second quarter of 2016. As a result of this facility rationalization, the Company recorded one-time costs in 2016 related to the early termination of certain contracts for utilities, site services, raw materials and other items. The Company also recorded a conditional asset retirement obligation (“ARO”) in 2016 related to certain contractually obligated future demolition, decontamination and repair costs associated with this facility rationalization. The Company does not expect to incur any additional contract termination or ARO charges related to this facility rationalization.

The table below summarizes the changes in the liabilities recorded related to contract termination costs and ARO from December 31, 2016 to December 31, 2017, all of which are included in “Other current liabilities” in the Consolidated Balance Sheets.

	Contract Termination Costs	Asset Retirement Obligation	Total
Accrued liability at December 31, 2016	$ 18	$ 13	$ 31
Activity(1)	(18)	(13)	(31)
Accrued liability at December 31, 2017	$ —	$ —	$ —

(1) These amounts include approximately $30 of cash payments during the twelve months ended December 31, 2017 and $1 of these amounts are included in “Accounts payable” in the Consolidated Balance Sheets as of December 31, 2017.

As a result of the Norco, LA facility rationalization, the estimated useful lives of certain long-lived assets related to this facility were shortened, and consequently, during the twelve months ended December 31, 2016, the Company incurred $76 of accelerated depreciation related to these assets, which is included in “Cost of sales” in the Consolidated Statements of Operations. These assets were fully depreciated in the second quarter of 2016. In addition, at June 30, 2016 the Company recorded a conditional ARO of $30 related to certain contractually obligated future demolition, decontamination and repair costs associated with this facility rationalization. During the twelve months ended December 31, 2016, the Company recorded an additional $30 of accelerated depreciation related to this ARO, which is also included in “Cost of sales” in the Consolidated Statements of Operations, rendering this item fully depreciated as of June 30, 2016. In the third quarter of 2016, this ARO liability was reduced by $11 as a result of revised cost estimates, primarily due to a reduction in the scope of expected future demolition. This $11 reduction in costs is included in “Business realignment costs” in the Consolidated Statements of Operations for the twelve months ended December 31, 2016.

During the year ended December 31, 2017, the Company incurred additional costs of less than $3 related to other ongoing site closure expenses related to this facility rationalization, which are included in “Business realignment costs” in the Consolidated Statements of Operations. During the twelve months ended December 31, 2016, the Company incurred costs of $24 related to the early termination of certain contracts for utilities, site services, raw materials and other items related to this facility rationalization and $16 related to abnormal production overhead, severance and other expenses to the facility closure. All of these costs are included in “Business realignment costs” in the Consolidated Statements of Operations.

4. Related Party Transactions

Administrative Service, Management and Consulting Arrangement

The Company is subject to a Management Consulting Agreement with Apollo (the “Management Consulting Agreement”) that renews on an annual basis, unless notice to the contrary is given by either party. Under the Management Consulting Agreement, the Company receives certain structuring and advisory services from Apollo and its affiliates. The Management Consulting Agreement provides indemnification to Apollo, its affiliates and their directors, officers and representatives for potential losses arising from these services. Apollo is entitled to an annual fee equal to the greater of $3 or 2% of the Company’s Adjusted EBITDA. Apollo elected to waive charges of any portion of the annual management fee due in excess of $3 for the years ended December 31, 2017, 2016 and 2015.

During each of the years ended December 31, 2017, 2016 and 2015, the Company recognized expense under the Management Consulting Agreement of $3. This amount is included in “Other operating expense, net” in the Company’s Consolidated Statements of Operations.

Transactions with MPM

Shared Services Agreement

On October 1, 2010, the Company entered into a shared services agreement with Momentive Performance Materials Inc. (‘MPM”) (which, from October 1, 2010 through October 24, 2014, was a subsidiary of Hexion Holdings), as amended in October 2014 (the “Shared Services Agreement”). Under this agreement, the Company provides to MPM, and MPM provides to the Company, certain services, including, but not limited to, executive and senior management, administrative support, human resources, information technology support, accounting, finance, legal and procurement services. The Shared Services Agreement establishes certain criteria upon which the costs of such services are allocated between the Company and MPM. The Shared Services Agreement was renewed for one year starting October 2017 and is subject to termination by either the Company or MPM, without cause, on not less than 30 days’ written notice, and expires in October 2018 (subject to one-year renewals every year thereafter; absent contrary notice from either party). The Company periodically reviews the scope of services provided under this agreement.

Pursuant to the Shared Services Agreement, during the years ended December 31, 2017, 2016 and 2015, the Company incurred approximately $48, $63 and $70, respectively, of net costs for shared services and MPM incurred approximately $38, $50 and $60, respectively, of net costs for shared services. Included in the net costs incurred during the years ended December 31, 2017, 2016 and 2015, were net billings from the Company to MPM of $26, $30 and $35, respectively, to bring the percentage of total net incurred costs for shared services under the Shared Services Agreement to the applicable allocation percentage. The allocation percentage for 2017 and 2016 was 56% for the Company and 44% for MPM. The scope of services and allocation percentages are reviewed by the Steering Committee pursuant to the terms of the Shared Services Agreement. The Company had accounts receivable from MPM of $3 and $5 as of December 31, 2017 and 2016, respectively, and no accounts payable to MPM.

Sales and Purchases of Products and Services with MPM

The Company also sells products to, and purchases products from, MPM. During the years ended December 31, 2017, 2016 and 2015, the Company sold less than $1, less than $1 and $1, respectively, of products to MPM and purchased $24, $27 and $31, respectively. During the years ended December 31, 2017, 2016, and 2015, the Company earned $1 from MPM as compensation for acting as distributor of products. The Company had no accounts receivable from MPM as of December 31, 2017 and less than $1 as of December 31, 2016, and $2 of accounts payable to MPM as of both December 31, 2017 and 2016 related to these agreements.

Purchases and Sales of Products and Services with Affiliates Other than MPM

The Company sells products to various Apollo affiliates other than MPM. These sales were $4, $6 and $59 for the years ended December 31, 2017, 2016 and 2015, respectively. Accounts receivable from these affiliates were less than $1 at both December 31, 2017 and 2016. The Company also purchases raw materials and services from various Apollo affiliates other than MPM. There were no purchases for the year ended December 31, 2017 and purchases of less than $1 and $3 for the years ended December 31, 2016 and 2015, respectively. The Company had no accounts payable to these affiliates at December 31, 2017 and accounts payable of less than $1 at December 31, 2016.

Participation of Apollo Global Securities in Refinancing Transactions

In April 2015, Apollo Global Securities, LLC (“AGS”), an affiliate of Apollo, acted as one of the initial purchasers and received less than $1 in connection with the sale of the $315 aggregate principal amount of the Company’s 10.00% First-Priority Senior Secured Notes due 2020.

Other Transactions and Arrangements

The Company sells products and provides services to, and purchases products from, its other joint ventures which are recorded under the equity method of accounting. These sales were $17, $43, and $105 for the years ended December 31, 2017, 2016 and 2015, respectively. Accounts receivable from these joint ventures were $6 and $7 at December 31, 2017 and 2016, respectively. These purchases were $14, $17, and $49 for the years ended December 31, 2017, 2016 and 2015, respectively. The Company had accounts payable to these joint ventures of $1 at both December 31, 2017 and 2016.

The Company had a loan receivable of $6 and royalties receivable of $1 and $2 as of December 31, 2017 and 2016, respectively, from its unconsolidated forest products joint venture in Russia. Note that these royalties receivable are also included in the accounts receivable from joint ventures disclosed above.

5. Goodwill and Intangible Assets

The Company’s gross carrying amount and accumulated impairments of goodwill consist of the following as of December 31, 2017 and 2016:

	2017				2016			
	Gross Carrying Amount	Accumulated Impairments	Accumulated Foreign Currency Translation	Net Book Value	Gross Carrying Amount	Accumulated Impairments	Accumulated Foreign Currency Translation	Net Book Value
Epoxy, Phenolic and Coating Resins	$ 111	$ (70)	$ 1	$ 42	$ 111	$ (57)	$ —	$ 54
Forest Products Resins	81	—	(10)	71	81	—	(14)	67
Total	$ 192	$ (70)	$ (9)	$ 113	$ 192	$ (57)	$ (14)	$ 121

The changes in the net carrying amount of goodwill by segment for the years ended December 31, 2017 and 2016 are as follows:

	Epoxy, Phenolic and Coating Resins	Forest Products Resins	Total
Goodwill balance at December 31, 2015	$ 54	$ 68	$ 122
Foreign currency translation	—	(1)	(1)
Goodwill balance at December 31, 2016	54	67	121
Goodwill impairment	(13)	—	(13)
Foreign currency translation	1	4	5
Goodwill balance at December 31, 2017 (1)	$ 42	$ 71	$ 113

(1) Includes $1 of goodwill related to the ATG Business, within the Forest Products Resins segment, included in “Long-term assets held for sale” in the Consolidated Balance Sheets.

In 2017, the Company lowered its forecast of estimated earnings and cash flows for its oilfield business from those previously projected, and indefinitely idled a manufacturing facility within its oilfield business. This was due to the slower than previously assumed recovery in the oil and gas market. As of September 30, 2017, the estimated fair value of the Company’s oilfield reporting unit was less than the carrying value of the net assets of the reporting unit. In estimating the fair value of the oilfield reporting unit, the Company relied solely on a discounted cash flow model income approach. This was due to the Company’s belief that the reporting unit’s EBITDA, a key input under the market approach, was not representative and consistent with the reporting unit’s historical performance and long-term outlook and, therefore, was not consistent with assumptions that a market participant would use in determining the fair value of the reporting unit. When the fair value of the reporting unit was determined, an impairment charge was recognized for the amount by which the carrying amount of oilfield’s net assets exceeded its fair value. As such, the entire oilfield reporting unit’s goodwill balance of $13 was impaired during the third quarter of 2017, and the Company recognized a goodwill impairment charge of $13 in its Epoxy, Phenolic and Coating Resins segment, which is included in “Asset impairments” in the Consolidated Statements of Operations. Significant unobservable inputs in the discounted cash flow analysis included projected long-term future cash flows, projected growth rates and discount rates associated with this reporting unit. Future projected long-term cash flows and growth rates were derived from models based upon forecasts prepared by the Company’s management. These projected cash flows were discounted using a rate of 13.5%.

The Company’s intangible assets with identifiable useful lives consist of the following as of December 31, 2017 and 2016:

	2017				2016			
	Gross Carrying Amount	Accumulated Impairments	Accumulated Amortization	Net Book Value	Gross Carrying Amount	Accumulated Impairments	Accumulated Amortization	Net Book Value
Patents and technology	$ 112	$ —	$ (97)	$ 15	$ 112	$ —	$ (91)	$ 21
Customer lists and contracts	109	(17)	(79)	13	109	(17)	(75)	17
Other	25	—	(11)	14	25	—	(11)	14
Total	$ 246	$ (17)	$ (187)	$ 42	$ 246	$ (17)	$ (177)	$ 52

The impact of foreign currency translation on intangible assets is included in accumulated amortization.

Total intangible amortization expense for the years ended December 31, 2017, 2016 and 2015 was $12, $12 and $13, respectively.

Estimated annual intangible amortization expense for 2018 through 2022 is as follows:

2018	$	15
2019		6
2020		6
2021		2
2022		2

6. Fair Value

Fair value is the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Fair value measurement provisions establish a fair value hierarchy which requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. This guidance describes three levels of inputs that may be used to measure fair value:

- **Level 1:** Inputs are quoted prices (unadjusted) for identical assets or liabilities in active markets.
- **Level 2:** Pricing inputs are other than quoted prices in active markets included in Level 1, which are either directly or indirectly observable as of the reported date.
- **Level 3:** Unobservable inputs that are supported by little or no market activity and are developed based on the best information available in the circumstances. For example, inputs derived through extrapolation or interpolation that cannot be corroborated by observable market data.

Recurring Fair Value Measurements

As of December 31, 2017, the Company had derivative liabilities of less than $1, which were measured using Level 2 inputs, and consist of derivative instruments transacted primarily in over-the-counter markets. There were no transfers between Level 1, Level 2 or Level 3 measurements during the years ended December 31, 2017 and 2016.

The Company calculates the fair value of its Level 2 derivative liabilities using standard pricing models with market-based inputs, adjusted for nonperformance risk. When its financial instruments are in a liability position, the Company evaluates its credit risk as a component of fair value. At December 31, 2017 and 2016, no adjustment was made by the Company to reduce its derivative liabilities for nonperformance risk.

When its financial instruments are in an asset position, the Company is exposed to credit loss in the event of nonperformance by other parties to these contracts and evaluates their credit risk as a component of fair value.

Non-recurring Fair Value Measurements

Long-Lived and Amortizable Intangible Assets

Following is a summary of losses as a result of the Company measuring long-lived assets at fair value on a non-recurring basis during the years ended December 31, 2017, 2016 and 2015, all of which were valued using Level 3 inputs.

	Year Ended December 31,		
	2017	2016	2015
Long-lived assets held and used	$ —	$ —	$ 4
Long-lived assets held for disposal/abandonment	—	—	2
Total	$ —	$ —	$ 6

In 2015, as a result of the likelihood that certain long-lived assets would be disposed of before the end of their estimated useful lives resulting in lower future cash flows associated with these assets, the Company wrote down long-lived assets with a carrying value of $5 to fair value of $1, resulting in an impairment charge of $4 within its Epoxy, Phenolic and Coating Resins segment.

In 2015, as a result of the Company’s decision to dispose of certain long-lived assets before the end of their estimated useful lives, the Company wrote down long-lived assets with a carrying value of $2 to fair value of $0, resulting in an impairment charge of $2 within its Forest Products Resins segment.

Non-derivative Financial Instruments

The following table summarizes the carrying amount and fair value of the Company’s non-derivative financial instruments:

	Carrying Amount[(1)]	Fair Value Level 1	Fair Value Level 2	Fair Value Level 3	Fair Value Total
December 31, 2017					
Debt	$ 3,750	$ —	$ 3,206	$ 49	$ 3,255
December 31, 2016					
Debt	$ 3,542	$ —	$ 3,134	$ 9	$ 3,143

(1) Debt carrying amounts exclude unamortized deferred debt issuance costs of $41 and $38 at December 31, 2017 and 2016, respectively.

Fair values of debt classified as Level 2 are determined based on other similar financial instruments, or based upon interest rates that are currently available to the Company for the issuance of debt with similar terms and maturities. Level 3 amounts represent capital leases whose fair value is determined through the use of present value and specific contract terms. The carrying amounts of cash and cash equivalents, short term investments, accounts receivable, accounts payable and other accrued liabilities are considered reasonable estimates of their fair values due to the short-term maturity of these financial instruments.

7. Debt and Lease Obligations

Debt outstanding at December 31, 2017 and 2016 is as follows:

	2017 Long-Term	2017 Due Within One Year	2016 Long-Term	2016 Due Within One Year
ABL Facility	$ 81	$ —	$ —	$ —
Senior Secured Notes:				
6.625% First-Priority Senior Secured Notes due 2020 (includes $2 and $3 of unamortized debt premium at December 31, 2017 and 2016, respectively)	1,552	—	1,553	—
10.00% First-Priority Senior Secured Notes due 2020	315	—	315	—
10.375% First-Priority Secured Notes due 2022	560	—	—	—
8.875% Senior Secured Notes due 2018 (includes $1 of unamortized discount at December 31, 2016)	—	—	706	—
13.75% Senior Secured Notes due 2022	225	—	—	—
9.00% Second-Priority Senior Secured Notes due 2020	574	—	574	—
Debentures:				
9.2% debentures due 2021	74	—	74	—
7.875% debentures due 2023	189	—	189	—
Other Borrowings:				
Australia Facility due 2018 at 4.6% and 4.1% at December 31, 2017 and 2016, respectively	—	50	—	51
Brazilian bank loans at 9.9% and 11.2% at December 31, 2017 and 2016, respectively	9	34	14	26
Lease obligations	44	5	7	2
Other at 5.0% and 5.1% at December 31, 2017 and 2016, respectively	2	36	3	28
Unamortized debt issuance costs	(41)	—	(38)	—
Total	$ 3,584	$ 125	$ 3,397	$ 107

2017 Refinancing Transactions

- In February 2017, the Company issued $485 aggregate principal amount of 10.375% First-Priority Senior Secured Notes due 2022 (the “New First Lien Notes”) and $225 aggregate principal amount of 13.75% Senior Secured Notes due 2022 (the “New Senior Secured Notes”). Upon the closing of these offerings, the Company used the net proceeds from these offerings, together with cash on its balance sheet, to redeem all of the Company’s outstanding 8.875% Senior Secured Notes due 2018 (the “Old Senior Secured Notes”), which occurred in March 2017. In connection with the extinguishment of the Old Senior Secured Notes, the Company wrote off $3 of unamortized deferred debt issuance costs and discounts, which are included in “Loss (gain) on extinguishment of debt” in the Consolidated Statements of Operations.

- In May 2017, the Company issued an additional $75 aggregate principal amount of New First Lien Notes at an issue price of 100.5%. These notes mature on February 1, 2022 and have the same terms as the New First Lien Notes issued in February 2017. The Company used the net proceeds from these notes for general corporate purposes.

- The Company also amended and restated its ABL Facility in December 2016 with modifications to, among other things, permit the refinancing of the Old Senior Secured Notes. In connection with the issuance of the new notes in February 2017, certain lenders under the ABL Facility provided extending revolving credit facility commitments in an aggregate principal amount of $350 with a maturity date of December 5, 2021 (subject to certain early maturity triggers), the existing commitments were terminated and the size of the ABL Facility was reduced from $400 to $350.

These transactions are collectively referred to as the “2017 Refinancing Transactions.”

2016 Debt Transactions

During 2016, the Company repurchased $290 of its Old Senior Secured Notes on the open market for cash of $240. These transactions resulted in a gain of $48, which represents the difference between the carrying value of the repurchased debt and the cash paid for the repurchases, less the proportionate amount of unamortized deferred financing fees and debt discounts that were written off in conjunction with the repurchases. This amount is recorded in “Loss (gain) on extinguishment of debt” in the Consolidated Statements of Operations.

2015 Debt Transactions

During 2015, the Company repurchased $203 of its Old Senior Secured Notes on the open market for total cash of $160. These transactions resulted in a gain of $41, which represents the difference between the carrying value of the repurchased debt and the cash paid for the repurchases, less the proportionate amount of unamortized deferred financing fees and debt discounts that were written off in conjunction with the repurchases. This amount is recorded in “Loss (gain) on extinguishment of debt” in the Consolidated Statements of Operations.

ABL Facility

In March 2013, the Company entered into a $400 asset-based revolving loan facility, subject to a borrowing base (the “ABL Facility”). The ABL Facility replaced the Company's senior secured credit facilities, which included a $171 revolving credit facility and the $47 synthetic letter of credit facility at the time of the termination of facilities upon the Company's entry into the ABL Facility.

In December 2016, the Company amended and restated the ABL Facility, with modifications to, among other things, permit the refinancing of the Old Senior Secured Notes with new first-priority senior secured notes, new senior secured notes and/or other secured or unsecured indebtedness. In connection with the issuance of the new notes in February 2017, certain lenders under the ABL Facility provided extended revolving facility commitments in an aggregate principal amount of approximately $350 with a maturity date of December 5, 2021 (subject to the early maturity triggers described below), the existing commitments were terminated and the size of the ABL Facility was reduced from $400 to $350.

As amended, the ABL Facility has a maturity date of December 5, 2021 unless, if 91 days prior to the scheduled maturity of the 6.625% First-Priority Senior Notes due 2020 and the 10.00% First-Priority Senior Secured Notes, more than $50 aggregate principal amount of these notes are outstanding, in which case the ABL Facility will mature on such earlier date. Additionally, if 91 days prior to the scheduled maturity of the 9.00% Second-Priority Senior Secured Notes due 2020, more than $50 aggregate principal amount of these notes are outstanding, the ABL Facility will mature on such earlier date.

Availability under the ABL Facility is $350, subject to a borrowing base based on a specified percentage of eligible accounts receivable and inventory. In 2015, the ABL Facility was amended to include certain international property plant and equipment as collateral up to $70. The borrowers under the ABL Facility include the Company and Hexion Canada Inc., Hexion B.V., Hexion UK Limited and Borden Chemical UK Limited, each a wholly owned subsidiary of the Company. In 2015, the ABL Facility was also amended to include Hexion Gmbh as a borrower.

The ABL Facility bears interest at a floating rate based on, at the Company's option, an adjusted LIBOR rate plus an initial applicable margin of 2.25% or an alternate base rate plus an initial applicable margin of 1.25%. From and after the date of delivery of the Company's financial statements for the first fiscal quarter ended after the effective date of the ABL Facility, the applicable margin for such borrowings will be adjusted depending on the availability under the ABL Facility. As of December 31, 2017, the applicable margin for LIBOR rate loans was 2.25% and for alternate base rate loans was 1.25%. In addition to paying interest on outstanding principal under the ABL Facility, the Company is required to pay a commitment fee to the lenders in respect of the unutilized commitments at an initial rate equal to 0.50% per annum, subject to adjustment depending on the usage. The ABL Facility does not have any financial maintenance covenants, other than a fixed charge coverage ratio of 1.0 to 1.0 that only applies if availability under the ABL Facility is less than the greater of (a) $35 and (b) 12.5% of the lesser of the borrowing base and the total ABL Facility commitments at such time. The fixed charge coverage ratio under the credit agreement governing the ABL Facility is generally defined as the ratio for the most recent four consecutive fiscal quarters of (a) Adjusted EBITDA minus non-financed capital expenditures and cash taxes to (b) debt service plus cash interest expense plus certain restricted payments, each measured for the four most recent quarters in which financial statements have been delivered. The ABL Facility is secured by, among other things, first-priority liens on most of the inventory and accounts receivable and related assets of the Company, its domestic subsidiaries and certain of its foreign subsidiaries (the “ABL Priority Collateral”), and by second-priority liens on certain collateral that generally includes most of the Company’s, its domestic subsidiaries’ and certain of its foreign subsidiaries’ assets other than the ABL Priority Collateral, in each case subject to certain exceptions and permitted liens. Available borrowings under the ABL Facility were $227 as of December 31, 2017, and there were $81 of outstanding borrowings and $42 of outstanding letters of credit under the ABL Facility as of December 31, 2017.

Senior Secured Notes

First-Priority Senior Secured Notes

In March 2012, the Company issued $450 aggregate principal amount of 6.625% First-Priority Senior Secured Notes due 2020 at an issue price of 100%. In January 2013, the Company issued an additional $1,100 aggregate principal amount of 6.625% First-Priority Senior Secured Notes due 2020 at an issue price of 100.75% (the “First-Priority Senior Secured Notes”).

The First-Priority Senior Secured Notes are due on April 15, 2020 and are secured by first-priority liens on collateral that generally includes most of the Company's and its domestic subsidiaries' assets other than inventory and accounts receivable and related assets (the “Notes Priority Collateral”), and by second-priority liens on the domestic portion of the collateral for the ABL Facility (the “ABL Priority Collateral”), which generally includes most of the inventory and accounts receivable and related assets of the Company, its domestic subsidiaries and certain of its foreign subsidiaries, in each case subject to certain exceptions and permitted liens.

10.00% First-Priority Senior Secured Notes

In April 2015, the Company issued $315 aggregate principal amount of 10.00% First-Priority Senior Secured Notes due 2020 (the “10.00% First Lien Notes”). The Company used the net proceeds to redeem or repay all $40 of its outstanding 8.375% Sinking Fund Debentures due 2016, and to repay all amounts outstanding under its ABL facility at the closing of the offering.

The 10.00% First Lien Notes are due April 15, 2020 and are secured by first-priority liens on collateral that generally includes most of the Company and its domestic subsidiaries’ assets other than inventory and accounts receivable and related assets and by second-priority liens on the domestic portion of the collateral for the ABL Facility, which generally includes most of the inventory and accounts receivable and related assets of the Company, its domestic subsidiaries and certain of its foreign subsidiaries, in each case subject to certain exceptions and permitted liens.

8.875% Senior Secured Notes

In January 2010, through the Company’s wholly owned finance subsidiaries, Hexion U.S. Finance Corp. and Hexion Nova Scotia Finance, ULC, the Company issued $1,000 aggregate principal amount of the Old Senior Secured Notes. In January 2013 the Company also issued $200 aggregate principal amount of Old Senior Secured Notes at an issue price of 100%, to lenders in exchange for loans of Hexion LLC, which were retired in full.

The priority of the collateral liens securing the 8.875% Senior Secured Notes is senior to the collateral liens securing the existing Second-Priority Senior Secured Notes, and is junior to the collateral liens securing the Company’s First-Priority Senior Secured Notes.

On February 8, 2017, the Company satisfied and discharged its obligations under the Old Senior Secured Notes by depositing the net proceeds of the offerings of the New First Lien Notes and New Senior Secured Notes, together with cash on its balance sheet, with the trustee for the Old Senior Secured Notes for the purpose of redeeming all of the Company’s outstanding aggregate principal amount of Old Senior Secured Notes, which were redeemed on March 10, 2017.

Second-Priority Senior Secured Notes

In November 2010, through the Company’s wholly owned finance subsidiaries, Hexion U.S. Finance Corp. and Hexion Nova Scotia Finance, ULC, the Company refinanced its existing 9.75% Second-Priority Senior Secured Notes due 2014 (the “Old Second Lien Notes”) through the issuance of $574 aggregate principal amount of 9.00% Second-Priority Senior Secured Notes due 2020, which mature on November 15, 2020 (the “New Second Lien Notes”). $440 aggregate principal amount was offered through a private placement with unaffiliated investors (the “Offering”). The remaining $134 aggregate principal amount of the New Second Lien Notes was issued in exchange for $127 aggregate principal amount of the Old Second Lien Notes that were held by an affiliate of Apollo Global Management, LLC at the time of the Offering (the “Apollo Exchange”). The exchange ratio was determined based on the consideration offered to holders of the Old Second Lien Notes to redeem the Old Second Lien Notes, which was intended to give Apollo an aggregate value equivalent to that which it would have received if it had received the total consideration upon the Company’s redemption of the Old Second Lien Notes and used the proceeds received to invest in the New Second Lien Notes. The new debt issued to Apollo has the same terms as the notes issued by the Company in the Offering.

Debentures

	Origination Date	Interest Payable	Early Redemption
9.2% debentures due 2021	March 1991	March 15 September 15	None
7.875% debentures due 2023	May 1993	February 15 August 15	None

Other Borrowings

The Company's Australian Term Loan Facility has a variable interest rate equal to the 90 day Australian or New Zealand Bank Bill Rates plus an applicable margin. The agreement also provides access to a $8 revolving credit facility. There were no outstanding borrowings under the revolving credit facility at December 31, 2017 or 2016. In February 2018, the Company extended its Australian Term Loan Facility through January 2021.

The Brazilian bank loans represent various bank loans, primarily for working capital purposes and to finance the construction of manufacturing facilities.

The Company's lease obligations classified as debt on the Consolidated Balance Sheets include capital leases and sale leaseback financing transactions, which range from one to fifteen year terms for equipment, pipeline, land and buildings. The Company's operating leases consist primarily of vehicles, equipment, tank cars, land and buildings.

General

The Company and certain of its domestic subsidiaries have pledged, to the applicable collateral agents, 100% of non-voting and 65% of voting equity interests in the Company's and such domestic subsidiaries' first-tier foreign subsidiaries, in each case to secure the obligations of the Company and the other domestic obligors under the ABL Facility, the 6.625% First-Priority Senior Secured Notes, the 10.00% First Lien Notes, the New First Lien Notes, the New Senior Secured Notes and the 9.00% Second-Priority Senior Secured Notes.

As of December 31, 2017 and 2016, the Company did not satisfy the Adjusted EBITDA to fixed charges incurrence test contained within the indentures that govern our 6.625% First-Priority Senior Secured Notes, 10.00% First Lien Notes, the New First Lien Notes, New Senior Secured Notes and 9.00% Second-Priority Senior Secured Notes. As a result, the Company is subject to restrictions on its ability to incur additional indebtedness or to make investments; however, there are exceptions to these restrictions, including exceptions that permit indebtedness under the ABL Facility (available borrowings of which were $227 at December 31, 2017).

As of December 31, 2017, the Company was in compliance with all covenants included in the agreements governing its outstanding indebtedness, including the ABL Facility.

Scheduled Maturities

Aggregate maturities of debt, minimum payments under capital leases and minimum rentals under operating leases at December 31, 2017 for the Company are as follows:

Year	Debt	Minimum Rentals Under Operating Leases	Minimum Payments Under Capital Leases
2018	$ 120	$ 24	$ 11
2019	5	19	10
2020	2,524	13	14
2021	76	9	10
2022	785	5	22
2023 and thereafter	189	13	1
Total minimum payments	$ 3,699	$ 83	68
Less: Amount representing interest			(19)
Present value of minimum payments			$ 49

The Company's operating leases consist primarily of vehicles, equipment, land and buildings. Rental expense under operating leases amounted to $30, $32, and $35 for each of the years ended December 31, 2017, 2016 and 2015, respectively.

The Company has $1.9 billion of First Priority Senior Secured Notes maturing in April 2020 and $0.6 billion of Second Priority Notes maturing in November 2020. Additionally, if 91 days prior to the scheduled maturity of these notes, more than $50 aggregate principal amount is outstanding, the ABL Facility, which matures in December 2021, will accelerate and become immediately due and payable.

The Company regularly reviews its portfolio and is currently exploring potential divestitures. While there is no guarantee of a transaction, it could include a specific business unit or combination of several businesses. The Company expects that the proceeds from a transaction or transactions upon completion would be used to help reduce the absolute amount of the Company's debt.

Further, depending upon market, pricing and other conditions, including the current state of the high yield bond market, as well as cash balances and available liquidity, the Company or its affiliates, may seek to acquire notes or other indebtedness of the Company through open market purchases, privately negotiated transactions, tender offers, redemption or otherwise, upon such terms and at such prices as the Company or its affiliates may determine (or as may be provided for in the indentures governing the notes), for cash or other consideration.

8. Commitments and Contingencies

Environmental Matters

The Company's operations involve the use, handling, processing, storage, transportation and disposal of hazardous materials. The Company is subject to extensive environmental regulation at the federal, state and local levels as well as foreign laws and regulations, and is therefore exposed to the risk of claims for environmental remediation or restoration. In addition, violations of environmental laws or permits may result in restrictions being imposed on operating activities, substantial fines, penalties, damages or other costs, any of which could have a material adverse effect on the Company's business, financial condition, results of operations or cash flows.

Environmental Institution of Paraná IAP—On August 10, 2005, the Environmental Institute of Paraná (IAP), an environmental agency in the State of Paraná, provided Hexion Quimica Industria, the Company's Brazilian subsidiary, with notice of an environmental assessment in the amount of 12 Brazilian reals. The assessment related to alleged environmental damages to the Paranagua Bay caused in November 2004 from an explosion on a shipping vessel carrying methanol purchased by the Company. The investigations performed by the public authorities have not identified any actions of the Company that contributed to or caused the accident. The Company responded to the assessment by filing a request to have it cancelled and by obtaining an injunction precluding execution of the assessment pending adjudication of the issue. In November 2010, the Court denied the Company's request to cancel the assessment and lifted the injunction that had been issued. The Company responded to the ruling by filing an appeal in the State of Paraná Court of Appeals. In March 2012, the Company was informed that the Court of Appeals had denied the Company's appeal, and on June 4, 2012 the Company filed appeals to the Superior Court of Justice and the Supreme Court of Brazil. In September 2016, the Superior Court of Justice decided that strict liability does not apply to administrative fines issued by environmental agencies and reversed the decision of the State of Paraná Court of Appeals. The Superior Court of Justice remanded the case back to the Court of Appeals to determine if the IAP met its burden of proving negligence by the Company. In September 2017, the State of Paraná Court of Appeals decided that IAP did not prove that the Company was negligent and granted the Company's request to annul the environmental assessment. IAP filed a motion for clarification regarding the Court of Appeals' analysis of the case and the Company filed a motion for clarification regarding attorney fees. After the pending motions are resolved, IAP will have 15 business days to file an appeal with the Superior Court of Justice. The Company does not believe that a loss is probable. At December 31, 2017, the amount of the assessment, including tax, penalties, monetary correction and interest, is 44 Brazilian reals, or approximately $13.

The following table summarizes all probable environmental remediation, indemnification and restoration liabilities, including related legal expenses, at December 31, 2017 and 2016:

	Liability		Range of Reasonably Possible Costs as of 12/31/17	
Site Description	**December 31, 2017**	**December 31, 2016**	**Low**	**High**
Geismar, LA	$ 14	$ 14	$ 9	$ 22
Superfund and offsite landfills – allocated share:				
Less than 1%	2	2	1	5
Equal to or greater than 1%	6	6	5	14
Currently-owned	4	4	3	8
Formerly-owned:				
Remediation	26	30	25	42
Monitoring only	—	1	—	1
Total	$ 52	$ 57	$ 43	$ 92

These amounts include estimates for unasserted claims that the Company believes are probable of loss and reasonably estimable. The estimate of the range of reasonably possible costs is less certain than the estimates upon which the liabilities are based. To establish the upper end of a range, assumptions less favorable to the Company among the range of reasonably possible outcomes were used. As with any estimate, if facts or circumstances change, the final outcome could differ materially from these estimates. At both December 31, 2017 and 2016, $11 and $13, respectively, have been included in "Other current liabilities" in the Consolidated Balance Sheets with the remaining amount included in "Other long-term liabilities."

Following is a discussion of the Company's environmental liabilities and the related assumptions at December 31, 2017:

Geismar, LA Site—The Company formerly owned a basic chemicals and polyvinyl chloride business that was taken public as Borden Chemicals and Plastics Operating Limited Partnership ("BCPOLP") in 1987. The Company retained a 1% interest, the general partner interest and the liability for certain environmental matters after BCPOLP's formation. Under a Settlement Agreement approved by the United States Bankruptcy Court for the District of Delaware among the Company, BCPOLP, the United States Environmental Protection Agency and the Louisiana Department of Environmental Quality, the Company agreed to perform certain of BCPOLP's obligations for soil and groundwater contamination at BCPOLP's Geismar, Louisiana site. The Company bears the sole responsibility for these obligations because there are no other potentially responsible parties ("PRP") or third parties from whom the Company could seek reimbursement.

A groundwater pump and treat system to remove contaminants is operational, and natural attenuation studies are proceeding. If closure procedures and remediation systems prove to be inadequate, or if additional contamination is discovered, costs that would approach the higher end of the range of possible outcomes could result.

Due to the long-term nature of the project, the reliability of timing and the ability to estimate remediation payments, a portion of this liability was recorded at its net present value, assuming a 3% discount rate and a time period of 21 years. The range of possible outcomes is discounted in a similar manner. The undiscounted liability, which is expected to be paid over the next 21 years, is approximately $18. Over the next five years, the Company expects to make ratable payments totaling $6.

Superfund Sites and Offsite Landfills—The Company is currently involved in environmental remediation activities at a number of sites for which it has been notified that it is, or may be, a PRP under the United States Comprehensive Environmental Response, Compensation and Liability Act or similar state “superfund” laws. The Company anticipates approximately 50% of the estimated liability for these sites will be paid within the next five years, with the remainder over the next twenty-five years. The Company generally does not bear a significant level of responsibility for these sites, and as a result, has little control over the costs and timing of cash flows.

The Company’s ultimate liability will depend on many factors including its share of waste volume, the financial viability of other PRPs, the remediation methods and technology used, the amount of time necessary to accomplish remediation and the availability of insurance coverage. The range of possible outcomes takes into account the maturity of each project, resulting in a more narrow range as the project progresses. To estimate both its current reserves for environmental remediation at these sites and the possible range of additional costs, the Company has not assumed that it will bear the entire cost of remediation of every site to the exclusion of other known PRPs who may be jointly and severally liable. The Company has limited information to assess the viability of other PRPs and their probable contribution on a per site basis. The Company’s insurance provides very limited, if any, coverage for these environmental matters.

Sites Under Current Ownership—The Company is conducting environmental remediation at a number of locations that it currently owns, of which ten sites are no longer in operation. As the Company is performing a portion of the remediation on a voluntary basis, it has some control over the costs to be incurred and the timing of cash flows. The Company expects to pay approximately $4 of these liabilities within the next five years, with the remainder over the next ten years. The factors influencing the ultimate outcome include the methods of remediation elected, the conclusions and assessment of site studies remaining to be completed, and the time period required to complete the work. No other parties are responsible for remediation at these sites.

Formerly-Owned Sites—The Company is conducting, or has been identified as a PRP in connection with, environmental remediation at a number of locations that it formerly owned and/or operated. Remediation costs at these former sites, such as those associated with our former phosphate mining and processing operations, could be material. The Company has accrued those costs for formerly-owned sites which are currently probable and reasonably estimable. One such site is the Coronet Industries, Inc. Superfund Alternative Site in Plant City, Florida. The current owner of the site alleged that it incurred environmental costs at the site for which it has a contribution claim against the Company, and that additional future costs are likely to be incurred. The Company signed a settlement agreement with the current owner and past owner of the site, which provides the Company will pay $10 over three annual installments in fulfillment of the contribution claim against the Company for past remediation costs. The Company timely paid the first and second installments. Additionally, the Company accepted a 40% allocable share of specified future remediation costs at this site. The Company estimates its allocable share of future remediation costs to be approximately $15. The final costs to the Company will depend on the method of remediation chosen, the amount of time necessary to accomplish remediation and the ongoing financial viability of the other PRPs. Currently, the Company has insufficient information to estimate the range of reasonably possible costs related to this site.

Monitoring Only Sites—The Company is responsible for a number of sites that require monitoring where no additional remediation is expected. The Company has established reserves for costs related to these sites. Payment of these liabilities is anticipated to occur over the next ten or more years. The ultimate cost to the Company will be influenced by fluctuations in projected monitoring periods or by findings that are different than anticipated.

Indemnifications—In connection with the acquisition of certain of the Company’s operating businesses, the Company has been indemnified by the sellers against certain liabilities of the acquired businesses, including liabilities relating to both known and unknown environmental contamination arising prior to the date of the purchase. The indemnifications may be subject to certain exceptions and limitations, deductibles and indemnity caps. While it is reasonably possible that some costs could be incurred, except for those sites identified above, the Company has inadequate information to allow it to estimate a potential range of liability, if any.

Non-Environmental Legal Matters

The Company is involved in various legal proceedings in the ordinary course of business and had reserves of $3 and $2 at December 31, 2017 and 2016, respectively, for all non-environmental legal defense costs incurred and settlement costs that it believes are probable and estimable. At December 31, 2017 and 2016, $2 and $1, respectively, has been included in “Other current liabilities” in the Consolidated Balance Sheets with the remaining amount included in “Other long-term liabilities.”

Other Legal Matters—The Company is involved in various other product liability, commercial and employment litigation, personal injury, property damage and other legal proceedings in addition to those described above, including actions that allege harm caused by products the Company has allegedly made or used, containing silica, vinyl chloride monomer and asbestos. The Company believes it has adequate reserves and that it is not reasonably possible that a loss exceeding amounts already reserved would be material. Furthermore, the Company has insurance to cover claims of these types.

Other Commitments and Contingencies

The Company has entered into contractual agreements with third parties for the supply of site services, utilities, materials and facilities and for operation and maintenance services necessary to operate certain of the Company's facilities on a stand-alone basis. The duration of the contracts range from less than one year to 20 years, depending on the nature of services. These contracts may be terminated by either party under certain conditions as provided for in the respective agreements; generally, 90 days notice is required for short-term contracts and three years notice is required for longer-term contracts (generally those contracts in excess of five years). Contractual pricing generally includes a fixed and variable component.

In addition, the Company has entered into contractual agreements with third parties to purchase feedstocks or other services. The terms of these agreements vary from one to fifteen years and may be extended at the Company's request and are cancelable by either party as provided for in each agreement. Feedstock prices are based on market prices less negotiated volume discounts or cost input formulas. The Company is required to make minimum annual payments under these contracts as follows:

Year	Minimum Annual Purchase Commitments
2018	$ 199
2019	97
2020	97
2021	10
2022	9
2023 and beyond	68
Total minimum payments	480
Less: Amount representing interest	(33)
Present value of minimum payments	$ 447

9. Pension and Non-Pension Postretirement Benefit Plans

The Company sponsors defined benefit pension plans covering certain U.S. associates and certain non-U.S. associates primarily in Netherlands, Germany, Canada, France and Belgium. Benefits under these plans are generally based on eligible compensation and / or years of credited service. Retirement benefits in other foreign locations are primarily structured as defined contribution plans. During 2009, the Company implemented a change in its U.S. retirement benefits to shift to a defined contribution platform. Benefits under the defined benefit U.S. pension plan were frozen and the Company added an annual Company contribution to the U.S. defined contribution plan for eligible participants.

The Company also provides non-pension postretirement benefit plans to certain U.S. associates, to Canadian associates, to Brazilian associates and to certain associates in the Netherlands. The U.S. benefit primarily consists of a life insurance benefit for a grandfathered group of retirees, for which the premiums are paid by the Company. In addition, some U.S. retirees are eligible to participate in the medical plans offered to active associates; however, the retirees' cost for this coverage depends on the maximum plan benefit and the retiree premium, which is equal to 175% of the active associate premium. The Canadian plans provide retirees and their dependents with medical and life insurance benefits, which are supplemental benefits to the respective provincial healthcare plan in Canada. The Brazilian plan became effective in 2012 as a result of a change in certain regulations, and provides retirees that contributed towards coverage while actively employed with access to medical benefits, with the retiree being responsible for 100% of the premiums. In 2014, the plan was amended such that 100% of the premiums of active employees are paid by the Company. The Netherlands' plan provides a lump sum payment at retirement for grandfathered associates.

The following table presents the change in benefit obligation, change in plan assets and components of funded status for the Company's defined benefit pension and non-pension postretirement benefit plans for the years ended December 31:

	Pension Benefits				Non-Pension Postretirement Benefits			
	2017		2016		2017		2016	
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans
Change in Benefit Obligation								
Benefit obligation at beginning of year	$ 242	$ 548	$ 249	$ 492	$ 6	$ 10	$ 7	$ 9
Service cost	3	16	3	14	—	—	—	—
Interest cost	7	9	8	10	—	1	—	1
Actuarial losses (gains)	6	(6)	5	57	(1)	—	—	(1)
Foreign currency exchange rate changes	—	77	—	(13)	—	—	—	1
Benefits paid	(17)	(11)	(20)	(10)	—	—	(1)	—
Reduction due to divestitures	—	—	—	(3)	—	—	—	—
Plan amendments	—	2	—	—	—	—	—	—
Expenses paid from assets	(3)	—	—	—	—	—	—	—
Employee contributions	—	1	—	1	—	—	—	—
Other	—	—	(3)	—	—	—	—	—
Benefit obligation at end of year	$ 238	$ 636	$ 242	$ 548	$ 5	$ 11	$ 6	$ 10
Change in Plan Assets								
Fair value of plan assets at beginning of year	$ 207	$ 349	$ 210	$ 316	$ —	$ —	$ —	$ —
Actual return on plan assets	26	4	17	33	—	—	—	—
Foreign currency exchange rate changes	—	48	—	(10)	—	—	—	—
Employer contributions	—	21	3	19	1	—	1	—
Benefits paid	(17)	(11)	(20)	(10)	(1)	—	(1)	—
Expenses paid from assets	(3)	—	—	—	—	—	—	—
Employee contributions	—	1	—	1	—	—	—	—
Other	—	—	(3)	—	—	—	—	—
Fair value of plan assets at end of year	213	412	207	349	—	—	—	—
Funded status of the plan at end of year	$ (25)	$ (224)	$ (35)	$ (199)	$ (5)	$ (11)	$ (6)	$ (10)

	Pension Benefits				Non-Pension Postretirement Benefits			
	2017		2016		2017		2016	
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans
Amounts recognized in the Consolidated Balance Sheets at December 31 consist of:								
Noncurrent assets	$ —	$ 1	$ —	$ —	$ —	$ —	$ —	$ —
Other current liabilities	—	(5)	—	(4)	—	(1)	—	—
Long-term pension and post employment benefit obligations	(25)	(220)	(35)	(195)	(5)	(10)	(6)	(10)
Accumulated other comprehensive loss	—	—	—	(3)	(2)	1	(2)	2
Net amounts recognized	$ (25)	$ (224)	$ (35)	$ (202)	$ (7)	$ (10)	$ (8)	$ (8)
Amounts recognized in Accumulated other comprehensive income at December 31 consist of:								
Net prior service cost (benefit)	$ 1	$ (1)	$ 1	$ (4)	$ —	$ 2	$ (1)	$ 3
Deferred income taxes	(1)	1	(1)	1	(2)	(1)	(1)	(1)
Net amounts recognized	$ —	$ —	$ —	$ (3)	$ (2)	$ 1	$ (2)	$ 2
Accumulated benefit obligation	$ 238	$ 587	$ 242	$ 504				
Accumulated benefit obligation for funded plans	238	393	241	350				
Pension plans with underfunded or non-funded accumulated benefit obligations at December 31:								
Aggregate projected benefit obligation	$ 238	$ 615	$ 242	$ 173				
Aggregate accumulated benefit obligation	238	567	242	164				
Aggregate fair value of plan assets	213	391	207	9				
Pension plans with projected benefit obligations in excess of plan assets at December 31:								
Aggregate projected benefit obligation	$ 238	$ 615	$ 242	$ 548				
Aggregate fair value of plan assets	213	391	207	349				

The foreign currency impact reflected in these rollforward tables are primarily for changes in the euro versus the U.S. dollar.

The Pension Protection Act of 2006 (the “2006 PPA”) provides for minimum funding levels on U.S. plans, and plans not meeting the minimum funding requirement may be subject to certain restrictions.

Following are the components of net pension and postretirement (benefit) expense recognized for the years ended December 31, 2017, 2016 and 2015:

	Pension Benefits					
	U.S. Plans			Non-U.S. Plans		
	2017	2016	2015	2017	2016	2015
Service cost	$ 3	$ 3	$ 3	$ 16	$ 14	$ 16
Interest cost on projected benefit obligation	7	8	10	9	10	12
Expected return on assets	(13)	(14)	(15)	(11)	(10)	(13)
Amortization of prior service cost (benefit)	—	1	—	(1)	(1)	—
Unrealized actuarial (gain) loss	(6)	1	—	1	35	(16)
Net (benefit) expense	$ (9)	$ (1)	$ (2)	$ 14	$ 48	$ (1)

	Non-Pension Postretirement Benefits					
	U.S. Plans			Non-U.S. Plans		
	2017	2016	2015	2017	2016	2015
Interest cost on projected benefit obligation	$ —	$ —	$ —	$ 1	$ 1	$ 1
Amortization of prior service benefit	—	(1)	—	—	—	—
Unrealized actuarial (gain) loss	(1)	—	—	1	(1)	(1)
Net (benefit) expense	$ (1)	$ (1)	$ —	$ 2	$ —	$ —

The following amounts were recognized in “Accumulated other comprehensive loss” during the year ended December 31, 2017:

	Pension Benefits		Non-Pension Postretirement Benefits		Total	
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans
Prior service cost from plan amendments	$ —	$ 2	$ —	$ —	$ —	$ 2
Amortization of prior service cost (benefit)	—	1	—	(1)	—	—
Loss (gain) recognized in accumulated other comprehensive loss, net of tax	$ —	$ 3	$ —	$ (1)	$ —	$ 2

The amounts in “Accumulated other comprehensive loss” that are expected to be recognized as components of net periodic benefit cost (benefit) during the next fiscal year are less than $1.

Determination of actuarial assumptions

The Company’s actuarial assumptions are determined based on the demographics of the population, target asset allocations for funded plans, regional economic trends, statutory requirements and other factors that could impact the benefit obligation and plan assets. For our European plans, most assumptions are set by country, as the plans within these countries have similar demographics, and are impacted by the same regional economic trends and statutory requirements.

The discount rates selected reflect the rate at which pension obligations could be effectively settled. The Company selects the discount rates based on cash flow models using the yields of high-grade corporate bonds or the local equivalent with maturities consistent with the Company’s anticipated cash flow projections. The Company’s pension and OPEB liabilities and related service and interest cost are calculated using a split-rate interest discounting methodology, whereby expected future cash flows related to these liabilities are discounted using multiple interest rates on a forward curve that correspond to the timing of the expected cash flows.

The expected rates of future compensation level increases are based on salary and wage trends in the chemical and other similar industries, as well as the Company’s specific long-term compensation targets by country. Input is obtained from the Company’s internal Human Resources group and from outside actuaries. These rates include components for wage rate inflation and merit increases.

The expected long-term rates of return on plan assets are determined based on the plans’ current and projected asset mix. To determine the expected overall long-term rate of return on assets, the Company takes into account the rates on long-term debt investments held within the portfolio, as well as expected trends in the equity markets, for plans including equity securities. Peer data and historical returns are reviewed and the Company consults with its actuaries, as well as the Plan’s investment advisors, to confirm that the Company’s assumptions are reasonable.

The weighted average rates used to determine the benefit obligations were as follows at December 31, 2017 and 2016:

	Pension Benefits				Non-Pension Postretirement Benefits			
	2017		2016		2017		2016	
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans
Discount rate	3.5%	1.9%	3.9%	1.9%	3.2%	5.3%	3.5%	6.0%
Rate of increase in future compensation levels	—	2.4%	—	2.4%	—	—	—	—
The weighted average assumed health care cost trend rates are as follows at December 31:								
Health care cost trend rate assumed for next year	—	—	—	—	6.6%	5.8%	6.8%	5.9%
Rate to which the cost trend rate is assumed to decline (the ultimate trend rate)	—	—	—	—	4.5%	4.5%	4.5%	4.5%
Year that the rate reaches the ultimate trend rate	—	—	—	—	2029	2023	2029	2030

The weighted average rates used to determine net periodic pension expense (benefit) were as follows for the years ended December 31, 2017, 2016 and 2015:

	Pension Benefits						Non-Pension Postretirement Benefits					
	U.S. Plans			Non-U.S. Plans			U.S. Plans			Non-U.S. Plans		
	2017	2016	2015	2017	2016	2015	2017	2016	2015	2017	2016	2015
Discount rate	3.9%	4.1%	3.7%	1.9%	2.3%	2.2%	3.5%	3.4%	3.4%	6.0%	5.5%	6.1%
Rate of increase in future compensation levels	—	—	—	2.4%	2.4%	3.0%	—	—	—	—	—	—
Expected long-term rate of return on plan assets	6.7%	6.7%	7.0%	2.9%	3.1%	3.8%	—	—	—	—	—	—

A one-percentage-point change in the assumed health care cost trend rates would change the projected benefit obligation for international non-pension postretirement benefits by $2 and service cost and interest cost by a negligible amount. The impact on U.S. plans is negligible.

Pension Investment Policies and Strategies

The Company's investment strategy for the assets of its North American defined benefit pension plans is to maximize the long-term return on plan assets using a mix of equities, fixed income and alternative investments with a prudent level of risk. Risk tolerance is established through careful consideration of plan liabilities, plan funded status and expected timing of future cash flow requirements. The investment portfolio contains a diversified blend of equity, fixed-income and alternative investments. For U.S. plans, equity investments are also diversified across U.S. and international stocks, as well as growth, value and small and large capitalization investments, while the Company's Canadian plan includes a blend of Canadian securities with U.S. and other foreign investments. The alternative investments are allocated in a diversified fund structure with exposure to a variety of hedge fund strategies. Investment risk and performance is measured and monitored on an ongoing basis through periodic investment portfolio reviews, annual liability measurements and periodic asset and liability studies. As plan funded status changes, adjustments to the diversified portfolio may be considered to reduce funded status volatility and better match the duration of plan liabilities.

The Company periodically reviews its target allocation of North American plan assets among the various asset classes. The targeted allocations are based on anticipated asset performance, discussions with investment professionals and on the projected timing of future benefit payments.

The Company observes local regulations and customs governing its European pension plans in determining asset allocations, which generally require a blended weight leaning toward more fixed income securities, including government bonds.

	Actual		
	2017	2016	Target 2018
Weighted average allocations of U.S. pension plan assets at December 31:			
Equity securities	34%	32%	35%
Debt securities	55%	53%	55%
Cash, short-term investments and other	11%	15%	10%
Total	100%	100%	100%
Weighted average allocations of non-U.S. pension plan assets at December 31:			
Equity securities	22%	23%	22%
Debt securities	76%	74%	78%
Cash, short-term investments and other	2%	3%	—%
Total	100%	100%	100%

Fair Value of Plan Assets

Fair value is the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Fair value measurement provisions establish a fair value hierarchy which requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. This guidance describes three levels of inputs that may be used to measure fair value:

- **Level 1:** Inputs are quoted prices (unadjusted) for identical assets or liabilities in active markets.
- **Level 2:** Pricing inputs are other than quoted prices in active markets included in Level 1, which are either directly or indirectly observable as of the reported date.

- **Level 3:** Unobservable inputs that are supported by little or no market activity and are developed based on the best information available in the circumstances. For example, inputs derived through extrapolation or interpolation that cannot be corroborated by observable market data.

Certain investments measured at net asset value (“NAV”), as a practical expedient for fair value, have been excluded from the fair value hierarchy.

The following table presents U.S. pension plan investments measured at fair value on a recurring basis as of December 31, 2017 and 2016:

	Fair Value Measurements Using							
	2017				2016			
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Unobserv-able Inputs (Level 3)	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Unobserv-able Inputs (Level 3)	Total
Large cap equity funds (1)	$ —	$ 38	$ —	$ 38	$ —	$ 35	$ —	$ 35
Small/mid cap equity funds (1)	—	6	—	6	—	6	—	6
International equity funds (1)	—	30	—	30	—	25	—	25
Fixed income securities (1)	—	116	—	116	—	110	—	110
Cash equivalents (2)	—	6	—	6	—	4	—	4
	$ —	$ 196	$ —	$ 196	$ —	$ 180	$ —	$ 180
Investments measured at fair value using net asset value as a practical expedient:								
Investment receivable (3)				$ —				$ 12
Other funds (4)				17				15
Total				$ 213				$ 207

The following table presents non-U.S. pension plan investments measured at fair value on a recurring basis as of December 31, 2017 and 2016:

	Fair Value Measurements Using							
	2017				2016			
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Unobserv-able Inputs (Level 3)	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Unobserv-able Inputs (Level 3)	Total
Pooled insurance products with fixed income guarantee (1)	$ —	$ 11	$ —	$ 11	$ —	$ 9	$ —	$ 9
	$ —	$ 11	$ —	$ 11	$ —	$ 9	$ —	$ 9
Investments measured at fair value using net asset value as a practical expedient:								
Other international equity funds (4)				$ 90				$ 82
Other fixed income securities (4)				311				258
Total				$ 412				$ 349

(1) Level 2 equity and fixed income securities are primarily in pooled asset and mutual funds and are valued based on underlying net asset value multiplied by the number of shares held. The underlying asset values are based on observable inputs and quoted market prices.

(2) Cash equivalents represent investment in a collective short term investment fund, which is a cash sweep for uninvested cash that earns interest monthly. For these investments, book value is assumed to equal fair value due to the short duration of the investment term.

(3) Represents receivables from investments in commingled funds sold in the fourth quarter of 2016, subject to a 90 day liquidation period.

(4) Represents investments in commingled funds with exposure to a variety of hedge fund strategies, which are not publicly traded and have ongoing redemption restrictions. The Company’s interest in these investments is measured at net asset value per share as a practical expedient for fair value, which is derived from the underlying asset values in these funds, only some of which represent observable inputs and quoted market prices. In accordance with ASU 2015-07, these investments are excluded from the fair value hierarchy.

Projections of Plan Contributions and Benefit Payments

The Company expects to make contributions totaling $23 to its defined benefit pension plans in 2018.

Estimated future plan benefit payments as of December 31, 2017 are as follows:

	Pension Benefits		Non-Pension Postretirement Benefits	
Year	**U.S. Plans**	**Non-U.S. Plans**	**U.S. Plans**	**Non-U.S. Plans**
2018	$ 19	$ 12	$ 1	$ 1
2019	18	13	1	—
2020	18	12	1	—
2021	17	14	1	—
2022	16	15	1	—
2023-2027	75	97	2	2

Defined Contribution Plans

The Company sponsors a number of defined contribution plans for its associates, primarily in the U.S., Canada, Europe and in the Asia-Pacific region. Full-time associates are generally eligible to participate immediately and may make pre-tax and after-tax contributions subject to plan and statutory limitations. For certain plans, the Company has the option to make contributions above the match provided in the plan based on financial performance.

As previously discussed, U.S retirement income benefits are provided under the Company's defined contribution plan (the “401(k) Plan”). This plan allows eligible associates to make pre-tax contributions from 1% to 15% of eligible earnings for associates who meet the IRS definition of a highly compensated employee and up to 25% for all other associates up to the federal limits for qualified plans. Associates contributing to the 401(k) are eligible to receive matching contributions from the Company at 100% on contributions of up to 5% of eligible earnings. An additional matching contribution may be made if the Company achieves specified annual financial targets established at the beginning of each plan year. In addition, the Company makes an annual retirement contribution ranging from 3% to 7% of eligible compensation depending on years of benefit service. All associates who are actively employed on the last day of the year are eligible for the true-up match and annual retirement contribution, unless otherwise determined by collective bargaining agreements. Effective January 2, 2018, the 401(k) Plan added the option for eligible participants to make after-tax contributions to a Roth 401(k).

The Company incurred expense for contributions under its defined contribution plans of $16, $14 and $20 during the years ended December 31, 2017, 2016 and 2015, respectively.

Non-Qualified and Other Retirement Benefit Plans

The Company provides key executives in some locations with non-qualified benefit plans that provide participants with an opportunity to elect to defer compensation or to otherwise provide supplemental retirement benefits in cases where executives cannot fully participate in the defined benefit or defined contribution plans because of plan or local statutory limitations. Most of the Company's supplemental benefit plans are unfunded and benefits are paid from the general assets of the Company. The liabilities related to defined benefit supplemental benefits are included in the previously discussed defined benefit pension disclosures.

The Company maintains a non-qualified defined contribution plan (the “SERP”) that provides annual employer credits to eligible U.S. associates of 5% of eligible compensation above the IRS limit for qualified plans. The Company can also make discretionary credits under the SERP; however, no participant contributions are permitted. The account credits are made annually to an unfunded phantom account, in the following calendar year. Certain executives also previously earned benefits under U.S. non-qualified executive supplemental plans that were frozen prior to 2010.

The Company’s liability for these non-qualified benefit plans was $6 and $5 at December 31, 2017 and 2016, and is included in “Other long-term liabilities” in the Consolidated Balance Sheets.

The Company’s German subsidiaries offer a government subsidized early retirement program to eligible associates called Altersteilzeit or ATZ Plans. The German government provides a subsidy in certain cases where the participant is replaced with a qualifying candidate. The Company had liabilities for these arrangements of $1 at both December 31, 2017 and 2016. The Company incurred expense for these plans of less than $1 for each of the years ended December 31, 2017, 2016 and 2015.

Also included in the Consolidated Balance Sheets at December 31, 2017 and 2016 are other post-employment benefit obligations relating to long-term disability and for liabilities relating to European jubilee benefit plans of $3.

10. Stock Option Plans and Stock Based Compensation

The following is a summary of existing stock based compensation plans and outstanding shares as of December 31, 2017:

Plan Name	Shares Outstanding	Plan Expiration	Vesting Terms/Status	Option Term	Number of Shares Authorized
Resolution Performance 2000 Stock Option Plan		November 2010		8 yrs 30 days	n/a plan expired
Tranche A options	15,745		Fully vested		
Tranche B performance options	31,516		Fully vested		
Resolution Performance 2000 Non-Employee Directors Option Plan	81,132	November 2010	Fully vested	8 yrs 30 days	n/a plan expired
Resolution Specialty Materials 2004 Stock Option Plan		October 2014		8 yrs 30 days	n/a plan expired
Tranche A options	1,902		Fully vested		
Tranche B performance options	3,804		Fully vested		
Director options	42,799		Fully vested		
BHI Acquisition Corp. 2004 Stock Incentive Plan		August 2014		10 years	n/a plan expired
Tranche A options	837,647		Fully vested		
Tranche B performance options	837,647		Fully vested		
Director options	56,282		Director grants vest upon IPO / change in control		
Hexion LLC 2007 Long-Term Incentive Plan		December 2017			1,700,000
Options to purchase units	159,500		Vest upon attainment of performance targets upon change in control	8 years	
Restricted stock units	50,000		Fully vested	N/A	
Momentive Performance Materials Holdings LLC 2011 Equity Incentive Plan		February 2021		10 years	20,800,000
Unit Options and Restricted Deferred Units (“RDUs”):					
2011 Grant					
Tranche A Options and RDUs	Options: 2,029,271		Time-vest ratably over 4 years; Accelerated vesting six months after certain change of control transactions as defined by the 2011 Equity Plan		
Tranche B Options and RDUs	Options: 1,012,596 RDUs: 337,529		Performance-based: Vest upon the earlier of i) the two year anniversary from the date of the achievement of the targeted common unit value following certain corporate transactions or ii) the six month anniversary from the date the targeted common unit value is achieved following certain change of control transactions		
Tranche C Options and RDUs	Options: 1,012,596 RDUs: 337,529		Performance-based: Vest upon the earlier of i) the one year anniversary from the date of the achievement of the targeted common unit value following certain corporate transactions or ii) the six month anniversary from the date the targeted common unit value is achieved following certain change of control transactions		
2013 Grant					
Unit Options	3,891,261		Time-vest ratably over 4 years; Accelerated vesting six months after a change of control event as defined by the 2011 Equity Plan	10 years	
RDUs	3,069,859		Performance-based: Vest upon the earlier of 1) one year from the achievement of the targeted common unit value and a realization event or 2) six months from the achievement of the targeted common unit value and a change in control event, as such terms are defined by the 2011 Equity Plan	N/A	

Summary of Plans

Legacy Plans

Prior to October 2010, the Company’s parent, Hexion LLC, maintained six stock-based compensation plans: the Resolution Performance 2000 Stock Option Plan (the “Resolution Performance Plan”), the Resolution Performance 2000 Non-Employee Directors Option Plan (the “Resolution Performance Director Plan”), the Resolution Performance Restricted Unit Plan (the “Resolution Performance Unit Plan”), the Resolution Specialty 2004 Stock Option Plan (the “Resolution Specialty Plan”), the BHI Acquisition 2004 Stock Incentive Plan (the “Borden Chemical Plan”) and the 2007 Hexion LLC 2007 Long-Term Incentive Plan. In addition to these plans, the Company’s parent maintains a stock-based deferred compensation plan, which is discussed below. The options granted under each of the option plans were to purchase common units in Hexion LLC.

Effective October 1, 2010, in conjunction with the previous combination of Hexion and MPM, stock options to purchase common units in Hexion LLC that were granted to our Directors and those granted under the Resolution Performance 2000 Stock Option Plan, the Resolution Performance 2000 Non-Employee Directors Option Plan, the Resolution Specialty 2004 Stock Option Plan, the BHI Acquisition 2004 Stock Incentive Plan and the Hexion LLC 2007 Long-Term Incentive plan to purchase common units in Hexion LLC were converted on a one-for-one basis to an equivalent number of options to purchase common units in Hexion Holdings. Similarly, the restricted Hexion LLC unit awards granted under the Hexion 2007 Long-Term Incentive Plan, the BHI Acquisition 2004 Deferred Compensation Plan and the Resolution Performance Restricted Unit Plan were converted on a one-for-one basis to common units in Hexion Holdings.

2011 Equity Plan

In 2011, the Compensation Committee of the Board of Managers of Hexion Holdings approved the Momentive Performance Materials Holdings LLC 2011 Equity Incentive Plan (the “2011 Equity Plan”). Under the 2011 Equity Plan, Hexion Holdings can award unit options, unit awards, restricted units, restricted deferred units, and other unit-based awards. The restricted deferred units are non-voting units of measurement which are deemed to be equivalent to one common unit of Hexion Holdings. The unit options are options to purchase common units of Hexion Holdings. The awards contain restrictions on transferability and other typical terms and conditions.

Unit Options

In 2013, the Company granted Unit Options with an aggregate grant date fair value of approximately $2. The fair value was estimated at the grant date using a Monte Carlo valuation method. The Monte Carlo valuation method requires the use of a range of assumptions. The range of risk-free interest rates was 0.11% to 2.06%, expected volatility rates ranged from 28.1% to 35.5% and the dividend rate was 0%. The expected life assumption is not used in the Monte Carlo valuation method, but the output of the model indicated a weighted-average expected life of 6.2 years.

In 2011, the Company granted Tranche A Options with an aggregate grant date fair value of approximately $6. The fair value of each option was estimated at the grant date using a Black-Scholes option pricing model. The assumptions used to estimate the fair value were a 2.17% risk-free interest rate, a 6.25 year expected life, a 37.5% expected volatility rate and a 0% dividend rate.

In 2011, the Company granted Tranche B and Tranche C Options with performance and market conditions, each with an aggregate grant date fair value of approximately $3. The fair value was estimated at the grant date using a Monte Carlo valuation method, which is a commonly accepted valuation model for awards with market and performance conditions. The Monte Carlo valuation method requires the use of a range of assumptions. The range of risk-free interest rates was 0.16% to 3.44%, expected volatility rates ranged from 34.6% to 41.7% and the dividend rate was 0%. The expected life assumption is not used in the Monte Carlo valuation method, but the output of the model indicated a weighted-average expected life of 9.2 years. As of December 31, 2017 it is not probable the related options will vest. Compensation cost will be recognized over the service period once the satisfaction of the performance condition is probable.

Restricted Deferred Units

In 2013, the Company granted RDUs with performance and market conditions with an aggregate grant date fair value of approximately $4. The fair value was estimated at the grant date using the same Monte Carlo valuation method and assumptions used for the Unit Options. The RDUs have an indefinite life, thus the term used in the valuation model was 30 years, which resulted in a weighted-average expected life of 22 years. As of December 31, 2017, it is not probable the related RDUs will vest. Compensation cost will be recognized over the service period once the satisfaction of the performance condition is probable.

In 2011, the Company granted Tranche A RDUs with an aggregate grant date fair value of approximately $4.

In 2011, the Company granted Tranche B and Tranche C RDUs with performance and market conditions, each with an aggregate grant date fair value of approximately $2. The fair value was estimated at the grant date using the same Monte Carlo valuation method and assumptions used for the Tranche B and Tranche C Options. The RDUs have an indefinite life, thus the term used in the valuation model was 30 years, which resulted in a weighted-average expected life of 21.4 years. As of December 31, 2017 it is not probable the related RDUs will vest. Compensation cost will be recognized over the service period once the satisfaction of the performance condition is probable.

Although the 2011 Equity Plan was issued by Hexion Holdings, the underlying compensation cost represents compensation costs paid for by Hexion Holdings on Hexion’s behalf, as a result of the employees’ service to Hexion. All compensation cost is recorded over the requisite service period on a graded-vesting basis.

Financial Statement Impact

Share-based compensation expense is recognized, net of estimated forfeitures, over the requisite service period on a graded-vesting basis. The Company adjusts compensation expense periodically for forfeitures.

The Company recognized share-based compensation expense of less than $1 for the years ended December 31, 2017, 2016 and 2015, respectively. The amounts are included in "Selling, general and administrative expense" in the Consolidated Statements of Operations. The Company expects additional compensation expense of $17, which will be recognized upon an initial public offering or other future contingent event.

Options Activity

Following is a summary of the Company's stock option plan activity for the year ended December 31, 2017:

	Hexion Holdings Common Units	Weighted Average Exercise Price
Options outstanding at December 31, 2016	11,360,391	$ 3.97
Options granted	—	$ —
Options forfeited	(848,006)	$ 3.53
Options outstanding at December 31, 2017 (1)	10,512,385	$ 4.01
Exercisable at December 31, 2017	8,982,742	$ 2.80
Expected to vest at December 31, 2017	37,021	$ 1.21

(1) Includes 2,318,200 of options that expired on December 31, 2017.

At December 31, 2017, exercise prices for options outstanding ranged from $1.21 to $29.42, with a weighted average remaining contractual life of 4.8 years. The weighted average remaining contractual life for options exercisable and options expected to vest was 3.3 and 7.6 years, respectively. At December 31, 2017, the aggregate intrinsic value of both options exercisable and options expected to vest was $0.

The total amount of cash received and total intrinsic value (which is the amount by which the stock price exceeded the exercise price of the options on the date of exercise) of options exercised during the years ended December 31, 2017, 2016 and 2015 was $0.

Restricted Unit Activity

Following is a summary of the Company's restricted unit plan activity for the year ended December 31, 2017:

	Hexion Holdings Common Units	Weighted Average Grant Date Fair Value
Nonvested at December 31, 2016	3,925,775	$ 1.91
Restricted units granted	—	$ —
Restricted units vested	—	$ —
Restricted units forfeited	(180,858)	$ 2.30
Nonvested at December 31, 2017	3,744,917	$ 1.95

As of December 31, 2017, there are no outstanding unvested time-based vesting restricted units.

Stock-Based Deferred Compensation Plan

In 2004, in connection with the acquisition of Borden Chemical by Apollo, certain key employees of the Company deferred the receipt of compensation and were credited with a number of deferred stock units that were equal in value to the amount of compensation deferred. In total, the Company granted 1,007,944 deferred common stock units under the Hexion LLC 2004 Deferred Compensation Plan (the "2004 DC Plan"), which is an unfunded plan. Each unit gives the grantee the right to one common stock unit of Hexion Holdings. Under the 2004 DC Plan, the deferred common stock units are not distributed to participants until their employment with the Company ends. At December 31, 2017, there were 198,394 undistributed units under the 2004 DC Plan. Under certain limited circumstances this award could be distributed in the form of a cash payment.

11. Assets and Liabilities Held for Sale

In December 2017, the Company announced the proposed sale of its Additives Technology Group business (“ATG”) to MÜNZING CHEMIE GmbH (“MÜNZING”), a privately-owned specialty additive company headquartered in Abstatt, Germany. ATG is included within the Company’s Forest Products Resins segment. On January 8, 2018, the sale was completed and the Company received approximately $50 in cash proceeds from the transaction, subject to customary post-closing adjustments. Proceeds from the sale will be used for general corporate purposes. In addition, the Company recorded a gain on this disposition of $44.

12. Dispositions

HAI

On May 31, 2016, the Company sold its 50% interest in HA-International, LLC (“HAI”), a joint venture within the Epoxy, Phenolic and Coating Resins segment serving the North American foundry industry, to its joint venture partner HA-USA, Inc., for a purchase price of $136, which includes $2 representing the Company’s 50% share of HAI’s cash balance at closing. Sale proceeds consisted of $61 in cash and a $75 buyer’s note issued by HA-USA, Inc. to the Company. As of December 31, 2016, the entire $75 of cash has been received on the buyer’s note. The Company recognized a gain on this disposition of $120, which is recorded as a component of “Gain on dispositions” in the Consolidated Statements of Operations.

PAC Business

On June 30, 2016, the Company completed the sale of its Performance Adhesives, Powder Coatings, Additives & Acrylic Coatings and Monomers business (the “PAC Business”) pursuant to the terms of a purchase agreement with Synthomer plc (the “Buyer”) dated March 18, 2016. The PAC Business includes manufacturing sites in Sokolov, Czech Republic; Sant’Albano, Italy; Leuna, Germany; Ribecourt, France; Asua, Spain; Roebuck, South Carolina; and Chonburi, Thailand. The PAC Business produced resins, polymers, monomers and additives that provide enhanced performance for adhesives, sealants, paints, coatings, mortars and cements used primarily in consumer, industrial and building and construction applications.

The Company received gross cash consideration for the PAC Business in the amount of $226, less approximately $6 relating to liabilities, net of cash and estimated working capital, that transferred to the Buyer as part of the Purchase Agreement. A subsequent post-closing adjustment to the purchase price of less than $1 was made in accordance with the purchase agreement. The Company recorded a gain on this disposition of $120, which is recorded in “Gain on dispositions” in the Consolidated Statements of Operations.

The PAC Business generated annual sales of approximately $370 in 2015, and was reported within the Epoxy, Phenolic and Coating Resins segment. The PAC Business had pre-tax income of $14 and $15 for the years ended December 31, 2016 and 2015, respectively, which is reported as a component of “Loss before income tax and earnings from unconsolidated entities” in the Consolidated Statements of Operations.

13. Acquisitions

In August 2015, the Company acquired the remaining 50% interest in Momentive Union Specialty Chemicals Ltd (“MUSC”), a joint venture that manufactures phenolic specialty resins in China, from its joint venture partner to better position the Company to serve its customers in this region. As a result of the transaction, the Company now owns a 100% interest in MUSC. This transaction was accounted for as a step acquisition and the allocation of the consideration exchanged was based upon a valuation of MUSC’s net identifiable assets and liabilities as of the transaction date. A gain of $5 was recorded in “Other operating expense (income), net” in the Consolidated Statements of Operations, which represents the difference between the $10 fair value and $5 carrying value of the Company’s previously held 50% non-controlling interest in MUSC on the acquisition date. The fair value of the non-controlling interest was determined using a market approach.

14. Income Taxes

On December 22, 2017, the United States enacted tax reform legislation that included a broad range of business tax provisions, including but not limited to a reduction in the U.S. federal tax rate from 35% to 21% as well as provisions that limit or eliminate various deductions or credits. The legislation also causes U.S. expenses, such as interest and general administrative expenses, to be taxed and imposes a new tax on U.S. cross-border payments. The 2017 provision for income taxes includes a provisional one-time charge of $65 for the transition tax on accumulated foreign earnings and profits, which results in an associated one-time reduction of an estimated $185 in the Company’s net operating loss carryforward.

In response to the enactment of U.S. tax reform, the SEC issued guidance (referred to as “SAB 118”) to address the complexity in accounting for this new legislation. When the initial accounting for items under the new legislation is incomplete, the guidance allows companies to recognize provisional amounts when reasonable estimates can be made or to continue to apply the prior tax law if a reasonable estimate of the impact cannot be made. The SEC has provided up to a one-year window for companies to finalize the accounting for the impacts of this new legislation and the Company anticipates finalizing its accounting during 2018.

The Company's accounting for the above items is based upon reasonable estimates of the tax effects of Tax Reform; however, its estimates may change upon the finalization of its implementation and additional interpretive guidance from regulatory authorities. The Company will complete its accounting for the above tax effects of Tax Reform during 2018 as provided in SAB 118 and will reflect any adjustments to its provisional amounts as an adjustment to the provision for taxes in the reporting period in which the amounts are finally determined.

Additionally, certain provisions of Tax Reform are not effective until 2018. The Company is in the process of evaluating the impact of these provisions and has not yet recorded any impact in the financial statements, nor has the Company made any accounting policy elections with respect to these items.

During 2017, the Company recognized income tax expense of $18, primarily as a result of income from certain foreign operations. Losses in the United States created a deferred income tax benefit which was completely offset by an increase to the valuation allowance. The Company incurred a provisional income tax expense of $167 associated with revaluing its net U.S. deferred tax attributes to reflect the new U.S. corporate tax rate of 21%, as well as an additional $65 provisional income tax expense associated with the estimated transition tax. The Company's valuation allowance was reduced by $234 as a result of the impact Tax Reform had on reducing its net deferred tax assets.

Due to the newly enacted U.S. tax rate change, estimated balances as of December 31, 2017 represent timing differences, which may change when those estimates are finalized with the filing of the 2017 income tax return. At this time, the Company has not yet gathered, prepared and analyzed the information in sufficient detail to complete the calculations necessary to finalize the amount of the transition tax. As the Company completes its analysis of accumulated foreign earnings and profits and related foreign taxes paid on an entity by entity basis and finalizes the amounts held in cash or other specified assets, the Company will update its provisional estimate of the transition tax and assess the impact on its valuation allowance.

During 2016, the Company recognized income tax expense of $38, primarily as a result of income from certain foreign operations. Losses in the United States created a deferred income tax benefit which was completely offset by an increase to the valuation allowance.

During 2015, the Company recognized income tax expense of $34, primarily as a result of income from certain foreign operations. Losses in the United States created a deferred income tax benefit which was completely offset by an increase to the valuation allowance. Income tax expense detail for the Company for the years ended December 31, 2017, 2016 and 2015 is as follows:

	2017	2016	2015
Current:			
State and local	$ 2	$ 2	$ 2
Foreign	19	34	25
Total current	21	36	27
Deferred:			
Federal	(5)	—	—
State and local	—	(1)	—
Foreign	2	3	7
Total deferred	(3)	2	7
Income tax expense	$ 18	$ 38	$ 34

A reconciliation of the Company's combined differences between income taxes computed at the federal statutory tax rate of 35% and provisions for income taxes for the years ended December 31, 2017, 2016 and 2015 is as follows:

	2017	2016	2015
Income tax benefit computed at federal statutory tax rate	$ (77)	$ (4)	$ (8)
State tax provision, net of federal benefits	—	—	1
Foreign tax rate (benefit) differential	(2)	(18)	(15)
Foreign source (loss) income subject to U.S. taxation	(45)	21	41
Losses (gains) and other expenses (income) not deductible (excluded) for tax	20	(4)	1
(Decrease) increase in the taxes due to changes in valuation allowance	(129)	42	17
Additional (benefit) expense on foreign unrepatriated earnings	—	(16)	18
Additional expense (benefit) for uncertain tax positions	5	(3)	3
Tax recognized in other comprehensive income	(3)	—	(1)
Changes in enacted tax laws and tax rates	167	—	(23)
Transition tax expense	65	—	—
Write-off of deferred tax assets	17	20	—
Income tax expense	$ 18	$ 38	$ 34

In December 2017, the United States enacted tax reform legislation. As a result, in 2017 the Company incurred a provisional income tax expense of $167 associated with revaluing its net U.S. deferred tax attributes to reflect the new U.S. corporate tax rate of 21%, as well as an additional $65 provisional income tax expense associated with the estimated transition tax. The Company’s valuation allowance was reduced by $234 as a result of the impact Tax Reform had on reducing its net deferred tax assets.

In December 2015, the Protecting Americans from Tax Hikes Act of 2015 (the “2015 Act”) was signed into law. The 2015 Act extended the controlled foreign corporation look-through rule, which provides for the exclusion of certain foreign earnings from U.S. federal taxation through December 31, 2019. The impact of the 2015 Act has been accounted for in the period of enactment. As a result, the company recognized a tax benefit of $23 during the year ended December 31, 2015.

The domestic and foreign components of the Company’s loss before income taxes for the years ended December 31, 2017, 2016 and 2015 is as follows:

	2017	2016	2015
Domestic	$ (143)	$ (115)	$ (242)
Foreign	(77)	104	220
Total	$ (220)	$ (11)	$ (22)

The tax effects of significant temporary differences and net operating loss and credit carryforwards, which comprise the Company’s deferred tax assets and liabilities at December 31, 2017 and 2016 is as follows:

	2017	2016
Assets:		
Non-pension post-employment	$ 5	$ 5
Accrued and other expenses	53	94
Property, plant and equipment	1	2
Loss and credit carryforwards	477	589
Intangibles	6	6
Pension and postretirement benefit liabilities	47	51
Gross deferred tax assets	589	747
Valuation allowance	(522)	(651)
Net deferred tax asset	67	96
Liabilities:		
Property, plant and equipment	(52)	(71)
Unrepatriated earnings of foreign subsidiaries	(9)	(9)
Intangible assets	(9)	(19)
Gross deferred tax liabilities	(70)	(99)
Net deferred tax liability	$ (3)	$ (3)

The following table summarizes the presentation of the Company’s net deferred tax liability in the Consolidated Balance Sheets at December 31, 2017 and 2016:

	2017	2016
Assets:		
Long-term deferred income taxes	$ 8	$ 10
Liabilities:		
Long-term deferred income taxes	(11)	(13)
Net deferred tax liability	$ (3)	$ (3)

Hexion LLC, the Company’s parent, is not a member of the registrant. Hexion LLC and its eligible subsidiaries file a consolidated U.S. Federal income tax return. Therefore, the Company can utilize Hexion LLC's tax attributes or vice versa. Cumulative income at Hexion LLC has reduced the amount of net operating loss carryforwards otherwise available to the Company by $26. However, since the Company accounts for Hexion LLC under the separate return method, the utilization is not reflected in the above gross deferred tax asset - loss and credit carryforwards. Further, the valuation allowance above does not reflect the related $26 offset.

As of December 31, 2017, the Company had a $522 valuation allowance for a portion of its net deferred tax assets that management believes, more likely than not, will not be realized. The Company's deferred tax assets include federal, state and foreign net operating loss carryforwards. The federal net operating loss carryforwards available are $1,158, which is reduced by the cumulative income from Hexion LLC, as described above. The federal net operating loss carryforwards expire beginning in 2027. A full valuation allowance has been provided against these loss carryforwards. The Company's deferred assets also include minimum tax credits of $2, which are available indefinitely and have no associated valuation allowance. The Company has provided a full valuation allowance against its state deferred tax assets, primarily related to state net operating loss carryforwards of $90. A valuation allowance of $130 has been provided against a portion of foreign net operating loss carryforwards, primarily in Germany and the Netherlands.

The Company continues to not assert indefinite reinvestment of undistributed earnings of its foreign subsidiaries outside of the United States. Accordingly, a related deferred tax liability of $9 is recorded.

The following table summarizes the changes in the valuation allowance for the years ended December 31, 2017, 2016 and 2015:

	Balance at Beginning of Period	Changes in Related Gross Deferred Tax Assets/Liabilities	Charge	Balance at End of Period
Valuation allowance on Deferred tax assets:				
Year ended December 31, 2015	$ 588	$ 6	$ 17	$ 611
Year ended December 31, 2016	611	(2)	42	651
Year ended December 31, 2017	651	—	(129)	522

Under SAB 118, the Company continues to evaluate its valuation allowance against its net deferred tax assets. At this time, the Company has not yet gathered, prepared and analyzed the necessary information in sufficient detail to estimate future taxable income. In 2017, losses in the U.S. and certain foreign operations in recent periods provisionally provided sufficient negative evidence to maintain a full valuation allowance against the net federal, state, and certain foreign deferred tax assets.

Examination of Tax Returns

The Company conducts business globally and, as a result, certain of its subsidiaries file income tax returns in the U.S. federal jurisdiction and various state and foreign jurisdictions. In the normal course of business, the Company is subject to examinations by taxing authorities throughout the world, including major jurisdictions such as the United States, Brazil, Canada, China, Germany, Italy, Netherlands and the United Kingdom.

With minor exceptions, the Company's closed tax years for major jurisdictions are years prior to: 2013 for United States, 2011 for Brazil, 2010 for Canada, 2012 for China, 2014 for Germany, 2007 for Italy, 2010 for Netherlands and 2012 for the United Kingdom.

The Company continuously reviews issues that are raised from ongoing examinations and open tax years to evaluate the adequacy of its liabilities. As the various taxing authorities continue with their audit/examination programs, the Company will adjust its reserves accordingly to reflect these settlements.

Unrecognized Tax Benefits

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

	2017	2016
Balance at beginning of year	$ 73	$ 62
Additions based on tax positions related to the current year	2	4
Additions for tax positions of prior years	1	42
Reductions for tax positions of prior years	(1)	(35)
Settlements	—	—
Foreign currency translation	5	—
Balance at end of year	$ 80	$ 73

During the year ended December 31, 2017, the Company increased the amount of its unrecognized tax benefits, including its accrual for interest and penalties, by $13, primarily as a result of increases in the unrecognized tax benefit for various intercompany transactions, offset by releases of unrecognized tax benefits from negotiations with foreign jurisdictions and lapses of statute of limitations. During the years ended December 31, 2017, 2016 and 2015, the Company recognized approximately $5, $6 and $4, respectively, in interest and penalties. The Company had approximately $49 and $43 accrued for the payment of interest and penalties at December 31, 2017 and 2016, respectively.

$80 of unrecognized tax benefits, if recognized, would affect the effective tax rate; however, a portion of the unrecognized tax benefit would be in the form of a net operating loss carryforward, which would be subject to a full valuation allowance. The Company anticipates recognizing less than $2 of the total amount of unrecognized tax benefits within the next 12 months as a result of negotiations with foreign jurisdictions and completion of audit examinations.

15. Summarized Financial Information of Unconsolidated Affiliates

The Company has included audited financial statements as of December 31, 2017 and 2016 and for the years ended December 31, 2017, 2016 and 2015 of the unconsolidated affiliate Momentive UV Coatings (Shanghai) Co., Ltd as Exhibit 10.90 of this Annual Report on Form 10-K.

Summarized financial information of the unconsolidated affiliate HAI for the years ended December 31, 2016 and 2015 is as follows:

	Year Ended December 31,	
	2016 (1)	2015
Net sales	$ 59	$ 161
Gross profit	25	54
Pre-tax income	14	31
Net income	14	31

(1) Amounts for the year ended December 31, 2016 represent activity through May 31, 2016, the date on which the Company sold its 50% interest in HAI (see Note 12).

The Company has included audited financial statements as of and for the years ended December 31, 2015 and 2014 of HAI as Exhibit 10.70 of this Annual Report on Form 10-K.

Summarized financial information of the Company's remaining unconsolidated affiliates, which are listed below, as of December 31, 2017 and 2016 and for the years ended December 31, 2017, 2016 and 2015 is as follows:

- Hexion Shchekinoazot Holding B.V.
- Sanwei Hexion Company Limited
- Hexion Australia Pty Ltd
- MicroBlend Columbia S.A.S

	December 31, 2017	December 31, 2016
Current assets	$ 21	$ 19
Non-current assets	18	18
Current liabilities	13	15
Non-current liabilities	10	10

	Year Ended December 31,		
	2017	2016	2015
Net sales	$ 78	$ 71	$ 93
Gross profit	16	15	13
Pre-tax income	3	6	—
Net income (loss)	2	4	(1)

16. Segment and Geographic Information

The Company's business segments are based on the products that the Company offers and the markets that it serves. In the fourth quarter of 2017, the Company added Corporate and Other as a reportable segment.

At December 31, 2017, the Company had three reportable segments: Epoxy, Phenolic and Coating Resins; Forest Products Resins; and Corporate and Other. A summary of the major products and items associated with the Company's reportable segments are as follows:

- **Epoxy, Phenolic and Coating Resins:** epoxy specialty resins, phenolic encapsulated substrates, versatic acids and derivatives, basic epoxy resins and intermediates, phenolic specialty resins and molding compounds
- **Forest Products Resins:** forest products resins and formaldehyde applications
- **Corporate and Other:** primarily corporate general and administrative expenses that are not allocated to the other segments, such as shared service and administrative functions, foreign exchange gains and losses and legacy company costs.

Reportable Segments

Following are net sales and Segment EBITDA (earnings before interest, income taxes, depreciation and amortization) by reportable segment. Segment EBITDA is defined as EBITDA adjusted for certain non-cash items and other income and expenses. Segment EBITDA is the primary performance measure used by the Company's senior management, the chief operating decision-maker and the board of directors to evaluate operating results and allocate capital resources among segments. Segment EBITDA is also the profitability measure used to set management and executive incentive compensation goals.

Net Sales[1]:

	Year Ended December 31,		
	2017	2016	2015
Epoxy, Phenolic and Coating Resins	$ 2,052	$ 2,094	$ 2,589
Forest Products Resins	1,539	1,344	1,551
Total	$ 3,591	$ 3,438	$ 4,140

Segment EBITDA:

	Year Ended December 31,		
	2017	2016	2015
Epoxy, Phenolic and Coating Resins [2]	$ 174	$ 258	$ 307
Forest Products Resins [3]	257	240	233
Corporate and Other	(66)	(65)	(74)
Total	$ 365	$ 433	$ 466

Depreciation and Amortization Expense:

	Year Ended December 31,		
	2017	2016	2015
Epoxy, Phenolic and Coating Resins	$ 71	$ 87	$ 96
Forest Products Resins	40	40	35
Corporate and Other	4	4	6
Total	$ 115	$ 131	$ 137

Total Assets:

	As of December 31,	
	2017	2016
Epoxy, Phenolic and Coating Resins	$ 1,100	$ 1,002
Forest Products Resins	880	840
Corporate and Other	117	213
Total	$ 2,097	$ 2,055

Capital Expenditures[4]:

	Year Ended December 31,		
	2017	2016	2015
Epoxy, Phenolic and Coating Resins	$ 73	$ 72	$ 71
Forest Products Resins	40	67	106
Corporate and Other	5	2	2
Total	$ 118	$ 141	$ 179

(1) Intersegment sales are not significant and, as such, are eliminated within the selling segment.
(2) Included in the Epoxy, Phenolic and Coating Resins Segment EBITDA are “Earnings from unconsolidated entities, net of taxes” of $3, $11 and $17 for the years ended December 31, 2017, 2016 and 2015, respectively.
(3) Included in the Forest Products Resins Segment EBITDA are “Earnings (losses) from unconsolidated entities, net of taxes” of $1, less than $(1) and less than $(1) for the years ended December 31, 2017, 2016 and 2015, respectively.
(4) Includes capitalized interest costs that are incurred during the construction of property and equipment.

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Reconciliation of Net Loss to Segment EBITDA:

	Year Ended December 31,		
	2017	2016	2015
Net loss	$ (234)	$ (38)	$ (39)
Income tax expense	18	38	34
Interest expense, net	329	310	326
Depreciation and amortization	115	131	137
Accelerated depreciation	14	129	2
EBITDA	$ 242	$ 570	$ 460
Items not included in Segment EBITDA:			
Asset impairments	$ 13	$ —	$ 6
Business realignment costs	52	55	16
Realized and unrealized foreign currency losses (gains)	3	(11)	10
Gain on dispositions	—	(240)	—
Loss (gain) on extinguishment of debt	3	(48)	(41)
Unrealized (gains) losses on pension and OPEB plan liabilities	(4)	34	(13)
Other	56	73	28
Total adjustments	123	(137)	6
Segment EBITDA	$ 365	$ 433	$ 466
Segment EBITDA:			
Epoxy, Phenolic and Coating Resins	$ 174	$ 258	$ 307
Forest Products Resins	257	240	233
Corporate and Other	(66)	(65)	(74)
Total	$ 365	$ 433	$ 466

Items Not Included in Segment EBITDA

Not included in Segment EBITDA are certain non-cash items and other income and expenses. For 2017 and 2016, these other items primarily included certain professional fees related to strategic projects and expenses from retention programs. For 2015, these other items primarily included expenses from retention programs, certain professional fees related to strategic projects and management fees, partially offset by gains on the disposal of assets and a gain on a step acquisition.

Business realignment costs for 2017 primarily included costs related to in-process cost reduction programs and certain in-process and recently completed facility rationalizations. Business realignment costs for 2016 primarily included costs related to the rationalization at our Norco, LA manufacturing facility and costs related to certain in-process cost reduction programs. Business realignment costs for 2015 primarily included costs related to certain in-process cost reduction programs.

Geographic Information

Net Sales(1):

	Year Ended December 31,		
	2017	2016	2015
United States	$ 1,513	$ 1,389	$ 1,663
Netherlands	595	583	698
Canada	344	302	344
China	270	296	331
Germany	198	180	205
Brazil	176	162	224
Other international	495	526	675
Total	$ 3,591	$ 3,438	$ 4,140

(1) Sales are attributed to the country in which the individual business locations reside.

Long-Lived Assets:

	As of December 31,	
	2017	2016
United States	$ 495	$ 555
Netherlands	119	99
Germany	127	92
Brazil	76	80
Canada	68	58
Other international	195	182
Total	$ 1,080	$ 1,066

17. Changes in Accumulated Other Comprehensive Loss

Following is a summary of changes in "Accumulated other comprehensive loss" for the years ended December 31, 2017 and 2016:

	Year Ended December 31, 2017			Year Ended December 31, 2016		
	Defined Benefit Pension and Postretirement Plans	Foreign Currency Translation Adjustments	Total	Defined Benefit Pension and Postretirement Plans	Foreign Currency Translation Adjustments	Total
Beginning balance	$ 3	$ (42)	$ (39)	$ 4	$ (19)	$ (15)
Other comprehensive (loss) income before reclassifications, net of tax	(2)	33	31	(1)	(23)	(24)
Ending balance	$ 1	$ (9)	$ (8)	$ 3	$ (42)	$ (39)

18. Guarantor/Non-Guarantor Subsidiary Financial Information

The Company's 6.625% First-Priority Senior Secured Notes due 2020, 10.00% First-Priority Senior Secured Notes due 2020, New First Lien Notes, New Senior Secured Notes and 9.00% Second-Priority Senior Secured Notes due 2020 are guaranteed by certain of its U.S. subsidiaries.

The following information contains the condensed consolidating financial information for Hexion Inc. (the parent), the combined subsidiary guarantors (Hexion Investments Inc.; Lawter International, Inc.; HSC Capital Corporation (dissolved in April 2017); Hexion International Inc.; Hexion CI Holding Company (China) LLC; NL COOP Holdings LLC and Oilfield Technology Group, Inc. (dissolved in September 2017)) and the combined non-guarantor subsidiaries, which includes all of the Company's foreign subsidiaries.

All of the subsidiary guarantors are 100% owned by Hexion Inc. All guarantees are full and unconditional, and are joint and several. There are no significant restrictions on the ability of the Company to obtain funds from its domestic subsidiaries by dividend or loan. While the Company's Australian, New Zealand and Brazilian subsidiaries are restricted in the payment of dividends and intercompany loans due to the terms of their credit facilities, there are no material restrictions on the Company's ability to obtain cash from the remaining non-guarantor subsidiaries.

These financial statements are prepared on the same basis as the consolidated financial statements of the Company except that investments in subsidiaries are accounted for using the equity method for purposes of the consolidating presentation. The principal elimination entries relate to investments in subsidiaries and intercompany balances and transactions.

This information includes allocations of corporate overhead to the combined non-guarantor subsidiaries based on net sales. Income tax expense has been provided on the combined non-guarantor subsidiaries based on actual effective tax rates.

HEXION INC.
CONDENSED CONSOLIDATING BALANCE SHEET
DECEMBER 31, 2017

	Hexion Inc.	Combined Subsidiary Guarantors	Combined Non-Guarantor Subsidiaries	Eliminations	Consolidated
Assets					
Current assets:					
Cash and cash equivalents (including restricted cash of $0 and $18, respectively)	$ 13	$ —	$ 102	$ —	$ 115
Accounts receivable, net	126	1	335	—	462
Intercompany accounts receivable	121	—	80	(201)	—
Intercompany loans receivable	1	—	22	(23)	—
Inventories:					
Finished and in-process goods	85	—	136	—	221
Raw materials and supplies	36	—	56	—	92
Current assets held-for-sale	1	—	5	—	6
Other current assets	19	—	25	—	44
Total current assets	402	1	761	(224)	940
Investments in unconsolidated entities	158	13	20	(171)	20
Deferred income taxes	—	—	8	—	8
Long-term assets held for sale	—	—	2	—	2
Other long-term assets	17	8	24	—	49
Intercompany loans receivable	1,114	—	190	(1,304)	—
Property and equipment, net	410	—	514	—	924
Goodwill	52	—	60	—	112
Other intangible assets, net	32	—	10	—	42
Total assets	$ 2,185	$ 22	$ 1,589	$ (1,699)	$ 2,097
Liabilities and Deficit					
Current liabilities:					
Accounts payable	$ 129	$ —	$ 273	$ —	$ 402
Intercompany accounts payable	80	—	121	(201)	—
Debt payable within one year	10	—	115	—	125
Intercompany loans payable within one year	22	—	1	(23)	—
Interest payable	80	—	2	—	82
Income taxes payable	6	—	6	—	12
Accrued payroll and incentive compensation	22	—	25	—	47
Current liabilities associated with assets held for sale	—	—	2	—	2
Other current liabilities	70	—	65	—	135
Total current liabilities	419	—	610	(224)	805
Long-term liabilities:					
Long-term debt	3,507	—	77	—	3,584
Intercompany loans payable	190	—	1,114	(1,304)	—
Accumulated losses of unconsolidated subsidiaries in excess of investment	668	171	—	(839)	—
Long-term pension and post employment benefit obligations	31	—	231	—	262
Deferred income taxes	2	—	9	—	11
Other long-term liabilities	109	—	68	—	177
Total liabilities	4,926	171	2,109	(2,367)	4,839
Total Hexion Inc. shareholder’s deficit	(2,741)	(149)	(519)	668	(2,741)
Noncontrolling interest	—	—	(1)	—	(1)
Total deficit	(2,741)	(149)	(520)	668	(2,742)
Total liabilities and deficit	$ 2,185	$ 22	$ 1,589	$ (1,699)	$ 2,097

HEXION INC.
CONDENSED CONSOLIDATING BALANCE SHEET
DECEMBER 31, 2016

	Hexion Inc.	Combined Subsidiary Guarantors	Combined Non-Guarantor Subsidiaries	Eliminations	Consolidated
Assets					
Current assets:					
Cash and cash equivalents (including restricted cash of $0 and $17, respectively)	$ 28	$ —	$ 168	$ —	$ 196
Accounts receivable, net	119	1	270	—	390
Intercompany accounts receivable	106	—	60	(166)	—
Intercompany loans receivable	—	—	175	(175)	—
Inventories:					
Finished and in-process goods	82	—	117	—	199
Raw materials and supplies	31	—	57	—	88
Other current assets	26	—	19	—	45
Total current assets	392	1	866	(341)	918
Investments in unconsolidated entities	93	13	18	(106)	18
Deferred income taxes	—	—	10	—	10
Other long-term assets	17	6	20	—	43
Intercompany loans receivable	1,050	—	180	(1,230)	—
Property and equipment, net	448	—	445	—	893
Goodwill	65	—	56	—	121
Other intangible assets, net	41	—	11	—	52
Total assets	$ 2,106	$ 20	$ 1,606	$ (1,677)	$ 2,055
Liabilities and Deficit					
Current liabilities:					
Accounts payable	$ 142	$ —	$ 226	$ —	$ 368
Intercompany accounts payable	60	—	106	(166)	—
Debt payable within one year	6	—	101	—	107
Intercompany loans payable within one year	175	—	—	(175)	—
Interest payable	69	—	1	—	70
Income taxes payable	6	—	7	—	13
Accrued payroll and incentive compensation	28	—	27	—	55
Other current liabilities	110	—	49	—	159
Total current liabilities	596	—	517	(341)	772
Long-term liabilities:					
Long-term debt	3,378	—	19	—	3,397
Intercompany loans payable	180	—	1,050	(1,230)	—
Accumulated losses of unconsolidated subsidiaries in excess of investment	339	106	—	(445)	—
Long-term pension and post employment benefit obligations	42	—	204	—	246
Deferred income taxes	4	—	9	—	13
Other long-term liabilities	105	—	61	—	166
Total liabilities	4,644	106	1,860	(2,016)	4,594
Total Hexion Inc shareholder’s deficit	(2,538)	(86)	(253)	339	(2,538)
Noncontrolling interest	—	—	(1)	—	(1)
Total deficit	(2,538)	(86)	(254)	339	(2,539)
Total liabilities and deficit	$ 2,106	$ 20	$ 1,606	$ (1,677)	$ 2,055

HEXION INC.
CONDENSED CONSOLIDATING STATEMENT OF OPERATIONS
YEAR ENDED DECEMBER 31, 2017

	Hexion Inc.	Combined Subsidiary Guarantors	Combined Non-Guarantor Subsidiaries	Eliminations	Consolidated
Net sales	$ 1,586	$ —	$ 2,203	$ (198)	$ 3,591
Cost of sales	1,374	—	1,914	(198)	3,090
Gross profit	212	—	289	—	501
Selling, general and administrative expense	134	—	173	—	307
Asset impairments	13	—	—	—	13
Business realignment costs	24	—	28	—	52
Other operating expense (income), net	3	(1)	15	—	17
Operating income	38	1	73	—	112
Interest expense, net	315	—	14	—	329
Intercompany interest (income) expense, net	(75)	—	75	—	—
Loss on extinguishment of debt	3	—	—	—	3
Other non-operating (income) expense, net	(65)	—	65	—	—
Loss before income tax, (losses) earnings from unconsolidated entities	(140)	1	(81)	—	(220)
Income tax (benefit) expense	(7)	—	25	—	18
(Loss) income before (losses) earnings from unconsolidated entities	(133)	1	(106)	—	(238)
(Losses) earnings from unconsolidated entities, net of taxes	(101)	(64)	4	165	4
Net loss	(234)	(63)	(102)	165	(234)
Comprehensive loss attributable to Hexion Inc.	$ (203)	$ (63)	$ (108)	$ 171	$ (203)

HEXION INC.
CONDENSED CONSOLIDATING STATEMENT OF OPERATIONS
YEAR ENDED DECEMBER 31, 2016

	Hexion Inc.	Combined Subsidiary Guarantors	Combined Non-Guarantor Subsidiaries	Eliminations	Consolidated
Net sales	$ 1,449	$ —	$ 2,171	$ (182)	$ 3,438
Cost of sales	1,370	—	1,850	(182)	3,038
Gross profit	79	—	321	—	400
Selling, general and administrative expense	142	—	186	—	328
Gain on dispositions	(188)	—	(52)	—	(240)
Business realignment costs	39	—	16	—	55
Other operating expense (income), net	18	5	(10)	—	13
Operating income (expense)	68	(5)	181	—	244
Interest expense, net	300	—	10	—	310
Intercompany interest (income) expense, net	(72)	—	72	—	—
Gain on extinguishment of debt	(48)	—	—	—	(48)
Other non-operating expense (income), net	17	—	(24)	—	(7)
(Loss) income before income tax, earnings from unconsolidated entities	(129)	(5)	123	—	(11)
Income tax (benefit) expense	(3)	—	41	—	38
(Loss) income before earnings from unconsolidated entities	(126)	(5)	82	—	(49)
Earnings from unconsolidated entities, net of taxes	88	31	5	(113)	11
Net (loss) income	(38)	26	87	(113)	(38)
Comprehensive (loss) income attributable to Hexion Inc.	$ (62)	$ 25	$ 66	$ (91)	$ (62)

HEXION INC.
CONDENSED CONSOLIDATING STATEMENT OF OPERATIONS
YEAR ENDED DECEMBER 31, 2015

	Hexion Inc.	Combined Subsidiary Guarantors	Combined Non-Guarantor Subsidiaries	Eliminations	Consolidated
Net sales	$ 1,715	$ —	$ 2,603	$ (178)	$ 4,140
Cost of sales	1,528	—	2,190	(178)	3,540
Gross profit	187	—	413	—	600
Selling, general and administrative expense	134	—	172	—	306
Asset impairments	—	—	6	—	6
Business realignment costs	7	—	9	—	16
Other operating expense (income), net	16	—	(4)	—	12
Operating income	30	—	230	—	260
Interest expense, net	317	—	9	—	326
Intercompany interest (income) expense, net	(80)	—	80	—	—
Gain on extinguishment of debt	(41)	—	—	—	(41)
Other non-operating expense (income), net	94	—	(97)	—	(3)
(Loss) income before income tax, earnings from unconsolidated entities	(260)	—	238	—	(22)
Income tax (benefit) expense	(2)	—	36	—	34
(Loss) income before earnings from unconsolidated entities	(258)	—	202	—	(56)
Earnings from unconsolidated entities, net of taxes	218	132	1	(334)	17
Net (loss) income	(40)	132	203	(334)	(39)
Net loss attributable to noncontrolling interest	— —	—	(1)	—	(1)
Net (loss) income attributable to Hexion Inc.	$ (40)	$ 132	$ 202	$ (334)	$ (40)
Comprehensive (loss) income attributable to Hexion Inc.	$ (128)	$ 133	$ 156	$ (289)	$ (128)

HEXION INC.
CONDENSED CONSOLIDATING STATEMENT OF CASH FLOWS
YEAR ENDED DECEMBER 31, 2017

	Hexion Inc.	Combined Subsidiary Guarantors	Combined Non-Guarantor Subsidiaries	Eliminations	Consolidated
Cash flows (used in) provided by operating activities	$ (278)	$ —	$ 126	$ (1)	$ (153)
Cash flows provided by (used in) investing activities					
Capital expenditures	(40)	—	(77)	—	(117)
Capitalized interest	—	—	(1)	—	(1)
Proceeds from sale of assets, net	5	—	3	—	8
Change in restricted cash	—	—	1	—	1
Return of capital from subsidiary from sales of accounts receivable	182 (a)	—	—	(182)	—
	147	—	(74)	(182)	(109)
Cash flows provided by (used in) financing activities					
Net short-term debt repayments	3	—	18	—	21
Borrowings of long-term debt	1,053	—	376	—	1,429
Repayments of long-term debt	(921)	—	(330)	—	(1,251)
Net intercompany loan borrowings (repayments)	1	—	(1)	—	—
Common stock dividends paid	—	—	(1)	1	—
Deferred financing fees paid	(20)	—	(5)	—	(25)
Return of capital to parent from sales of accounts receivable	—	—	(182) (a)	182	—
	116	—	(125)	183	174
Effect of exchange rates on cash and cash equivalents	—	—	6	—	6
Decrease in cash and cash equivalents	(15)	—	(67)	—	(82)
Cash and cash equivalents at beginning of year (including restricted cash of $0 and $17, respectively)	28	—	151	—	179
Cash and cash equivalents at end of year (including restricted cash of $0 and $18, respectively)	$ 13	$ —	$ 84	$ —	$ 97

(a) During the year ended December 31, 2017, Hexion Inc. contributed receivables of $182 to a non-guarantor subsidiary as capital contributions, resulting in a non-cash transaction. During the year ended December 31, 2017, the non-guarantor subsidiary sold the contributed receivables to certain banks under various supplier financing agreements. The cash proceeds were returned to Hexion Inc. by the non-guarantor subsidiary as a return of capital. The sale of receivables has been included within cash flows from operating activities on the Combined non-guarantor subsidiaries. The return of the cash proceeds from the sale of receivables has been included as a financing outflow and an investing inflow on the Combined Non-Guarantor Subsidiaries and Hexion Inc., respectively.

HEXION INC.
CONDENSED CONSOLIDATING STATEMENT OF CASH FLOWS
YEAR ENDED DECEMBER 31, 2016

	Hexion Inc.	Combined Subsidiary Guarantors	Combined Non-Guarantor Subsidiaries	Eliminations	Consolidated
Cash flows (used in) provided by operating activities	$ (202)	$ 4	$ 182	$ (4)	$ (20)
Cash flows provided by (used in) investing activities					
Capital expenditures	(67)	—	(73)	—	(140)
Capitalized interest	(1)	—	—	—	(1)
Proceeds from dispositions, net	147	—	134	—	281
Cash received on buyer's note	75	—	—	—	75
Proceeds from sale of assets, net	—	—	5	—	5
Change in restricted cash	—	—	(9)	—	(9)
Capital contribution to subsidiary	(13)	(9)	—	22	—
Investment in unconsolidated affiliates, net	(1)	—	—	—	(1)
Return of capital from subsidiary from sales of accounts receivable	95 (a)	—	—	(95)	—
	235	(9)	57	(73)	210
Cash flows (used in) provided by financing activities					
Net short-term debt repayments	(1)	—	(21)	—	(22)
Borrowings of long-term debt	360	—	284	—	644
Repayments of long-term debt	(601)	—	(255)	—	(856)
Net intercompany loan borrowings (repayments)	176	—	(176)	—	—
Capital contribution from parent	—	9	13	(22)	—
Common stock dividends paid	—	(4)	—	4	—
Deferred financing fees paid	(1)	—	—	—	(1)
Return of capital to parent from sales of accounts receivable	—	—	(95) (a)	95	—
	(67)	5	(250)	77	(235)
Effect of exchange rates on cash and cash equivalents	—	—	(4)	—	(4)
Decrease in cash and cash equivalents	(34)	—	(15)	—	(49)
Cash and cash equivalents at beginning of year (including restricted cash of $0 and $8, respectively)	62	—	166	—	228
Cash and cash equivalents at end of year (including restricted cash of $0 and $17, respectively)	$ 28	$ —	$ 151	$ —	$ 179

(a) During the year ended December 31, 2016, Hexion Inc. contributed receivables of $95 to a non-guarantor subsidiary as capital contributions, resulting in a non-cash transaction. During the year ended December 31, 2016, the non-guarantor subsidiary sold the contributed receivables to certain banks under various supplier financing agreements. The cash proceeds were returned to Hexion Inc. by the non-guarantor subsidiary as a return of capital. The sale of receivables has been included within cash flows from operating activities on the Combined non-guarantor subsidiaries. The return of the cash proceeds from the sale of receivables has been included as a financing outflow and an investing inflow on the Combined Non-Guarantor Subsidiaries and Hexion Inc., respectively.

HEXION INC.
CONDENSED CONSOLIDATING STATEMENT OF CASH FLOWS
YEAR ENDED DECEMBER 31, 2015

	Hexion Inc.	Combined Subsidiary Guarantors	Combined Non-Guarantor Subsidiaries	Eliminations	Consolidated
Cash flows (used in) provided by operating activities	$ (295)	$ 19	$ 508	$ (19)	$ 213
Cash flows provided by (used in) investing activities					
Capital expenditures	(91)	—	(84)	—	(175)
Purchase of businesses, net of cash acquired	—	—	(7)	—	(7)
Capitalized interest	(3)	—	(1)	—	(4)
Proceeds from sale of investments, net	—	—	6	—	6
Change in restricted cash	—	—	8	—	8
Proceeds from sale of assets	—	—	17	—	17
Capital contribution to subsidiary	(25)	(17)	—	42	—
Return of capital from subsidiary from sales of accounts receivable	278 (a)	—	—	(278)	—
	159	(17)	(61)	(236)	(155)
Cash flows provided by (used in) financing activities					
Net short-term debt repayments	—	—	(3)	—	(3)
Borrowings of long-term debt	500	—	23	—	523
Repayments of long-term debt	(445)	—	(40)	—	(485)
Net intercompany loan borrowings (repayments)	131	—	(131)	—	—
Capital contribution from parent	—	17	25	(42)	—
Long-term debt and credit facility financing fees	(11)	—	—	—	(11)
Common stock dividends paid	—	(19)	—	19	—
Return of capital to parent from sales of accounts receivable	—	—	(278) (a)	278	—
	175	(2)	(404)	255	24
Effect of exchange rates on cash and cash equivalents	—	—	(10)	—	(10)
Increase in cash and cash equivalents	39	—	33	—	72
Cash and cash equivalents at beginning of year (including restricted cash of $0 and $16, respectively)	23	—	133	—	156
Cash and cash equivalents at end of year (including restricted cash of $0 and $8, respectively)	$ 62	$ —	$ 166	$ —	$ 228

(a) During the year ended December 31, 2015, Hexion Inc. contributed receivables of $278 to a non-guarantor subsidiary as capital contributions, resulting in a non-cash transaction. During the year ended December 31, 2015, the non-guarantor subsidiary sold the contributed receivables to certain banks under various supplier financing agreements. The cash proceeds were returned to Hexion Inc. by the non-guarantor subsidiary as a return of capital. The sale of receivables has been included within cash flows from operating activities on the Combined non-guarantor subsidiaries. The return of the cash proceeds from the sale of receivables has been included as a financing outflow and an investing inflow on the Combined Non-Guarantor Subsidiaries and Hexion Inc., respectively.

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of
Hexion Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Hexion Inc. and its subsidiaries as of December 31, 2017 and 2016, and the related consolidated statements of operations, comprehensive loss, deficit and cash flows for each of the three years in the period ended December 31, 2017, including the related notes and financial statement schedule listed in the accompanying index appearing under Item 8 (collectively referred to as the “consolidated financial statements”). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2017 and 2016, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2017 in conformity with accounting principles generally accepted in the United States of America.

Change in Accounting Principle

As discussed in Note 2 to the consolidated financial statements, the Company changed the manner in which it accounts for goodwill impairments in 2017.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (“PCAOB”) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits of these consolidated financial statements in accordance with the standards of the PCAOB. 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, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting 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.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ PricewaterhouseCoopers LLP
Columbus, Ohio
March 2, 2018

We have served as the Company's auditor since 2005.

Schedule II – Valuation and Qualifying Accounts

Column A	Column B	Column C		Column D	Column E
		Additions			
Description	Balance at Beginning of Period	Charged to cost and expenses(1)	Charged to other accounts	Deductions	Balance at End of Period
Allowance for Doubtful Accounts:					
Year Ended December 31, 2017	$ 17	$ 3	$ —	$ (1)	$ 19
Year ended December 31, 2016	15	3	—	(1)	17
Year ended December 31, 2015	14	1	—	—	15
Reserve for Obsolete Inventory:					
Year Ended December 31, 2017	$ 9	$ 4	$ —	$ (4)	$ 9
Year ended December 31, 2016	7	9	—	(7)	9
Year ended December 31, 2015	8	4	—	(5)	7

(1) Includes the impact of foreign currency translation.

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

As of the end of the period covered by this Annual Report on Form 10-K, we, under the supervision and with the participation of our Disclosure Committee and our management, including our President and Chief Executive Officer and our Executive Vice President and Chief Financial Officer, carried out an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures as such term is defined in Exchange Act Rules 13a-15(e) and 15d-15(e). Based on that evaluation, our President and Chief Executive Officer, and Executive Vice President and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of December 31, 2017.

Management's Annual Report on Internal Control Over Financial Reporting

We are responsible for establishing and maintaining adequate internal control over financial reporting. 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 pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; 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 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.

We have assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2017. In making this assessment, we used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in *Internal Control - Integrated Framework* (2013). Based on our assessment, we have concluded that, as of December 31, 2017, the Company's internal control over financial reporting was effective based on those criteria.

Changes in Internal Control Over Financial Reporting

There have been no changes in the Company's internal control over financial reporting identified in connection with the evaluation described above in "Management's Annual Report on Internal Control Over Financial Reporting" that occurred during the Company's fourth quarter ended December 31, 2017 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

ITEM 9B - OTHER INFORMATION

None.

PART III

ITEM 10 - DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Directors, Executive Officers, Promoters and Control Persons

The supervision of our management and the general course of the Company's affairs and business operations is entrusted to the Board of Managers of our indirect parent, Hexion Holdings LLC ("Hexion Holdings").

Set forth below are the names, ages and current positions of our executive officers and the members of the Hexion Holdings Board of Managers as of March 1, 2018.

Name	Age	Position
Craig A. Rogerson	61	Director, Chairman, President and Chief Executive Officer
George F. Knight	61	Director, Executive Vice President and Chief Financial Officer
Dr. William H. Joyce	82	Director
Robert Kalsow-Ramos	32	Director
Scott M. Kleinman	45	Director
Geoffrey A. Manna	56	Director
Dr. Jonathan D. Rich	62	Director
Samuel Feinstein	34	Director
Marvin O. Schlanger	69	Director
Joseph P. Bevilaqua	62	Executive Vice President and Chief Operating Officer
John P. Auletto	52	Executive Vice President – Human Resources
Nathan E. Fisher	52	Executive Vice President – Procurement
Douglas A. Johns	60	Executive Vice President and General Counsel
Karen E. Koster	55	Executive Vice President – Environmental, Health & Safety
Matthew A. Sokol	45	Executive Vice President - Business Development and Strategy

Craig A. Rogerson was elected Chairman, President and Chief Executive Officer and a director of the Company and Hexion Holdings LLC effective July 9, 2017. He served as Chairman, President and Chief Executive Officer of Chemtura Corporation from December 2008 to April 2017. He was President, Chief Executive Officer and Director of Hercules Incorporated from December 2003 to November 2008. Mr. Rogerson joined Hercules in 1979 and served in a number of management positions, including President of the FiberVisions and Pinova Divisions, Vice President of Global Procurement and Chief Operating Officer. He was President and Chief Executive Officer of Wacker Silicones Corporation from 1997-2000. In May 2000, he rejoined Hercules and became President of its BetzDearborn division in August 2000. Mr. Rogerson serves on the boards of PPL Corporation, the American Chemistry Council, the Society of Chemical Industry, and the Pancreatic Cancer Action Network. He also serves on the Advisory board of the Michigan State University Chemical Engineering & Materials Science College.

George F. Knight was elected Executive Vice President and Chief Financial Officer and a director of the Company and Hexion Holdings effective January 1, 2016. He served as Senior Vice President - Finance and Treasurer of the Company from June 1, 2005 to December 31, 2015, having been Vice President, Finance and Treasurer since July 2002. He has also served as Executive Vice President and Chief Financial Officer and a director of Hexion Holdings since January 1, 2016. Mr. Knight also served as Senior Vice President-Finance and Treasurer for MPM and Hexion Holdings from October 1, 2010 and November 1, 2010, respectively, until December 31, 2015. Mr. Knight joined the Company in 1997 and served until 1999 as Director and then Vice President of Mergers and Acquisitions - Finance for Borden, Inc. From 1999-2001 he served as Vice President of Finance for Borden Foods Corporation.

Dr. William H. Joyce has been a member of the Board of Managers of Hexion Holdings since October 1, 2010. Since 2008, Dr. Joyce has been the Chairman and CEO of Advanced Fusion Systems. He is the retired, former chief executive officer and chairman of Nalco Holding Company, positions he held from November 2003 until his retirement in December 2007. Prior to his appointment as chief executive officer and chairman of Nalco Company, Dr. Joyce served as chief executive officer and chairman at Hercules Incorporated and prior to that at Union Carbide. Dr. Joyce holds a B.S. degree in Chemical Engineering from Penn State University, and M.B.A. and Ph.D. degrees from New York University. Dr. Joyce received the National Medal of Technology Award in 1993 from President Clinton, the Plastics Academy's Lifetime Achievement Award in 1997, and the Society of Chemical Industry Perkin Medal Award in 2003. Dr. Joyce also serves as a trustee and Vice Chairman of the Universities Research Association and is a board leadership fellow of the National Association of Corporate Directors. During the past five years, he also served on the board of directors of El Paso Corporation, CVS Caremark Corporation, and Momentive Performance Materials Holdings Inc. He is a Chair of the Environmental, Health and Safety committee of the Hexion Holdings LLC Board of Managers. Dr. Joyce's extensive management experience, and his skills in business leadership and strategy, qualify him to serve on the Board of Managers of Hexion Holdings.

Robert Kalsow-Ramos was elected a member of the Board of Managers of Hexion Holdings on October 27, 2014. Mr. Kalsow-Ramos is a Principal in Apollo Global Management's Private Equity Group, where he has worked since 2010. Prior to joining Apollo, Mr. Kalsow-Ramos was a member of the Transportation Investment Banking Group at Morgan Stanley from 2008 to 2010. He also serves on the Board of Directors of MPM Holdings Inc. and West Corporation, which are affiliated with Apollo. Mr. Kalsow-Ramos was previously a director of Noranda Aluminum Holding Corporation. He is Chair of the Hexion Holdings Board of Managers' Compensation Committee, Chair of its Audit Committee and a member of its Executive Committee. In light of our ownership structure and Mr. Kalsow-Ramos' extensive finance and business experience, we believe it is appropriate for Mr. Kalsow-Ramos to serve on the Board of Managers of Hexion Holdings.

Scott M. Kleinman served as a director of the Company from February 12, 2014 to October 27, 2014. He was elected a member of the Board of Managers of Hexion Holdings on October 1, 2010. Mr. Kleinman is Co-President of Apollo Global Management, LLC, sharing responsibility for all of Apollo's revenue-generating and investing businesses. Mr. Kleinman focuses on Apollo's equity and opportunistic business. Mr. Kleinman joined Apollo in 1996, and in 2009 he was named Lead Partner for Private Equity. Prior to joining Apollo, Mr. Kleinman was a member of the Investment Banking division at Smith Barney Inc. Mr. Kleinman also serves on the Board of Directors of the following companies affiliated with Apollo: MPM Holdings Inc., Vectra Corp., and Constellis Holdings, LLC. Mr. Kleinman has previously been a director of CH2M Hill Companies, Ltd., Noranda Aluminum Holding Corporation, Realogy Holdings Corp., Lyondell Basell Industries N.V., Taminco Corporation, and Verso Corporation. He is a member of the Compensation Committee and Chair of the Executive Committee of the Board of Managers of Hexion Holdings. In light of our ownership structure and Mr. Kleinman's position with Apollo and his extensive finance and business experience, we believe it is appropriate for Mr. Kleinman to serve on the Board of Managers of Hexion Holdings.

Geoffrey A. Manna was elected a director of the Company on September 30, 2013 and served until October 27, 2014 at which time he resigned and was elected a member of the Board of Managers of Hexion Holdings. Since May 2017 he has been Managing Director for CION Investments, a multi-billion AUM alternative asset manager focused on credit strategies, where he is a senior member of the investment team. From 2008 to 2017, he served as an independent consultant principally focused on financial advisory and interim management engagements such as Chief Operating Officer and Chief Financial Officer oriented roles for companies ranging from small middle market to multi-billion market capitalization public companies across several industry sectors, including media, healthcare, building products and energy distribution & logistics. He served in management and operating roles in leveraged finance and investment banking from 1995 to 2008. From June 2006 to June 2008 he served as Managing Director for The Royal Bank of Scotland. From June 2004 to June 2006 he served as Managing Director for BNP Paribas. From July 1999 to June 2004 he served as Chief Operating Officer-Financial Sponsors Group and Director for Credit Suisse First Boston. From July 1995 to July 1999 he served as Vice President for Deutsche Bank and its predecessor companies Bankers Trust Company and BT Securities. Prior to that, from July 1991 to January 1994 he held the position of Director-Finance for US WEST Capital where he directed financial management and merger and acquisition projects. Before that, he was employed at KPMG for eight years as a Senior Manager and managed over 50 audit engagements and special projects for major public and private companies, including General Electric and GE Capital Corporation. Mr. Manna also serves on the Board of Directors of Conisus Holdings, Inc. Until his resignation, Mr. Manna served as a member of the Company's Audit Committee. He currently serves as a member of the Audit Committee of the Board of Managers of Hexion Holdings. Mr. Manna's extensive experience in finance and business qualifies him to serve on the Board of Managers of Hexion Holdings.

Dr. Jonathan D. Rich has been a member of the Board of Managers of Hexion Holdings since October 1, 2010 where he serves on the Environmental, Health and Safety Committee. Dr. Rich has been a director, chief executive officer and chairman of the board of Berry Global Group Inc. since February 2017. He was previously a director, chief executive officer and Chairman of Berry Plastics Group Inc. from October 2010 to January 2017. Beginning in 2002, Dr. Rich was President, North American Tire-Goodyear Tire and Rubber Company, and chairman of the board, Goodyear Dunlop Tires NA. At Goodyear, he had previously served as Director, Chemical R&D and as president of Goodyear Chemical. Dr. Rich began his career at GE in 1982 as a research chemist with Corporate R&D and progressed through a series of management positions to become Manager of Operational Excellence at GE Silicones from 1996 to 1998. He was then promoted to Technical Director, GE Bayer Silicones in Germany from 1998 to 2000. He served as a director of MPM and MPM Holdings, and as president and chief executive officer from June 2007 to October 2010. Dr. Rich's previous officer and director positions, his extensive management experience, and his skills in business leadership and strategy, qualify him to serve on the Board of Managers of Hexion Holdings.

Samuel Feinstein was elected a member of the Board of Managers of Hexion Holdings on November 2, 2016. He has been an investment professional in Apollo's private equity business since 2007 and was previously a member of the Investment Banking Group at Morgan Stanley from September 2005 to May 2007. Mr. Feinstein currently serves on the board of CEVA Holdings LLC, Vectra Co., MPM Holdings, Inc., and Pinnacle Agriculture Holdings, LLC. Within the past five years, he has served on the board of directors of Taminco Corporation. He is a member of the Audit and Compensation Committees of the Board of Managers of Hexion Holdings. In light of our ownership structure and his extensive finance and business experience, we believe it is appropriate for Mr. Feinstein to serve on the Board of Managers of Hexion Holdings.

Marvin O. Schlanger was appointed a member of the Board of Managers of Hexion Holdings on October 1, 2010 and serves on the Board's Environmental, Health and Safety Committee. Prior to that, Mr. Schlanger served as Vice Chair on the Board of Managers of Hexion Specialty Chemicals, Inc. from June 2005 to October 2010. Since October 1998, Mr. Schlanger has been a principal in the firm of Cherry Hill Chemical Investments, LLC, which provides management services and capital to the chemical and allied industries. Prior to October 1998, he held various positions with ARCO Chemical Company, serving as President and Chief Executive Officer from May 1998 to July 1998 and as Executive Vice President and Chief Operating Officer from 1994 to May 1998. He served as Chairman and Chief Executive Officer of Resolution Performance Products LLC and RPP Capital Corporation from November 2000 and Chairman of Resolution Specialty Materials Company from August 2004 until the formation of Hexion Specialty Chemicals, Inc. in May 2005. Mr. Schlanger is also a director and the Chairman of the Board of CEVA Group Plc, UGI Corporation and UGI Utilities Inc., and a director of Amerigas Partners, LP, Vectra Corporation, and MPM Holdings Inc. Mr. Schlanger was formerly Chairman of the Supervisory Board of Lyondell Basell Industries N.V. and Chairman of Covalence Specialty Materials Corp. Mr. Schlanger's extensive finance and business experience qualifies him to serve on the Board of Managers of Hexion Holdings.

Joseph P. Bevilaqua was appointed Executive Vice President and Chief Operating Officer of the Company effective October 5, 2016. Until this appointment, he served as Executive Vice President and President of the Company's Epoxy, Phenolic and Coating Resins Division. Since August 10, 2008, he has been responsible for the epoxy and phenolic resins businesses and in October 2010, the coatings business was added to his division responsibilities. Prior to that, he was Executive Vice President and President of the Phenolic and Forest Products Division, a position he held from January 2004 to August 2008. Mr. Bevilaqua joined the Company in April 2002 as Vice President-Corporate Strategy and Development. From February 2000 to March 2002, he was the Vice President and General Manager of Alcan's global plastics packaging business. Prior to Alcan, Mr. Bevilaqua served in leadership positions with companies such as General Electric, Woodbridge Foam Corporation and Russell-Stanley Corporation.

John P. Auletto was elected Executive Vice President - Human Resources effective May 15, 2016. Mr. Auletto joined the Company in September 1999 as Director of Human Resources for the Performance Resins Group. Since then he has held various positions with increasing responsibilities in human resources, including most recently, Vice President - Human Resources for the Epoxy, Phenolic and Coating Resins Division from April 2013 to May 15, 2016. Prior to joining the Company, Mr. Auletto served in human resources roles with Associates National Bank, W.L. Gore & Associates, and The Bank of New York.

Nathan E. Fisher was elected Executive Vice President - Procurement of the Company on June 1, 2005. He also serves as Executive Vice President - Procurement of Momentive Performance Materials Inc., having been elected to that position on October 1, 2010. Mr. Fisher joined the Company in March 2003 as Director of Strategic Sourcing and was promoted to Vice President - Global Sourcing in September 2004.

Douglas A. Johns joined the Company on May 9, 2015 but had served as Executive Vice President and General Counsel under the Shared Services Agreement with MPM since October 1, 2010. He also serves as Executive Vice President, General Counsel and Secretary of Hexion Holdings. Mr. Johns was employed by Momentive Performance Materials Inc., serving as its General Counsel and Secretary from its formation on December 4, 2006 until October 24, 2014. Prior to that time, Mr. Johns served as General Counsel for GE Advanced Materials, a division of the General Electric Company from 2004 to December 2006. Mr. Johns began his career as a trial lawyer at the U.S. Department of Justice and was in private practice before joining GE in 1991, where he served as Senior Counsel for global regulatory and environmental matters and Senior Business Counsel at GE Plastics' European headquarters in Bergen Op Zoom, The Netherlands from 2001 to 2004.

Karen E. Koster was elected Executive Vice President-Environmental, Health & Safety of the Company effective August 8, 2011 and the same position for Hexion Holdings on October 27, 2014. Ms. Koster also served in that capacity for Momentive Performance Materials Inc. from August 8, 2011 to December 15, 2014. Prior to joining the Company, Ms. Koster held various environmental services and legal management roles at Cytec Industries where, from August 2002, she served as Vice President, Safety, Health and Environment.

Matthew A. Sokol joined the Company in November 2017 as Executive Vice President, Business Development and Strategy. Mr. Sokol joined the Company from Lanxess Solutions, Inc. (formerly Chemtura Corporation), where he served as interim Vice President of HR and M&A (NAFTA) for Lanxess. Mr. Sokol joined Chemtura in October 2005 and held a number of senior leadership roles including leading M&A, which ultimately culminated in the sale of the company to Lanxess in April 2017. Previous roles at Chemtura included: Head of Corporate Development & Investor Relations; General Manager, Flame Retardants; and Director, Strategic Corporate Development. While at Chemtura, Mr. Sokol also served as Associate General Counsel, IEP Segment, and Assistant General Counsel. Prior to Chemtura, Mr. Sokol served as senior litigation associate at Tyler, Cooper & Alcon, LLP from September 1999 to October 2005.

Nominating Committee

Since Hexion is a controlled company, Hexion Holdings has no Nominating Committee nor does it have written procedures by which security holders may recommend nominees to its Board of Managers.

Audit Committee Financial Expert

Since Hexion is not a listed issuer, there are no requirements that Hexion Holdings have an independent Audit Committee. Hexion Holdings' Audit Committee consists of Messrs. Kalsow-Ramos, Feinstein and Manna, each of whom qualifies as an audit committee financial expert, as such term is defined in Item 407(d)(5) of Regulation S-K.

Code of Conduct

We have a Code of Conduct that applies to all associates, including our Chief Executive Officer and senior financial officers. These standards are designed to deter wrongdoing and to promote the honest and ethical conduct of all employees. Our Code of Conduct is posted on our website: *www.hexion.com* under "Investor Relations – Corporate Governance." Any substantive amendment to, or waiver from, any provision of the Code of Conduct with respect to any senior executive or financial officer shall be posted on this website.

ITEM 11 - EXECUTIVE COMPENSATION

COMPENSATION DISCUSSION AND ANALYSIS

In this Compensation Discussion and Analysis, we describe our process of determining the compensation and benefits provided to our "Named Executive Officers" ("NEOs"). Our 2017 NEOs are Craig A. Rogerson, President and Chief Executive Officer (our "CEO"); George F. Knight, Executive Vice President and Chief Financial Officer (our "CFO"); Joseph P. Bevilaqua, Executive Vice President and Chief Operating Officer; Douglas A. Johns, Executive Vice President and General Counsel; Nathan E. Fisher, Executive Vice President, Global Procurement; Craig O. Morrison, former President and Chief Executive Officer; and Kevin W. McGuire, former Executive Vice President, Business Process & Information Technology.

Messrs. Rogerson, Knight, Bevilaqua, Fisher and Johns are currently executive officers of the Company. Mr. Morrison retired from the Company on July 9, 2017, and Mr. Rogerson was hired as CEO of the Company effective July 10, 2017. Mr. Rogerson's employment arrangements are described below in the "Employment Agreements" section. Mr. McGuire passed away unexpectedly on July 29, 2017. Mr. Fisher, in addition to his responsibilities for the Company, provides services to MPM under the Shared Services Agreement, as did Mr. McGuire until his passing.

Oversight of Executive Compensation

The Board of Managers of the Company's parent holding company, Hexion Holdings, is responsible for governance of the Company, including the responsibility for determining the compensation and benefits of our executive officers. All executive compensation decisions made during 2017 for our NEOs were made by the Compensation Committee of the Hexion Holdings Board of Managers (the "Committee").

The Committee sets the principles and strategies that guide the design of our executive compensation program. The Committee annually evaluates the performance and compensation levels of the NEOs. This annual compensation review process includes an evaluation of key objectives and measurable contributions to ensure that incentives are not only aligned with the Company's strategic goals, but also enable us to attract and retain a highly qualified and effective management team. Based on this evaluation, the Committee approves each executive officer's compensation level, including base salary, annual incentive opportunities and long-term incentive opportunities.

In order to obtain a general understanding of current compensation practices when setting total compensation levels for our NEOs, the Committee considers broad-based competitive market data on total compensation packages provided to executive officers with similar responsibilities at comparable companies. Such companies include those within the chemical industry, as well as those with similar revenues and operational complexity outside the chemical industry. As warranted, the Committee may use data obtained from third-party executive compensation salary surveys such as those published by Willis Towers Watson and AonHewitt when determining appropriate total compensation levels for our NEOs.

Executive Summary

Executive Compensation Objectives and Strategy

Our executive compensation program is designed to set compensation and benefits at a level that is reasonable, internally fair and externally competitive. Specifically, the Committee is guided by the following objectives:

- ***Pay for Performance***. We emphasize pay for performance based on achievement of company operational and financial objectives and the realization of personal goals. We believe that a significant portion of each executive's total compensation should be variable and contingent upon the achievement of specific and measurable financial and operational performance goals.

- ***Align Incentives with Shareholders***. Our executive compensation program is designed to focus our NEOs on our key strategic, financial and operational goals that will translate into long-term value-creation for our shareholders.

- ***Balance Critical Short-Term Objectives and Long-Term Strategy***. We believe that the compensation packages we provide to our NEOs should include a mix of short-term, cash-based incentive awards that encourage the achievement of annual goals, and long-term cash and equity elements that reward long-term value-creation for the business.

- ***Attract, Retain and Motivate Top Talent***. We design our executive compensation program to be externally competitive in order to attract, retain and motivate the most talented executive officers who will drive company objectives.

- ***Pay for Individual Achievement***. We believe that each executive officer's total compensation should correlate to the scope of his or her responsibilities and relative contributions to the Company's performance.

2017 Executive Compensation Updates

- On July 9, 2017, Craig Morrison retired from the Company after 15 years of service. Craig Rogerson was hired as the CEO, effective July 10, 2017, and serves as a member, and Chairman, of the Board. On July 29, 2017, Kevin McGuire passed away unexpectedly. Mr. McGuire was our Executive Vice President, Business Processes and IT.

- The Company continued its focus on (i) motivating our NEOs to deliver improved performance and (ii) retaining key talent during difficult business cycles through the use of the goals set in our annual incentive plan and long-term time- and performance-based cash awards made under our long-term incentive plan.

- The Committee reviewed the base salaries of our NEOs in the first quarter of the year. After considering the accomplishments of our NEOs, but also considering internal compensation equity and external market factors, the Committee determined to increase the base salary of three of our NEOs. Consistent with our recent past practice, we delivered annual merit base salary increases effective July 2017.

- Apollo, as the Company's controlling shareholder, and its representatives continue to be actively involved in making recommendations regarding the structure of our executive compensation program and the amounts payable to our NEOs. The Company is not currently required to hold a shareholder advisory "say-on-pay" vote.

Evaluating Company and Individual Performance

In determining 2017 compensation, the Committee considered the following accomplishments of our NEOs in 2016:

- ***Mr. Knight, our Executive Vice President and Chief Financial Officer:*** The Committee considered Mr. Knight's leadership in managing our leveraged balance sheet, his development of talent depth within the Finance organization, and the strong leadership he brings to the management of the shared services agreement with MPM.

- ***Mr. Bevilaqua, our Executive Vice President and Chief Operating Officer:*** The Committee recognized Mr. Bevilaqua's leadership in driving record profits in the Versatic Acids and Specialty Epoxy business units, his efforts in developing a very strong group of business unit leaders and his delivery of the Norco site closure, a major project that was extremely complex and executed in a very effective manner.

- ***Mr. Johns, our Executive Vice President and General Counsel:*** The Committee recognized Mr. Johns for his significant contributions to the Company's longer term business strategy, his leadership in the assessment of potential business transactions and his development of talent within the legal function.

- ***Mr. Fisher, our Executive Vice President, Global Procurement:*** The Committee considered Mr. Fisher's significant cost-productivity contributions in 2016 as well as his strong leadership in managing key supplier relationships for both the Company and MPM in a very challenging business environment.

- ***Mr. Morrison, our former President and Chief Executive Officer:*** The Committee recognized Mr. Morrison's significant contributions over his many years of service in determining the benefits provided to Mr. Morrison under his retirement agreement.

- ***Mr. McGuire, our former Executive Vice President, Business Process and Information Technology:*** The Committee recognized the strong leadership and significant contributions that Mr. McGuire made to achieving cost synergies and guiding the shared services agreement process with MPM.

Mr. Rogerson was hired as the Company's Chief Executive Officer in July 2017. Mr Rogerson's 2017 compensation was determined based on employment negotiations.

Components of Our Executive Compensation Program

The principal components of our executive compensation program are as follows:

Type	Components
Annual Cash Compensation	Base Salary Annual Incentive Awards Discretionary Awards
Long-Term Incentives	Equity Awards Long-Term Cash Awards
Benefits	Health, Welfare and Retirement Benefits
Other	International Assignment Compensation Change-in-Control and Severance Benefits

The following section describes each of these components in further detail.

1. Annual Cash Compensation

Base Salaries

The annual base salaries of our NEOs are designed to be commensurate with professional status, accomplishments, scope of responsibility, overall impact on the organization, and the size and complexity of the business or functional operations managed. The annual base salaries of our NEOs are also intended to be externally competitive with the market.

The Committee reviews our NEOs' base salary levels (i) annually, in conjunction with annual performance reviews, and (ii) in conjunction with new hires, promotions or significant changes in job responsibilities. When approving base salary increases, the Committee considers various factors, such as job performance, total target compensation, impact on value-creation and the external competitive marketplace. The Committee reviews the performance and achievements of the NEOs in determining whether any increases are merited based on the prior year’s performance.

The base salary change for each NEO is shown in the table below. Mr. Knight’s, Mr. Fisher’s and Mr. McGuire’s merit increases in July took into consideration the accomplishments outlined above, internal equity, and external competitive market considerations. No salary increases were delivered to Mr. Bevilaqua or Mr. Johns based on unique circumstances such as the changing scope of their respective roles and relevant market data. Mr. Morrison retired on July 9, 2017, and Mr. Rogerson was hired on July 10, 2017, so neither NEO was eligible for a merit increase.

Name	2017 Base Salary	2016 Base Salary	2017 Increase (Decrease)
Mr. Rogerson	$ 1,000,000	n/a	n/a
Mr. Knight	486,875	475,000	2.50%
Mr. Bevilaqua	631,108	631,108	—%
Mr. Johns	517,212	517,212	—%
Mr. Fisher	408,231	392,529	4.00%
Mr. Morrison	850,000	850,000	—%
Mr. McGuire	385,053	373,837	3.00%

Annual Incentive Awards

Our annual incentive compensation plan is a short-term performance incentive designed to reward participants for delivering increased value to the organization against specific financial and other critical business objectives. Annual incentive compensation awards are targeted at a level that, when combined with base salaries and other components of our total rewards program, is intended to yield total annual compensation that is competitive in the external marketplace, while performance above the target is intended to yield total annual compensation above the market median.

The performance targets for the applicable components of the annual incentive compensation plan are identical for executives and other eligible, salaried associates. We strive to set annual incentive award targets that are achievable only through strong performance, believing that this motivates our executives and other participants to deliver ongoing value-creation, while allowing the Company to attract and retain highly talented senior executives. Annual incentive award targets are determined in connection with the development of an overall budget for Hexion Holdings and its subsidiaries. Performance measures may be based on a number of factors, such as our prior-year performance, current market trends, anticipated synergies, integration efforts around acquired assets or businesses, potential pricing actions, raw material projections, the realization of planned productivity initiatives, expansion plans, new product development, environmental, health and safety, and other strategic factors that could potentially impact operations.

The 2017 Annual Incentive Compensation Plan

In early 2017, the Committee approved the 2017 annual incentive compensation plan for associates of the Company and its subsidiaries, which we refer to as the “2017 ICP.” Under the 2017 ICP, our NEOs and other eligible participants had the opportunity to earn annual cash incentive compensation based upon the achievement of certain financial and Environmental Health & Safety (“EH&S”) goals. The design of the 2017 ICP, described below, was substantially similar to the design of the 2016 incentive compensation plan.

The performance goals under the 2017 ICP for our NEOs were based upon the achievement of both corporate and divisional goals to recognize their significant leadership responsibilities. Our NEOs with corporate functional roles: Messrs. Rogerson, Knight, Bevilaqua, Johns and Morrison, had 72.5% of their target bonus opportunity based on the achievement of corporate financial and EH&S targets and 27.5% based on the achievement of divisional financial targets.

As mentioned above, during 2016 and 2017, Messrs. Fisher and McGuire continued to provide services to MPM under the Shared Services Agreement. The 2017 ICP included a specific incentive structure for associates providing shared services. Under the shared services incentive design, Mr. Fisher's and Mr. McGuire's respective target bonus opportunities based 50% on the achievement of Hexion targets and 50% based on the achievement of MPM's targets under MPM's 2017 incentive compensation plan.

The Hexion performance goals were established based on the following measures:

- Segment EBITDA (Hexion and divisional), which equals earnings before interest, taxes, depreciation and amortization, adjusted to exclude certain non-cash and other income and expenses and discontinued operations. See Items 7 & 8 of Part II of this Annual Report on Form 10-K for a reconciliation of Hexion Net Loss to Segment EBITDA. For the 2017 ICP, the targeted Hexion Segment EBITDA was set at $428 million.

- Cash flow, which encompasses Segment EBITDA, net trading capital improvement and/or usage, capital spending and interest paid along with other operating cash flow items such as income taxes paid and pension contributions. For the 2017 ICP, the targeted cash flow for Hexion Holdings was a net usage of cash of $105 million.

- Environmental health & safety (EH&S) goals, which, for the 2017 ICP, included the following: (i) corrective actions completed on time, (ii) severe or high-potential incidents ("SIFs"), (iii) occupational illness and injury rate ("OIIR"), and (iv) total environmental incidents (ERI).

    - The target goal for the timely closure of corrective actions on SIFs and process safety management (PSM) incidents was to close 90% of corrective actions on time.
    - The target SIFs goal was to reduce the number of SIFs by 12.5% compared to 2016.
    - The Company's OIIR in 2016 was 0.58. The target goal for 2017 was to achieve a 10% reduction from 2016 or a rate of 0.52.
    - Hexion Holdings ended 2016 with 34 total environmental incidents. The 2017 goal was to reduce ERI to 30 or fewer incidents, which represents an approximate 10% improvement from prior year.

Each of the 2017 performance goals was measured independently such that a payout for the achievement of one element was not dependent upon the achievement of any other performance measure. This was intended to keep associates focused on driving continuous improvement in EH&S and cash flow, in addition to EBITDA.

Awards under the 2017 ICP were calculated as follows: each participant was designated a target award under the 2017 ICP based on a percentage of his base salary, which varies by participant based on the scope of the participant's responsibilities and externally competitive benchmarks. For 2017, the target bonus percentage for our continuing NEOs as a percentage of base salary remained consistent with the prior year. Fixed payout percentages for our NEOs were established for minimum (50% payout), target (100% payout), upper-mid (133% payout) and maximum (200% payout) levels of performance. Payout of the target award is based on the achievement of the performance goals described above. Payout percentages between the minimum and target, the target and upper-mid and the upper mid and maximum levels of performance follow, in each case, a linear path. Depending upon whether an NEO's bonus opportunity is based on the achievement of corporate or divisional goals, (i) achievement of Segment EBITDA ranging from approximately 92% of target to 98% of target would be necessary in order for a participant to earn the minimum 50% of the allocated target award for the EBITDA component, and (ii) achievement of Segment EBITDA ranging from approximately 114% of target to 137% of target would be necessary in order for a participant to earn the maximum 200% of the allocated target award for the Segment EBITDA goal.

In 2017, the achievement percentages required for the maximum EBITDA payout were increased to provide an incentive to further drive EBITDA growth. For example, in 2016, the Segment EBITDA needed to earn a maximum 200% payout was 107 - 112% of target, whereas under the 2017 ICP, achievement of approximately 114%-137% of target is required to earn the same payout. The Committee determined to adjust the achievement thresholds rather than the payout targets in order to keep the payout targets relatively consistent from year to year.

After several consecutive years of lower environmental incidents across the organization, the Company decided to focus the 2016 EH&S performance goals on only three (3) safety components. However, in 2017, in order to keep a focus on environmental responsibility, the Company re-introduced total environmental incidents as one of four (4) EH&S goals. The payment range for achieving the performance goals for EH&S was 100% (target) and 200% (maximum) of the allocated target award for each of the four EH&S goals. The payment range for achieving the performance goals for Cash Flow was 50% (minimum), 100% (target) and 200% (maximum) of the allocated target award for the Cash Flow component.

The following table summarizes the target awards, performance measures, weightings, achievements and payouts for the 2017 ICP awards granted to our NEOs. The 2017 ICP award amounts are reflected in the "Non-Equity Incentive Plan Compensation" column of the Summary Compensation Table. Each NEO's actual bonus under the 2017 ICP is calculated based on the information provided in the table below. In each case, the "Target Award" amount for each NEO is multiplied by the weighting percentage and performance achieved percentage for each individual component to determine the payout for that component. The total bonus payout is the sum of the individual component payouts.

Name	Incentive Target (% of Base Salary)	Target Award ($)	Performance Criteria / Weighting %	Performance Achieved (%)	2017 ICP Payout ($)
C. Rogerson	100%	500,000[(1)]	Hexion Segment EBITDA / 27.5%	0%	—
			Divisional Segment EBITDA / 27.5%	35.7%	49,090
			EH&S Goal / 10%	125%	62,500
			Hexion Cash Flow / 35%	0%	—
G. Knight	70%	340,813	Hexion Segment EBITDA / 27.5%	0%	—
			Divisional Segment EBITDA / 27.5%	35.7%	33,461
			EH&S Goal / 10%	125%	42,602
			Hexion Cash Flow / 35%	0%	—
J. Bevilaqua	80%	504,887	Hexion Segment EBITDA / 27.5%	0%	—
			Divisional Segment EBITDA / 27.5%	35.7%	49,570
			EH&S Goal / 10%	125%	63,111
			Hexion Cash Flow / 35%	0%	—
D. Johns	70%	362,049	Hexion Segment EBITDA / 27.5%	0%	—
			Divisional Segment EBITDA / 27.5%	35.7%	35,546
			EH&S Goal / 10%	125%	45,256
			Hexion Cash Flow / 35%	0%	—
N. Fisher	70%	285,761	Hexion Segment EBITDA / 13.75%	0%	—
			Divisional Segment EBITDA / 13.75%	35.7%	14,028
			Hexion EH&S Goal / 5%	125%	17,860
			Hexion Cash Flow / 17.5%	0%	—
			Momentive Segment EBITDA / 35%	143%	143,024
			Momentive EH&S Goal / 5%	150%	21,432
			Momentive Cash Flow / 10%	0%	—
C. Morrison	100%	850,000	Hexion Segment EBITDA / 27.5%	0%	—
			Divisional Segment EBITDA / 27.5%	35.7%	83,453
			EH&S Goal / 10%	125%	106,250
			Hexion Cash Flow / 35%	0%	—
K. McGuire	60%	133,999[(1)]	Hexion Segment EBITDA / 13.75%	0%	—
			Divisional Segment EBITDA / 13.75%	35.7%	6,616
			Hexion EH&S Goal / 5%	125%	8,423
			Hexion Cash Flow / 17.5%	0%	—
			Momentive Segment EBITDA / 35%	143%	67,451
			Momentive EH&S Goal / 5%	150%	10,108
			Momentive Cash Flow / 10%	0%	—

(1) The target awards for Messrs. Rogerson and McGuire have been prorated 50% and 58%, respectively based on their employment with the company in 2017.

Discretionary Awards

The CEO periodically uses discretionary awards to reward exemplary efforts. Often, such efforts are required by atypical business conditions or are related to special projects impacting long-term business results. Discretionary awards are also used for retention purposes or in connection with a new hiring or promotion. Any discretionary award to an executive officer must be approved by the Committee. No discretionary awards were made to our NEOs for services performed in 2017.

2. <u>Long-Term Incentive Awards</u>

Equity Awards

The Committee believes that equity awards play an important role in creating incentives to maximize Company performance, motivating and rewarding long-term value-creation, and further aligning the interests of our executive officers with those of our shareholders. Our NEOs, as well as other members of the leadership team and other eligible associates, participate in equity plans sponsored by Hexion Holdings or Hexion LLC. Awards under these plans are factored into the executive compensation program established by the Committee.

Our long-term strategy includes the use of periodic grants, rather than ongoing annual grants of equity. We believe that periodic grants provide an incentive toward a long-term projected value. Our equity awards contain performance- and service-vesting requirements. Awards that are conditioned service-vesting requirements only function as a retention incentive, while awards that are conditioned on performance- and service-vesting requirements are linked to the attainment of specific long-term objectives.

We have historically used the following types of equity awards: (i) options to purchase common units and (ii) restricted deferred units. Prior to the combination of the Company and MPM in 2010, our NEOs received awards under the following plans administered by Hexion LLC, Hexion or MPM: the 2004 Stock Incentive Plan (the “2004 Stock Plan”), the 2004 Deferred Compensation Plan (the “2004 DC Plan”), the 2007 Long-Term Incentive Plan (the “2007 Long-Term Plan”) and the Momentive Performance Materials Holdings Inc. 2007 Long-Term Incentive Plan (the “MPM 2007 Plan”). At the time of the combination of the Company and MPM in 2010, all outstanding equity awards that included common units of Hexion LLC and shares of MPM Holdings were converted to units of Hexion Holdings. In February 2011, the Hexion Holdings Committee approved and granted awards under a new long-term equity incentive plan for key leaders and directors of the Company and MPM (the “2011 Equity Plan”). These equity plans are described in the “Narrative to Outstanding Equity Awards Table” below.

In February 2017, in recognition of his service to the Company, the Committee acted to extend the expiration date of the Tranche A options granted under the 2007 MPM Plan held by Mr. Johns, which would have expired on March 30, 2017, to December 31, 2020. These awards are reflected in the “Outstanding Equity Awards Table - 2016 Fiscal Year-End” below.

In addition, due to the passing of Mr. McGuire, and consistent with plan provisions, the Company settled in cash the deferred compensation units previously granted under the 2004 Deferred Compensation Plan and issued payment to Mr. McGuire’s surviving spouse. Also, consistent with applicable provisions of the 2011 Equity Plan, the Company repurchased from his surviving spouse common units previously issued to Mr. McGuire.

Cash Awards

The Committee may, from time to time, approve long-term cash awards or plans for our key associates, including our NEOs. These awards are designed to pay over extended performance periods subject to the achievement of specified, measurable performance goals, and are further conditioned upon continued employment. As such, these awards are useful in providing a defined value for achievement of our financial targets, as well as leadership stability. In addition, long-term cash awards help complement equity awards that are not yet liquid.

Retaining key talent during difficult business cycles has been a critical focus for the Company in recent years. It became apparent to the Committee that the long-term performance goals established under a 2012 plan would likely never be achieved due to the MPM bankruptcy. Therefore, to ensure the continued retention of key talent during a critical period of challenging business conditions, the Committee granted new long-term cash awards to key leaders employed by the Company in November 2014, under the Momentive Performance Materials Holdings LLC Long-Term Cash Incentive Plan (the “LTIP”). The LTIP awards are subject to service-vesting requirements. Acceptance of this award was conditioned upon the participant’s forfeiture of certain earlier awards.

In November 2016, new long-term cash awards were made under the LTIP to all of our NEOs. These awards vest based upon service and/or performance metrics, depending upon the grantee.

In July 2017, following the retirement announcement of Mr. Morrison, a modification was made to the 2016 awards to ensure stability and retention of key associates; including the NEOs, except for Mr. Rogerson. A portion of these awards that were payable based on achievement of performance metrics were converted into time-based awards payable in 2020.

After the sudden passing of Mr. McGuire, the Compensation Committee approved a promise to pay the service-vesting amounts of his LTIP award to his spouse. The payment will occur at the same time as those service-based amounts would have otherwise been paid to Mr. McGuire. As a part of Mr. Morrison’s retirement arrangements with the Company, the Committee agreed to pay Mr. Morrison the service-vesting portion of his award at the time that Mr. Morrison was otherwise to received payment, in July 2018.

3. **<u>Benefits</u>**

The Company provides a comprehensive group of benefits to eligible associates, including our NEOs. Our benefit programs are designed to provide market-competitive benefits for associates and their covered dependents. Each of our NEOs is covered under a health and welfare program that provides medical, prescription drug, dental, vision, life insurance and disability insurance benefits.

Each of our NEOs also participates in our savings plan, a defined contribution plan (the “401(k) Plan”), which allows eligible U.S. associates to make pre-tax contributions from 1% to 15% of eligible earnings for associates who meet the definition of a highly compensated employee and 25% for all other associates up to the U.S. tax limits for qualified plans. Those associates are also eligible to receive matching contributions from the Company equal to 100% on contributions of up to 5% of eligible earnings. In addition, the Company makes an annual retirement contribution, ranging from 3% to 7% of eligible earnings depending on years of service, to eligible associates actively employed on the last day of the year. An additional company contribution may be made if we achieve specified annual financial goals established at the beginning of each plan year.

Each of our NEOs, other than Messrs. Johns and Rogerson, participated in a qualified cash balance pension plan on substantially the same terms as other plan participants (the "Hexion U.S. Pension Plan"). The Hexion U.S. Pension Plan was frozen in 2009, as discussed further in the Narrative to the Pension Benefits table below. In addition, because individuals are subject to U.S. tax limitations on contributions to qualified retirement plans, the Company provided a non-qualified retirement plan intended to provide these associates, including our NEOs, with an incremental benefit on eligible earnings above the U.S. tax limits for the qualified plan (the "Hexion Supplemental Plan"). The benefits in the Hexion Supplemental Plan associated with the Hexion U.S. Pension Plan were also frozen in 2009. Our NEOs participated in the non-qualified plan on the same basis as our other highly compensated salaried associates.

Additionally, because individuals are subject to U.S. tax limitations on contributions to a qualified retirement plan, and following the freezing of the Hexion Supplemental Plan, in 2011 the Company established a non-qualified Supplemental Executive Retirement Plan ("SERP"), which provides a benefit on eligible earnings that exceed the U.S. tax limit applicable to our 401(k) Plan. In 2017, our NEO's were eligible to receive a 5% contribution on eligible earnings in excess of $270,000, which is the same benefit received by our other highly compensated salaried employees.

There were no significant changes to the Company's benefit plans in 2017 that would impact our NEOs. There are descriptions of these plans in the Narrative to the Pension Benefits Table and Narrative to the Nonqualified Deferred Compensation Table below.

4. Other

Temporary Assignment / Relocation

The Company may provide certain additional benefits to an executive officer if he or she is on a temporary international or domestic assignment. These benefits are externally competitive and a means to compensate the executive officer for financial expenses that would not exist if the executive remained in his or her home. For example, the Company may provide family travel and housing allowances, other one-time allowances, tax equalization payments, and reimbursements or payments for relocation from the executive officer's home. In addition, pursuant to the Company's relocation policy, certain expenses are grossed up to protect the executive from the tax consequences associated with those certain relocation expenses. We believe that, as a global company, it is necessary to offer this compensation to encourage key associates and executives to temporarily relocate for strategic business reasons.

Change-in-Control and Severance Benefits

Our NEOs are generally entitled to change-in-control and severance protections. We believe that appropriate change-in-control and severance protections accomplish two objectives. First, they create an environment where key executives are able to take actions in the best interest of the Company without incurring undue personal risk. Second, they foster management stability during periods of potential uncertainty. We are also cognizant that excessive pay in the form of change-in-control and severance protection would not be in the best interest of the Company because such pay may encourage undue risk-taking. In an attempt to balance the delicate equation, the Committee has determined to provide these benefits very selectively. The change-in-control and severance benefits payable to our NEOs are discussed in the Narrative to the Summary Compensation Table and in the discussion on Potential Payments Upon Termination of Employment below.

COMPENSATION COMMITTEE REPORT ON EXECUTIVE COMPENSATION(1)

The Committee has reviewed and discussed with management the disclosures contained in the above Compensation Discussion and Analysis. Based upon this review and discussion, the Committee recommended to our Board of Directors that the Compensation Discussion and Analysis section be included in our Annual Report on Form 10-K.

Compensation Committee of the Board of Managers

Robert Kalsow-Ramos (Chairman)
Scott M. Kleinman
Samuel Feinstein

(1) SEC filings sometimes "incorporate information by reference." This means the Company is referring the reader to information that has previously been filed with the SEC, and that this information should be considered as part of the filing. Unless the Company specifically states otherwise, this report shall not be deemed to be incorporated by reference and shall not constitute soliciting material or otherwise be considered filed under the Securities Act or the Securities Exchange Act.

SUMMARY COMPENSATION TABLE

The following table provides information about the compensation of our Chief Executive Officer, Chief Financial Officer, our three next most highly compensated executive officers, and one former executive officer at December 31, 2017, whom we collectively refer to as our NEOs.

Name and Principal Position(a)	Year (b)	Salary ($) (c)	Bonus ($) (d) (1)	Stock Awards ($) (e)	Options Awards ($) (f)	Non-Equity Incentive Plan Compensation ($) (g) (2)	Change in Pension Value and Nonqualified Deferred Compensation Earnings ($) (h) (3)	All Other Compensation ($) (i) (4)	Total ($) (j)
Craig A. Rogerson President and Chief Executive Officer	2017	480,769	888,410	—	—	111,590	—	258,302	1,739,071
	2016	—	—	—	—	—	—	—	—
	2015	—	—	—	—	—	—	—	—
George F. Knight Executive Vice President and Chief Financial Officer	2017	480,937	272,267	—	—	76,063	—	54,778	884,045
	2016	475,000	272,267	—	—	81,562	10,839	50,142	889,810
	2015	—	—	—	—	—	—	—	—
Joseph P. Bevilaqua Executive Vice President and Chief Operating Officer	2017	631,108	743,600	—	—	112,681	—	77,118	1,564,507
	2016	631,108	743,600	—	—	182,883	9,856	109,745	1,677,192
	2015	624,557	858,000	—	—	794,969	—	134,260	2,411,786
Douglas A. Johns Executive Vice President and General Counsel	2017	517,213	594,880	—	—	80,802	—	48,768	1,241,663
	2016	517,212	594,880	—	—	88,811	—	75,331	1,276,234
	2015	509,485	686,400	—	—	425,475	—	36,358	1,657,718
Nathan E. Fisher Executive Vice President, Global Procurement	2017	400,380	596,232	—	—	196,344	—	43,564	1,236,520
	2016	383,183	596,232	—	—	199,876	5,769	40,006	1,225,066
	2015	—	—	—	—	—	—	—	—
Craig O. Morrison President and Chief Executive Officer	2017	441,346	1,653,750	—	—	189,703	—	89,559	2,374,358
	2016	850,000	3,803,750	—	—	208,505	18,847	139,874	5,020,976
	2015	976,606	4,775,000	—	—	998,909	4,142	91,967	6,846,624
Kevin W. McGuire Executive Vice President Business Process & IT	2017	216,538	1,242,600	—	—	92,597	—	79,145	1,630,880
	2016	—	—	—	—	—	—	—	—
	2015	—	—	—	—	—	—	—	—

(1) The amounts shown in column (d) for 2017 reflect amounts paid under the LTIP to each NEO with the exception of Mr. Rogerson, whose amount in column (d) reflects the difference between the amount earned in Non-Equity Incentive Plan Compensation (column g) and the guaranteed bonus amount as described in his employment agreement ($1,000,000).

(2) The amounts shown in column (g) for 2017 reflect the amounts earned under the 2017 ICP, based on performance achieved for 2017. The material terms of the 2017 ICP are described in the Compensation Discussion & Analysis above. Payments under the 2017 ICP will be made in April 2018.

(3) The amounts shown in column (h) reflect the net actuarial decrease in the present value of benefits under the Hexion U.S. Pension Plan and the Hexion Supplemental Plan for Messrs. Knight, Bevilaqua, Fisher, Morrison, and McGuire. Mr. Rogerson and Mr. Johns are not participants in these plans. The decrease in net present value for 2017 includes: for Mr. Knight, a ($1,156) decrease; for Mr. Bevilaqua, a ($3,285) decrease; for Mr. Fisher, a ($757) decrease; for Mr. Morrison, a ($58,368) decrease; and for Mr. McGuire, a ($3,711) decrease in net present value. See the Pension Benefits Table below for additional information regarding our pension calculations, including the assumptions used for these calculations.

(4) The amounts shown in the All Other Compensation column for 2017 include: for Mr. Rogerson: $32,138 of company contributions made or accrued to the defined contribution plans, $112,805 in tax gross-ups, $17,009 in rental housing and furniture, and $96,056 in travel expenses; for Mr. Knight: $54,778 of company contributions made or accrued to the defined contribution plans; for Mr. Bevilaqua: $77,118 of company contributions made or accrued to the defined contribution plans; for Mr. Johns: $48,768 of company contributions made or accrued to the defined contribution plans; for Mr. Fisher: $43,564 of company contributions made or accrued to the defined contribution plans; for Mr. Morrison: $89,559 of company contributions made or accrued to the defined contribution plans; and for Mr. McGuire: $31,878 of company contributions made or accrued to the defined contribution plans, $1,111 in tax gross-ups and $46,156 payable to his surviving spouse for one month’s salary plus any earned vacation time at time of death.

GRANTS OF PLAN-BASED AWARDS

The following table presents information about grants of awards during the year ended December 31, 2017, under the 2017 ICP and the 2016 LTIP grants that are subject to performance-vesting conditions.

	Estimated Future Payouts Under Non-Equity Incentive Plan Awards		
Name (a)	Threshold ($) (c)	Target ($) (d)	Maximum ($) (e)
Craig A. Rogerson(1)			
2017 ICP	12,500	500,000	1,000,000
George F. Knight			
2017 ICP	8,520	340,813	681,625
2016 LTIP	1,266,666	1,900,000	1,900,000
Joseph P. Bevilaqua			
2017 ICP	12,622	504,887	1,009,773
Douglas A. Johns			
2017 ICP	9,051	362,049	724,097
2016 LTIP	1,379,234	2,068,850	2,068,850
Nathan E. Fisher			
2017 ICP	3,572	285,761	571,523
2016 LTIP	1,046,744	1,570,117	1,570,117
Craig O. Morrison			
2017 ICP	21,250	850,000	1,700,000
Kevin W. McGuire			
2017 ICP	2,888	231,032	462,063
2016 LTIP	996,900	996,900	996,900

(1) The amounts reflected above for Mr. Rogerson are the amounts he was eligible to earn under the 2017 ICP. Mr. Rogerson’s employment arrangements with the Company provide for a minimum bonus payment for 2017 equal to $1,000,000.

Narrative to Summary Compensation Table and Grants of Plan-Based Awards Table

Employment Agreements

The Company has employment agreements or employment letters with each of our NEOs, which provide for their terms of compensation, benefits, severance, and certain restrictive covenants. Details regarding the severance and restrictive covenant provisions are provided below under “Potential Payments upon a Termination or Change in Control.”

Mr. Rogerson’s Employment Agreement dated June 12, 2017, includes (i) a base salary at the rate of one million dollars ($1,000,000) per annum, (ii) an annual cash bonus with a target amount equal to 100% of his base salary, based on Mr. Rogerson’s and/or the Company’s attainment of certain criteria as determined by the Board, (iii) a long-term incentive award earned pursuant to the terms and conditions of the LTI Award Agreement dated June 12, 2017, and (iv) reimbursement of certain commuting and relocation costs.

Mr. Rogerson’s 2017 LTI Award Agreement generally provides for a cash bonus equal to 7.5% of the amount of any distribution of cash or property made by Hexion Holdings to one or more of its members during the term of his employment agreement and on or prior to December 31, 2020. Unless Mr. Rogerson’s employment is terminated before December 31, 2020, by the Company with cause or for by Mr. Rogerson without good reason, or due to his death or disability, Mr. Rogerson will be entitled to an additional cash bonus on each anniversary of the last day of the term of the employment agreement that occurs prior to a change in control of the Company, equal to 7.5% of the aggregate amount of any distributions of cash or property made by Hexion Holdings to its members during the preceding year. Upon a change in control of the Company, unless Mr. Rogerson’s employment is terminated by the Company with cause (or, following the term of the employment agreement, at a time when the Company would have had “cause” to terminate Mr. Rogerson had the employment agreement remained in effect) or by Mr. Rogerson without good reason, or due to his death or disability, Mr. Rogerson will be entitled to an amount equal to the sum of (x) 7.5% of any distributions made by Hexion Holdings to its members since the last of such cash bonuses, and (y) 7.5% of the net sale proceeds available for distribution to members of Hexion Holdings in connection with such change in control transaction.

Mr. Johns’ Terms of Employment from May 2015 include relocation benefits under the Company’s relocation policy, the extension of the equity awards held by Mr. Johns in Hexion Holdings and agreement that the put/call rights and obligations related to the common units of Hexion Holdings equity purchased by Mr. Johns continue so long as he remains an employee of the Company. Mr. Johns received service credit for his prior years of service with MPM and GE for purposes of calculating his retirement benefits.

2017 Annual Incentive Compensation Plan (2017 ICP)

Information on the 2017 ICP targets, performance components, weightings, and payouts for each of our NEOs can be found in the Compensation Discussion and Analysis section of this Report.

2016 Long-Term Cash Incentive Awards (2016 Awards)

In exchange for the award amounts originally granted in 2016, the Board granted new awards in July 2017 for Messrs. Knight, Johns, Fisher and McGuire such that, for each of these NEOs, 67% of their target award is payable based upon continued service with the Company and the remaining 33% is payable based upon performance achievement.

OUTSTANDING EQUITY AWARDS AT FISCAL YEAR-END

The following table presents information about outstanding and unexercised options and outstanding stock awards held by our NEOs at December 31, 2017. The securities underlying the awards are common units of Hexion Holdings, and the awards were granted under the 2004 Stock Plan, 2007 Long-Term Plan, the MPM 2007 Plan and the 2011 Equity Plan. See the Narrative to the Outstanding Equity Awards Table below for a discussion of these plans and the vesting conditions applicable to the awards.

	Option Awards					Stock Awards	
Name (a)	**Number of Securities Underlying Unexercised Options (#) Exercisable (b)**	**Number of Securities Underlying Unexercised Options (#) Unexercisable (c)**	**Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Unearned Options (#) (d)**	**Option Exercise Price ($) (e)**	**Option Expiration Date (f)**	**Equity Incentive Plan Awards: Number of Unearned Shares, Units or Other Rights That Have Not Vested (#) (g)**	**Equity Incentive Plan Awards: Market or Payout Value of Unearned Shares, Units or Other Rights That Have Not Vested ($) (h) (1)**
Craig A. Rogerson	—	—	—	—	—	—	—
George F. Knight							
2004 Stock Plan: [2]							
Tranche A Options	26,816	—	—	6.22	12/31/2017	—	—
Tranche B Options	26,816	—	—	6.22	12/31/2017	—	—
2011 Equity Plan:							
2011 Grant:							
Tranche A Options [3]	32,375	—	—	4.85	2/23/2021	—	—
Tranche B Options [4]	—	—	16,187	4.85	2/23/2021	—	—
Tranche C Options [5]	—	—	16,187	4.85	2/23/2021	—	—
Tranche B RDUs [4]	—	—	—	—	—	5,396	2,104
Tranche C RDUs [5]	—	—	—	—	—	5,396	2,104
2013 Grant:							
Unit Options [6]	35,044	—	—	1.42	3/8/2023	—	—
RDUs [7]	—	—	—	—	—	27,672	10,792
Joseph P. Bevilaqua							
2004 Stock Plan: [2]							
Tranche A Options	100,504	—	—	6.22	12/31/2017	—	—
Tranche B Options	100,504	—	—	6.22	12/31/2017	—	—
2011 Equity Plan:							
2011 Grant:							
Tranche A Options [3]	183,517	—	—	4.85	2/23/2021	—	—
Tranche B Options [4]	—	—	91,758	4.85	2/23/2021	—	—
Tranche C Options [5]	—	—	91,758	4.85	2/23/2021	—	—
Tranche B RDUs [4]	—	—	—	—	—	30,586	11,929
Tranche C RDUs [5]	—	—	—	—	—	30,586	11,929
2013 Grant:							
Unit Options [6]	416,189	—	—	1.42	3/8/2023	—	—
RDUs [7]	—	—	—	—	—	328,635	128,168
Douglas A. Johns							

	Option Awards					Stock Awards	
Name (a)	Number of Securities Underlying Unexercised Options (#) Exercisable (b)	Number of Securities Underlying Unexercised Options (#) Unexercisable (c)	Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Unearned Options (#) (d)	Option Exercise Price ($) (e)	Option Expiration Date (f)	Equity Incentive Plan Awards: Number of Unearned Shares, Units or Other Rights That Have Not Vested (#) (g)	Equity Incentive Plan Awards: Market or Payout Value of Unearned Shares, Units or Other Rights That Have Not Vested ($) (h) (1)
2007 MPM Plan:							
Tranche A Options [8]	89,979	—	—	2.59	12/31/2020	—	—
2011 Equity Plan:							
2011 Grant:							
Tranche A Options [3]	60,480	—	—	4.85	2/23/2021	—	—
Tranche B Options [4]	—	—	30,240	4.85	2/23/2021	—	—
Tranche C Options [5]	—	—	30,240	4.85	2/23/2021	—	—
Tranche B RDUs [4]	—	—	—	—	—	10,080	3,931
Tranche C RDUs [5]	—	—	—	—	—	10,080	3,931
2013 Grant:							
Unit Options [6]	262,861	—	—	1.42	3/8/2023	—	—
RDUs [7]	—	—	—	—	—	207,563	80,950
Nathan E. Fisher							
2004 Stock Plan: [2]							
Tranche A Options	46,929	—	—	6.22	12/31/2017	—	—
Tranche B Options	46,929	—	—	6.22	12/31/2017	—	—
2011 Equity Plan:							
2011 Grant:							
Tranche A Options [3]	118,710	—	—	4.85	2/23/2021	—	—
Tranche B Options [4]	—	—	59,356	4.85	2/23/2021	—	—
Tranche C Options [5]	—	—	59,356	4.85	2/23/2021	—	—
Tranche B RDUs [4]	—	—	—	—	—	19,785	7,716
Tranche C RDUs [5]	—	—	—	—	—	19,785	7,716
2013 Grant:							—
Unit Options [6]	244,906	—	—	1.42	3/8/2023	—	—
RDUs [7]	—	—	—	—	—	193,385	75,420
Craig O. Morrison							
2004 Stock Plan: [2]							
Tranche A Options	301,514	—	—	6.22	12/31/2017	—	—
Tranche B Options	301,514	—	—	6.22	12/31/2017	—	—
2011 Equity Plan:							
2011 Grant:							
Tranche A Options [3]	290,501	—	—	4.85	12/31/2020	—	—
Tranche B Options [4]	—	—	145,250	4.85	12/31/2020	—	—
Tranche C Options [5]	—	—	145,250	4.85	12/31/2020	—	—
Tranche B RDUs [4]	—	—	—	—	—	48,417	18,883
Tranche C RDUs [5]	—	—	—	—	—	48,417	18,883
2013 Grant:							—
Unit Options [6]	778,454	—	—	1.42	12/31/2020	—	—
RDUs [7]	—	—	—	—	—	614,691	239,729
Kevin W. McGuire							
2004 Stock Plan [2]							
Tranche A Options	46,929	—	—	6.22	12/31/2017	—	—
Tranche B Options	46,929	—	—	6.22	12/31/2017	—	—
2011 Equity Plan:							
Tranche A Options [3]	118,710			4.85	12/31/2020	—	—

Name (a)	Option Awards					Stock Awards	
	Number of Securities Underlying Unexercised Options (#) Exercisable (b)	Number of Securities Underlying Unexercised Options (#) Unexercisable (c)	Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Unearned Options (#) (d)	Option Exercise Price ($) (e)	Option Expiration Date (f)	Equity Incentive Plan Awards: Number of Unearned Shares, Units or Other Rights That Have Not Vested (#) (g)	Equity Incentive Plan Awards: Market or Payout Value of Unearned Shares, Units or Other Rights That Have Not Vested ($) (h) (1)
Tranche B Options [4]	—	—	59,356	4.85	12/31/2020	—	—
Tranche C Options [5]	—	—	59,356	4.85	12/31/2020	—	—
Tranche B RDUs [4]	— —	— —	—	—	—	19,785	7,716
Tranche C RDUs [5]	—	—	—	—	— —	19,785	7,716
2013 Equity Plan:							
Unit Options [6]	244,906	—	—	1.42	1/25/2018	—	—
RDUs [7]	—	—	—	—	— —	193,385	75,420

(1) Because equity interests in our ultimate parent, Hexion Holdings, are not publicly traded, there is no closing market price at the completion of the fiscal year. The market values shown in column (h) are based on the value of a unit of Hexion Holdings as of December 31, 2017, as determined by Hexion Holdings' Board of Managers for management equity transaction purposes. In light of differences between the companies, including differences in capitalization, the value of a unit in Hexion Holdings does not necessarily equal the value of a share of the Company's common stock.

(2) The "Tranche A" options vested over five years. The "Tranche B" options vested on August 12, 2012, the eighth anniversary of the grant date.

(3) This award vested in four equal annual installments on each December 31st of 2011 through 2014.

(4) This award vests on the earlier to occur of (i) the two-year anniversary of the date that the common unit value is at least $10 following certain corporate transactions and (ii) six months following the date that the common unit value is at least $10 following certain change-in-control transactions.

(5) This award vests on the earlier to occur of (i) the one-year anniversary of the date that the common unit value is at least $15 following certain corporate transactions and (ii) six months following the date that the common unit value is at least $15 following certain change-in-control transactions.

(6) This award vested in four equal annual installments on each December 31st of 2013 through 2016.

(7) This award vests on the earlier to occur of (i) the one-year anniversary of the date that the common unit value is at least $3.50 following certain corporate transactions and (ii) six months following the date that the common unit value is at least $3.50 following certain change-in-control transactions.

(8) This award time-vested over five years.

Narrative to Outstanding Equity Awards Table

2011 Equity Plan

2011 Grant

On February 23, 2011, our NEOs received awards of RDUs and unit options in Hexion Holdings under the 2011 Equity Plan. The RDUs are non-voting units of measurement that are deemed for bookkeeping purposes to be equivalent to one common unit of Hexion Holdings. Of the RDUs and options granted in 2011, approximately 50% are "Tranche A RDUs" and options with time-based vesting (subject to acceleration in the event of certain change-in-control transactions) and approximately 50% are "Tranche B and C RDUs" and options with performance-based vesting.

The vesting terms of the RDUs and options described in footnotes 3-5 to the table above, in each case, are conditioned on the executive's continued employment through the vesting dates mentioned above, subject to certain exceptions. The expiration date for the Tranche A, B, and C options for Mr. Morrison was extended to 12/31/2020 pursuant to his separation agreement. The expiration date for the Tranche A, B, and C options for Mr. McGuire was extended to 12/31/2020 pursuant to action by the compensation committee. With respect to any RDUs that vest as a result of a corporate or change-in-control transaction, such RDUs will be delivered promptly following the vesting date, or a cash payment will be delivered in settlement thereof, depending on the type of transaction. The RDUs and unit options contain restrictions on transferability and other customary terms and conditions. For information on the vested awards, see the Narrative to the Nonqualified Deferred Compensation Table.

2013 Grant

On March 8, 2013, our NEOs received awards of performance-based RDUs of Hexion Holdings and options to purchase units of Hexion Holdings under the 2011 Equity Plan. The RDUs are non-voting units of measurement which are deemed for bookkeeping purposes to be equivalent to one common unit of Hexion Holdings.

The vesting terms of the unit options and RDUs described in footnotes 6 and 7 to the table above are each conditioned on the NEO's continued employment through the vesting dates specified above, subject to certain exceptions. The expiration date for Mr. Morrison's options were extended to 12/31/2020 pursuant to his separation agreement. With respect to any RDUs that vest as a result of a corporate or change-in-control transaction, such RDUs will be delivered promptly following the vesting date, or a cash payment will be delivered in settlement thereof, depending on the type of transaction. The unit options and RDUs contain restrictions on transferability and other customary terms and conditions.

OPTION EXERCISES AND STOCK VESTED

The Option Exercises and Stock Vested table is omitted since there were no such transactions for our NEOs during the year ended December 31, 2017.

PENSION BENEFITS

The following table presents information regarding the benefits payable to each of our NEOs at, following, or in connection with their retirement under the qualified and non-qualified defined benefit pension plans of Hexion as of December 31, 2017. The table does not provide information regarding the Company's qualified or non-qualified defined contribution plans. The amounts shown in the table for each participant represent the present value of the annuitized benefit and do not represent the actual cash value of a participant's account.

Name (a)	Plan Name (b)	Number of Years Credited Service (#) (c) (1)	Present Value of Accumulated Benefit ($) (d)	Payments During Last Fiscal Year ($) (e)
Craig Rogerson (2)	Hexion U.S. Pension Plan	—	—	—
	Hexion Supplemental Plan	—	—	—
George F. Knight	Hexion U.S. Pension Plan	12.23	187,940	—
	Hexion Supplemental Plan	11.74	88,295	—
Joseph P. Bevilaqua	Hexion U.S. Pension Plan	7.25	120,996	—
	Hexion Supplemental Plan	6.76	159,905	—
Douglas A. Johns (2)		—	—	—
Nathan E. Fisher	Hexion U.S. Pension Plan	6.33	93,652	—
	Hexion Supplemental Plan	5.84	29,567	—
Craig O. Morrison	Hexion U.S. Pension Plan	7.27	126,225	—
	Hexion Supplemental Plan	6.78	—	(484,031)
Kevin W. McGuire(3)	Hexion U.S. Pension Plan	6.65	99,366	—
	Hexion Supplemental Plan	6.16	—	(30,171)

(1) The number of years of credited service set forth in column (c) reflects the number of years between the NEO's hire date and the plan freeze date, and is used to determine benefit accrual under the applicable plan.

(2) Messrs. Rogerson and Johns do not participate in the Hexion U.S. Pension Plan or the Hexion Supplemental Plan.

(3) Payments made during 2017 were made to Mr. McGuire's surviving spouse.

Narrative to Pension Benefits Table

Hexion U.S. Pension Plan and Hexion Supplemental Plan

The benefits associated with the Hexion U.S. Pension Plan and Hexion Supplemental Plan were frozen June 30, 2009, and January 1, 2009, respectively. Although participants will continue to receive interest credits under the plans, no additional benefit credits will be provided. Prior to the freeze, the Hexion U.S. Pension Plan provided benefit credits equal to 3% of earnings to the extent that this credit does not exceed the Social Security wage base for the year plus 6% of eligible earnings in excess of the social security wage base to covered U.S. associates, subject to the IRS-prescribed limit applicable to tax-qualified plans.

The Hexion Supplemental Plan provided non-qualified pension benefits in excess of allowable limits for the qualified pension plans. The benefit formula mirrored the qualified Hexion U.S. Pension Plan but applied only to eligible compensation above the federal limits for qualified plans. The accrued benefits are unfunded and are paid from our general assets upon the participant's termination of employment with the Company.

Under both the Hexion U.S. Pension Plan and Hexion Supplemental Plan, eligible earnings included annual incentive awards that were paid currently, but excluded any long-term incentive awards. Historically, the accrued benefits earned interest credits based on one-year Treasury bill rates until the participant begins to receive benefit payments. Effective January 1, 2012, the plans were amended to provide a minimum interest crediting rate of 300 basis points. The interest rate determined under the plan for fiscal 2016 was 3.0%. Participants vest after the completion of three years of service.

Messrs. Knight and Bevilaqua are both currently eligible for early retirement under the Hexion U.S. Pension Plan, both having met the eligibility criteria of having reached age 55 with 10 years of service with the Company. In addition, the surviving spouse of Mr. McGuire is eligible for a death benefit under the Hexion U.S. Pension Plan.

For a discussion of the assumptions applied in calculating the benefits reported in the table above, please see Note 9 to our Consolidated Financial Statements included in Part II of Item 8 in this Annual Report on Form 10-K.

NONQUALIFIED DEFERRED COMPENSATION

The following table presents information with respect to each defined contribution or other plan that provides for the deferral of compensation on a basis that is not tax-qualified.

Name (a)	Executive Contributions in Last FY ($) (b)	Registrant Contributions in Last FY ($) (c)	Aggregate Earnings (Loss) in Last FY ($) (d)	Aggregate Withdrawals/ Distributions ($) (e)	Aggregate Balance at Last FYE ($) (f)
Craig A. Rogerson	—	—	—	—	—
George F. Knight					
Hexion Supplemental Plan	—	—	8,735	—	197,995
Hexion SERP [1]	—	16,759	1,718	—	67,317
Hexion 2004 DC Plan [2]	—	—	(1,073)	—	8,367
Joseph P. Bevilaqua					
Hexion Supplemental Plan	—	—	17,043	—	386,308
Hexion SERP [1]	—	58,054	5,875	—	230,588
Hexion 2004 DC Plan [2]	—	—	(4,020)	—	31,357
Douglas A. Johns					
Hexion SERP [1]	—	33,884	579	—	38,038
Nathan E. Fisher					
Hexion Supplemental Plan	—	—	1,219	—	27,632
Hexion SERP [1]	—	14,270	1,532	—	59,669
Hexion 2004 DC Plan [2]	—	—	(1,877)	—	14,642
Craig O. Morrison					
Hexion Supplemental Plan	—	—	32,257	(973,696)	—
Hexion SERP [1]	—	79,195	11,310	—	426,203
Hexion 2004 DC Plan [2]	—	—	(2,412)	(103,721)	—
Kevin W. McGuire					
Hexion Supplemental Plan	—	—	1,245	(37,036)	—
Hexion SERP [1]	—	11,824	847	(54,733)	—
Hexion 2004 DC Plan [2]	—	—	(375)	(16,143)	—

(1) The amount shown in column (c) for the Hexion SERP is included in the All Other Compensation column of the Summary Compensation Table for 2016. These amounts were earned in 2016 and credited to the accounts by Hexion in 2017.

(2) The amount shown in column (f) is based on the number of vested units multiplied by the value of a common unit of Hexion Holdings on December 31, 2017, as determined by Hexion Holdings' Board of Managers for management equity purposes.

Narrative to the Nonqualified Deferred Compensation Table

Hexion Supplemental Plan

Effective January 1, 2009, the benefits associated with this plan were frozen. This plan provided supplemental retirement benefits in the form of voluntary associate deferral opportunities and employer match on compensation earned above the IRS limit on qualified plans. The Hexion Supplemental Plan benefits are unfunded and paid from our general assets upon the associate's termination of employment. Effective January 1, 2016, interest credits are made to the participants' accounts at an interest rate determined by the Company, which has been defined as the greater of (i) the rate in the fixed income fund of the 401(k) Plan and (ii) 3%.

Hexion SERP

The Company adopted the Hexion SERP in 2011 to provide certain of its executives and other highly compensated associates, including our NEOs, an annual contribution of 5% of eligible earnings above the maximum limitations set by the IRS for contributions to a qualified defined contribution plan. Under the Hexion SERP, an unfunded non-qualified plan, eligible earnings are limited to base salary and amounts earned under the Company's annual incentive compensation plan. Account credits are made to the plan during the third quarter of each year. Interest credits are provided in participants' SERP accounts at an interest rate determined by the Company. Effective January 1, 2016, the interest rate determined by the Company is the greater of (i) the rate in the fixed income fund of the 401(k) Plan and (ii) 3%. This deferred compensation is paid six months following termination of employment.

Hexion 2004 DC Plan

In 2004, in connection with Apollo's acquisition of the Company, Messrs. Craig Morrison, Knight, Bevilaqua, McGuire, and Fisher deferred the receipt of compensation and were credited with a number of deferred stock units (DCUs) in Hexion LLC equal in value to the amount of compensation deferred. The 2004 DC Plan is an unfunded plan. Any cash or units distributed pursuant to the 2004 DC Plan are distributable only upon a termination of employment or retirement. The NEOs mentioned above each have a put right, which can be exercised upon termination of employment to require the Company to pay them the then market value of the DCUs credited to their account. If the put right is not exercised, the NEO will be issued units in Hexion Holdings.

During 2017, Mr. Craig Morrison retired and Mr. McGuire terminated due to his sudden passing. Mr. Craig Morrison did not exercise his put right and instead was issued 241,211 common stock units in Hexion Holdings, which is equal to the number of DCUs he held at the time of his termination. Mr. McGuire held 37,543 DCUs at the time of his passing. Instead of issuing common stock units to his surviving spouse, the Company paid in cash settlement of his DCUs.

At December 31, 2017, the number of DCUs credited to the remaining NEOs were: Mr. Knight - 21,453; Mr. Bevilaqua - 80,403; and Mr. Fisher - 37,543.

POTENTIAL PAYMENTS UPON TERMINATION OR CHANGE-IN-CONTROL

The Company has employment agreements or letters with Messrs. Rogerson, Knight, Bevilaqua, and Johns. The section below describes the payments that may be made to our Named Executive Officers upon separation, pursuant to these individual agreements, applicable corporate practices, or in connection with a change in control. For payments made upon a retirement, other than in connection with a separation or change in control, also see the discussion in the Pension Benefits and Nonqualified Deferred Compensation tables and related narratives above.

Severance/Termination Payments

The employment agreement with Mr. Rogerson provides that if Mr. Rogerson's employment is terminated by the Company without cause or he resigns for good reason (as defined in his employment agreement), the Company will provide him with an amount equal to 1.5 times the sum of (x) his annual base salary and (y) his target annual bonus, paid in equal installments for 18 months, and continued COBRA coverage for 18 months at the expense of the Company (or until Mr. Rogerson becomes ineligible for such coverage), subject to his execution of a release of claims against the Company and his continued compliance with post-termination covenants. In addition, any accrued but unpaid compensation through the termination date (such as accrued but unpaid base salary, earned but unpaid bonus, and accrued and unused vacation) will be paid in a lump-sum payment at the time of termination. The employment agreement also contains an agreement to not disclose non-public information and a 12 month post-termination non-competition and non-solicitation agreement.

The employment agreements with Messrs. Rogerson and Bevilaqua provide that if the executive's employment is terminated by the Company without cause or the executive resigns for good reason (as defined in his employment agreement), the Company will provide him with continued base salary for 18 months and a lump sum payment equal to the estimated cost for the executive to continue COBRA coverage for 18 months. In addition, any accrued but unpaid compensation through the termination date will be paid in a lump-sum payment at the time of termination. The employment agreements also contain an agreement to not disclose non-public information; an agreement not to compete with the Company during the severance period, or, in the case of a termination by the Company for cause or by the executive without good reason, for 12 months following the date he ceases receiving any payments from the Company related to salary, bonus or severance; and a non-solicitation agreement for an additional year beyond the date he ceases receiving any payment from the Company related to salary, bonus or severance.

Under Mr. Knight's terms of employment, he would receive 18 months of continued base salary if his employment is terminated through no fault of his own. In addition to agreeing to not disclose non-public information, pursuant to the Management Investor Rights Agreement under the 2011 Equity Plan Mr. Knight has agreed not to compete with the Company during the period he receives severance payments from the Company and not to solicit Company associates for one year following the date he ceases receiving severance payments from the Company.

Under Mr. Johns' terms of employment, he would receive 18 months of continued base salary if his employment is terminated by the Company without cause. In addition to agreeing to not disclose non-public information, pursuant to the Management Investor Rights Agreement under the 2011 Equity Plan, Mr. Johns has agreed not to compete with the Company during the period he receives severance payments from the Company and not to solicit Company associates for one year following the date he ceases receiving severance payments from the Company. Upon termination by the Company without cause or resignation for good reason, Mr. Johns has a right to require the Company to repurchase his Hexion Holdings units for their original cost, under the MPM 2007 Plan, as shown in the table below.

Under applicable corporate severance guidelines based upon his position and length of service with the Company, Mr. Fisher would be entitled to continued base salary payments for 52 weeks in the event his employment is terminated without cause. Severance payments under such guidelines are conditioned upon compliance with non-competition and non-solicitation covenants. In addition to agreeing to not disclose non-public information, pursuant to the Management Investor Rights Agreement under the 2011 Equity Plan Mr. Fisher has agreed not to compete with the Company during the period he receives severance payments from the Company and not to solicit Company associates for one year following the date he ceases receiving severance payments from the Company.

Retirement Payments

The following table describes payments our NEOs would have received had the individual's employment been terminated by the Company without cause, or in the case of Messrs. Rogerson and Bevilaqua, by the executive for good reason, as of December 31, 2017.

Name	Cash Severance ($) (1)	Estimated Value of Benefits ($) (2)	2017 ICP ($) (3)	MPM 2007 Plan ($) (4)
Craig A. Rogerson	3,000,000	40,631	1,000,000	—
George F. Knight	730,313	21,329	76,063	—
Joseph P. Bevilaqua	946,662	28,386	112,681	—
Nathan E. Fisher	408,230	37,630	196,344	—
Douglas A. Johns	775,820	40,631	80,802	250,000

(1) This column reflects cash severance payments due under the NEO's employment agreement, or under the applicable severance guidelines of the Company, as described above, based on salary as of December 31, 2017.

(2) This column reflects the estimated value of health care benefits and outplacement services. Under the Company's severance guidelines, each NEO would be entitled to 12 months of executive outplacement services in the event of a termination through no fault of his own. The values are based upon the Company's estimated cost of providing such benefits as of December 31, 2017.

(3) This column reflects the amount earned by each executive under the 2017 ICP, which would be paid if he or she was employed on December 31, 2017, but incurred a termination of employment by the Company without cause (or in the case of Mr. Bevilaqua, by the executive for good reason) prior to payment. The incentive payment would be forfeited if the executive resigns (in the case of Mr. Bevilaqua, without good reason) or incurs a termination of employment by the Company for cause prior to payment.

(4) This column reflects the cost of Mr. Johns' initial investment in Hexion Holdings, which he may require Hexion Holdings to purchase in the event he is terminated by the Company without cause, or leaves for good reason, as defined in the MPM 2007 Plan.

In addition to these benefits, our NEOs would also generally be entitled to receive the benefits set forth above in the Pension Benefits Table and Nonqualified Deferred Compensation Table following a termination of employment for any reason.

Change-in-Control Payments

As noted above in the Narrative to the Outstanding Equity Awards Table, our NEOs will be entitled to accelerated vesting of their outstanding unvested equity awards under the 2011 Equity Plan in connection with certain corporate transactions or change-in-control transactions. In addition, under the 2016 LTIP Awards, the service components of the awards would be deemed satisfied upon a change-in-control transaction but the performance conditions would not be accelerated. The exercise prices of all of the options held by our NEOs at December 31, 2017, exceeded the year-end unit value as determined by the Hexion Holdings' Board of Managers for management equity purposes.

PAY RATIO DISCLOSURE

As required by Section 953(b) of the Dodd-Frank Wall Street Reform and Consumer Protection Act, and Item 402(u) of Regulation S-K, following is information about the relationship of the annual total compensation of our employees and the annualized total compensation of Mr. Craig Rogerson, our CEO. The pay ratio included in this information is a reasonable estimate calculated in a manner consistent with Item 402(u) of Regulation S-K.

For the most recently completed fiscal year ended December 31, 2017:

- The median of the annual total compensation of all our employees (other than our CEO) was $69,123; and
- The annualized total compensation of our CEO was $2,530,223.

Pay Ratio

Annual Total Compensation of Mr. Rogerson, our CEO	Median of the Annual Total Compensation of All Employees	Pay Ratio
$2,530,223	$69,123	37 to 1

Methodology

The assumptions used to identify the annual total compensation of all of our employees and our “median employee” are as follows:

- As of October 1, 2017, there were 4,245 active Hexion employees in the U.S. and 25 other countries. We selected October 1st as the date at which we would select our median employee to allow sufficient time to gather the data, given the complexity and scope of our business.

- Hexion excluded 197 employees in 13 countries under the “de minimus” exception permitted by the SEC rules. This exception allows an exclusion of up to 5% of employees, provided that all employees within a given country be excluded when this exception is exercised, and U.S. employees cannot be excluded. The exclusions are reflected in the table below:

Country	Number of Employees Excluded
Spain	94
India	30
South Korea	30
Malaysia	19
Taiwan	4
Uruguay	4
United Arab Emirates	3
France	3
Japan	3
Singapore	3
Russian Federation	2
Czech Republic	1
Thailand	1
TOTAL	**197**

- Total gross compensation from our local payroll systems was used as our compensation measure to determine the median employee, using data for the nine months ended September 30, 2017. We believe compensation is generally spread evenly through the fiscal year, except for our global incentive compensation, which is generally paid in the second and third quarters.

- Total gross compensation was not annualized for employees hired during 2017.

- Cost-of-living adjustments were not calculated when identifying the median paid employee.

- September 2017 year-to-date average foreign exchange rates were used to translate the local currency total gross compensation to U.S. dollars when identifying the median paid employee. December 2017 year-to-date average foreign exchange rates were used to translate the local currency to U.S dollars for the median paid employee’s annual total compensation.

- The pay ratio was calculated using the annualized pay for Mr. Rogerson, our CEO, who was hired on July 10, 2017. The table below lists the components of annualized total compensation for Mr. Rogerson:

Compensation Component	Annualized Amount	
Salary	$	1,000,000
Non-Equity Incentive Plan		1,000,000
All Other Compensation:		
Employer 401(k) match *(qualified plan)*		13,500
Employer annual retirement contribution *(qualified plan)*		8,100
Employer supplemental executive retirement plan contribution *(non-qualified plan)*		36,500
Commuting and housing allowance, including tax gross-up		472,123
Total annualized compensation	**$**	**2,530,223**

DIRECTOR COMPENSATION

The following table presents information regarding the compensation earned or paid during 2017 to our directors who are not also NEOs and who served on the Board of Managers of Hexion Holdings during the year.

Name	Fees Earned or Paid in Cash ($)	Total ($)
Samuel Feinstein	90,000	90,000
William H. Joyce	88,000	88,000
Robert Kalsow-Ramos	92,000	92,000
Scott M. Kleinman	87,000	87,000
Geoffrey A. Manna	89,000	89,000
Jonathan Rich	88,000	88,000
Marvin O. Schlanger	90,000	90,000

Narrative to the Director Compensation Table

Each of our directors who is not an associate or officer of the Company receives an annual retainer of $75,000 payable quarterly in advance. In addition, each such director receives $2,000 for each meeting of the Board that he attends in person and $1,000 for attending teleconference meetings or for participating in regularly scheduled in-person meetings via teleconference.

During 2017, there were no stock or option awards granted to directors, and there are no outstanding, unvested stock awards held by these directors. The aggregate number of unexercised option awards held by our directors at December 31, 2017 is shown in the following table.

Director	Unexercised Option Awards (#)	Vested (#)
Samuel Feinstein	—	—
William H. Joyce	127,103	127,103
Robert Kalsow-Ramos	—	—
Scott M. Kleinman	213,850(1)	185,709(2)
Geoffrey A. Manna	—	—
Jonathan Rich	1,013,795	1,013,795
Marvin O. Schlanger	405,470	405,470

(1) Amount includes 86,747 options scheduled to expire on 12/31/17.

(2) Amount includes 58,606 options scheduled to expire on 12/31/17.

COMPENSATION COMMITTEE INTERLOCKS AND INSIDER PARTICIPATION

Messrs. Kleinman, Feinstein, and Kalsow-Ramos, whose names appear on the Compensation Committee Report above, are employed by Apollo Management, L.P., our indirect controlling shareholder. Neither of these directors is or has been an executive officer of the Company. None of our executive officers served as a director or a member of a compensation committee (or other committee serving an equivalent function) of any other entity, the executive officers of which served as a director or member of our Compensation Committee during the fiscal year ended December 31, 2017.

ITEM 12 - SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

Hexion Holdings is our ultimate parent company and indirectly owns 100% of our capital stock. The following table sets forth information regarding the beneficial ownership of Hexion Holdings common units, as of March 1, 2018, and shows the number of units and percentage owned by:

- each person known to beneficially own more than 5% of the common units of Hexion Holdings;
- each of Hexion's 2017 Named Executive Officers;
- each current member of the Board of Managers of Hexion Holdings; and
- all of the executive officers and current members of the Board of Managers of Hexion Holdings as a group.

As of March 1, 2018, Hexion Holdings had 308,843,407 common units issued and outstanding. The amounts and percentages of common units beneficially owned are reported on the basis of regulations of the SEC governing the determination of beneficial ownership of securities. Under the rules of the SEC, a person is deemed to be a "beneficial owner" of a security if that person has or shares "voting power," which includes the power to vote or to direct the voting of such security, or "investment power," which includes the power to dispose of or to direct the disposition of such security. A person is also deemed to be a beneficial owner of any securities of which that person has a right to acquire beneficial ownership within 60 days. Under these rules, more than one person may be deemed a beneficial owner of the same securities and a person may be deemed a beneficial owner of securities as to which he has no economic interest. Except as otherwise indicated in the footnotes below, each of the beneficial owners has, to our knowledge, sole voting and investment power with respect to the indicated common units, and has not pledged any such units as security.

	Beneficial Ownership of Equity Securities	
Name of Beneficial Owner	**Amount of Beneficial Ownership**	**Percent of Class**
Apollo Funds (1)	278,426,128	86.6%
ASF Radio, L.P. (2)	25,491,297	7.9%
Geoffrey A. Manna (3)	—	*
Scott M. Kleinman (4) (5)	185,709	*
Samuel Feinstein (4) (5)	—	*
William H. Joyce (5) (6)	127,103	*
Robert Kalsow-Ramos (4)	—	*
Jonathan D. Rich (7)	1,495,692	*
Marvin O. Schlanger (8)	1,027,068	*
Craig A. Rogerson (11)	—	*
George F. Knight (9) (11)	131,842	*
Joseph P. Bevilaqua (10) (11)	861,886	*
Nathan E. Fisher (11) (12)	497,045	*
Douglas A. Johns (11) (13)	529,860	*
Craig O. Morrison (11) (14)	2,010,027	*
Kevin W. McGuire(11)(15)	497,045	*
All Managers and Executive Officers as a group (16)	8,332,595	2.6%

* less than 1%

(1) Represents (i) 102,454,557 common units held of record by Apollo Investment Fund VI, L.P. ("AIF VI"); (ii) 94,365,980 common units held of record by AP Momentive Holdings LLC ("AP Momentive Holdings"); (iii) 75,154,788 common units held of record by AIF Hexion Holdings, L.P. ("AIF Hexion Holdings"); and (iv) 6,450,803 common units held of record by AIF Hexion Holdings II, L.P. ("AIF Hexion Holdings II," and together with AIF VI, AP Momentive Holdings and AIF Hexion Holdings, the "Apollo Funds"). The amount reported as beneficially owned does not include common units held or beneficially owned by certain of the directors, executive officers and other members of our management or of Momentive Holdco, for which the Apollo Funds and their affiliates have voting power and the power to cause the sale of such shares under certain circumstances.

Apollo Advisors VI, L.P. ("Advisors VI") is the general partner of AIF VI, and Apollo Capital Management VI, LLC ("ACM VI") is the general partner of Advisors VI. AIF IV Hexion GP, LLC ("AIF IV Hexion GP") and AIF V Hexion GP, LLC ("AIF V Hexion GP") are the general partners of AIF Hexion Holdings. AIF Hexion Holdings II GP, LLC ("Hexion Holdings II GP") is the general partner of AIF Hexion Holdings II. Apollo Investment Fund IV, L.P. and its parallel investment vehicle (collectively, the "AIF IV Funds") are the members of AIF IV Hexion GP. Apollo Advisors IV, L.P. ("Advisors IV") is the general partner or managing general partner of each of the AIF IV Funds, and Apollo Capital Management IV, Inc. ("ACM IV") is the general partner of Advisors IV. Apollo Investment Fund V, L.P. and its parallel investment vehicles (collectively, the "AIF V Funds") are the members of AIF V Hexion GP and of Hexion Holdings II GP. Apollo Advisors V, L.P. ("Advisors V") is the general partner, managing general partner or managing limited partner of each of the AIF V Funds, and Apollo Capital Management V, Inc. ("ACM V") is the general partner of Advisors V. Apollo Principal Holdings I, L.P. ("Principal Holdings I") is the sole stockholder or sole member, as applicable, of each of ACM IV, ACM V and ACM VI. Apollo Principal Holdings I GP, LLC ("Principal Holdings I GP") is the general partner of Principal Holdings I.

Apollo Management VI, L.P. ("Management VI") is the manager of AP Momentive Holdings, and AIF VI Management, LLC ("AIF VI LLC") is the general partner of Management VI. Apollo Management IV, L.P. ("Management IV") is the manager of each of the AIF IV Funds. Apollo Management V, L.P. ("Management V") is the manager of each of the AIF V Funds, and AIF V Management, LLC ("AIF V LLC") is the general partner of Management V. Apollo Management, L.P. ("Apollo Management") is the managing general partner of Management IV and the sole member and manager of AIF V LLC and AIF VI LLC. Apollo Management GP, LLC ("Management GP") is the general partner of Apollo Management. Apollo Management Holdings, L.P. ("Management Holdings") is the sole member and manager of Management GP, and Apollo Management Holdings GP, LLC ("Management Holdings GP") is the general partner of Management Holdings.

Leon Black, Joshua Harris and Marc Rowan are the managers of each of Management Holdings GP and Principal Holdings I GP, as well as executive officers of Management Holdings GP, and as such may be deemed to have voting and dispositive control of the common units held of record by the Apollo Funds. The address of each of the Apollo Funds, AIF IV Hexion GP, AIF V Hexion GP, the AIF IV Funds, Advisors IV, ACM IV, the AIF V Funds, Advisors V, ACM V, Advisors VI, ACM VI, Principal Holdings I and Principal Holdings I GP is One Manhattanville Road, Suite 201, Purchase, New York 10577. The address of each of Management IV, Management V, AIF V LLC, Management VI, AIF VI LLC, Apollo Management, Management GP, Management Holdings, Management Holdings GP, and Messrs. Black, Harris and Rowan, is 9 West 57th Street, 43rd Floor, New York, New York 10019.

(2) Includes 6,003,363 shares issuable upon exercise of a warrant issued on December 4, 2006. Also includes 77,103 common units issuable upon the exercise of an option that is currently exercisable. The address of ASF Radio, L.P. is 1370 Avenue of the Americas, New York, New York 10019.

(3) The address for Mr. Manna is 8400 SW 54th Ave. Miami, FL 33143.

(4) The address for Messrs Kleinman, Feinstein and Kalsow-Ramos is c/o Apollo Management L.P., 9 West 57th Street, New York, New York 10019.

(5) Represents common units issuable upon the exercise of options currently exercisable, or exercisable by December 31, 2020.

(6) The address for Dr. Joyce is c/o Advanced Fusion Systems LLC, 11 Edmond Road, Newtown, CT 06470.

(7) Includes 1,013,795 common units issuable upon the exercise of options currently exercisable or exercisable by April 30, 2018. The address for Dr. Rich is 276 Live Oak Drive, Vero Beach, FL 32963.

(8) Includes 405,470 common units issuable upon the exercise of options currently exercisable or exercisable by April 30, 2018. The address for Mr. Schlanger is c/o Cherry Hill Chemical Investments, One Greentree Centre, 10000 Lincoln Drive East, Suite 201, Marlton, NJ 08053.

(9) Includes 121,051 common units issuable upon the exercise of options currently exercisable or exercisable by April 30, 2018. Does not include 21,453 vested deferred units credited to Mr. Knight's account.

(10) Includes 800,714 common units issuable upon the exercise of options currently exercisable or exercisable by April 30, 2018. Does not include 80,403 vested deferred units credited to Mr. Bevilaqua's account.

(11) The address for Messrs. Rogerson, Knight, Bevilaqua, Fisher, Johns, Morrison, and McGuire is c/o Hexion Inc., 180 E. Broad St., Columbus, Ohio 43215.

(12) Includes 457,474 common units issuable upon the exercise of options currently exercisable or exercisable by April 30, 2018. Does not include 37,543 vested deferred units credited to Mr. Fisher's account.

(13) Includes 413,320 common units issuable upon the exercise of options currently exercisable or exercisable by April 30, 2018.

(14) Includes 1,671,983 common units issuable upon the exercise of options currently exercisable or exercisable by April 30, 2018.

(15) Includes 457,474 common units issuable upon the exercise of options currently exercisable or exercisable by April 30, 2018.

(16) Includes 6,507,032 common units issuable upon the exercise of options granted to our directors and executive officers that are currently exercisable or exercisable by April 30, 2018. Does not include 139,399 of vested deferred common stock units.

We have no compensation plans that authorize issuing our common stock to employees or non-employees. In addition, there have been no sales or repurchases of our equity securities during the past fiscal year. However, we and our direct and indirect parent companies have in the past issued and may issue from time to time equity awards to our employees and directors that are denominated in or based upon the common units of our direct or ultimate parent. As the awards were granted in exchange for service to us these awards are included in our consolidated financial statements. For a discussion of these equity plans see Note 10 in Item 8 of Part II and Item 11 of Part III of this Annual Report on Form 10-K.

ITEM 13 - CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Review, Approval or Ratification of Transactions with Related Persons

We have a written Statement of Policy and Procedures Regarding Related Person Transactions that has been adopted by our Board of Directors.

The policy requires the Company to establish and maintain procedures for identifying potential or existing transactions between the Company and related persons. The policy generally adopts the definitions of “related person” and “transaction” set forth in Regulation S-K Item 404 under the Securities Act of 1933 and the Securities Exchange Act of 1934.

The types of transactions that are covered by our policy include financial and other transactions, arrangements or relationships in which the Company or any of its subsidiaries is a participant and in which a related person has a direct or indirect material interest, where the amount involved exceeds $75,000.

Related persons include directors and director nominees, executive officers, shareholders beneficially owning more than 5% of the Company’s voting stock, and immediate family members of any of the previously described persons. A related person could also be an entity in which a director, executive officer or 5% shareholder is an employee, general partner or 5% shareholder.

Transactions identified by management that are between the Company and a related person that involve amounts exceeding $75,000 will be reviewed by the Board of Directors, the Audit Committee, or another appropriate committee of the Board of Directors. In certain situations, the Board or a committee may delegate authority to an individual Board member to review related person transactions.

Under the policy, the Board of Directors or a committee of the Board of Directors is directed to approve only those related person transactions that are determined by them in good faith to be in, or not inconsistent with, the best interest of the Company and its shareholders. In making this determination, all available, relevant facts and circumstances will be considered, including the benefits to the Company; the impact of the transaction on the related person’s independence; the availability of other sources of comparable products or services; the terms of the transaction; and the terms available to unrelated third parties or to employees in general.

Our policy recognizes that there are situations where related person transactions may be in, or may not be inconsistent with, the best interests of the Company and its shareholders, especially while we are a “controlled company.”

There were no material related person transactions where our policies and procedures did not require review, approval or ratification or where such policies and procedures were not followed.

Related Transactions

Management Consulting Agreement

We are subject to an Amended and Restated Management Consulting Agreement with Apollo (the “Management Consulting Agreement”) that renews on an annual basis, unless notice to the contrary is given by either party. Under the Management Consulting Agreement, we receive certain structuring and advisory services from Apollo and its affiliates. The Management Consulting Agreement provides indemnification to Apollo, its affiliates and their directors, officers and representatives for potential losses arising from these services. Apollo is entitled to an annual fee equal to the greater of $3 million or 2% of our Adjusted EBITDA. Apollo elected to waive charges of any portion of the annual management fee due in excess of $3 million for the year ended December 31, 2017. During the year ended December 31, 2017, we recognized an expense under the Management Consulting Agreement of $3 million. The Management Consulting Agreement also provides for a lump-sum settlement equal to the net present value of the remaining annual management fees payable under the remaining term of the agreement in connection with a sale or initial public offering by us.

Shared Services Agreement and Other Agreements with MPM and its Subsidiaries

On October 1, 2010, we entered into a shared services agreement with Momentive Performance Materials Inc. (‘MPM”) (which, from October 1, 2010 through October 24, 2014, was a subsidiary of Hexion Holdings), as amended in October 2014 (the “Shared Services Agreement”). Under this agreement, we provide to MPM, and MPM provides to us, certain services, including, but not limited to, executive and senior management, administrative support, human resources, information technology support, accounting, finance, legal and procurement services. The Shared Services Agreement establishes certain criteria upon which the costs of such services are allocated between the parties. The Shared Services Agreement was renewed for one year starting October 2017 and is subject to termination by either of the parties, without cause, on not less than 30 days’ written notice, and expires in October 2018 (subject to one-year renewals every year thereafter; absent contrary notice from either party). We periodically review the scope of services provided under this agreement.

Pursuant to this agreement, during the year ended December 31, 2017, we incurred approximately $48 million of net costs for shared services and MPM incurred approximately $38 million of net costs for shared services. Included in the net costs incurred during the year ended December 31, 2017 were net billings from us to MPM of $26 million. These net billings were made to bring the percentage of total net incurred costs for shared services under the Shared Services Agreement to 56% for us and 44% for MPM, as well as to reflect costs allocated 100% to one party. We had accounts receivable from MPM of $3 million as of December 31, 2017, and no accounts payable to MPM.

We also sell products to, and purchase products from, MPM. We sold less than $1 million of products to MPM during 2017, and we purchased $24 million of products from MPM. During 2017, we earned $1 million from MPM as compensation for acting as distributor of products. As of December 31, 2017, we had no accounts receivable from MPM and $2 million of accounts payable to MPM related to these agreements.

Purchases and Sales of Products and Services with Affiliates Other than MPM

We sell products to various Apollo affiliates other than MPM. These sales were $4 million for the year ended December 31, 2017. Accounts receivable from these affiliates were less than $1 million at December 31, 2017. We also purchase raw materials and services from various Apollo affiliates other than MPM. There were no purchases for the year ended December 31, 2017. We had no accounts payable to these affiliates at December 31, 2017.

Other Transactions and Arrangements

We sell products and provide services to, and purchase products from, our other joint ventures which are recorded under the equity method of accounting. These sales were $17 million for the year ended December 31, 2017. Accounts receivable from these joint ventures were $6 million at December 31, 2017. These purchases were $14 million for the year ended December 31, 2017. We had accounts payable to these joint ventures of $1 million at December 31, 2017.

We had a loan receivable of $6 million and royalties receivable of $1 million from our unconsolidated forest products joint venture in Russia as of December 31, 2017.

Director Independence

We and Hexion Holdings have no securities listed for trading on a national securities exchange or in an automated inter-dealer quotation system of a national securities association which has requirements that a majority of our Board of Directors or Board of Managers be independent. However, for purposes of complying with the disclosure requirements of the Securities and Exchange Commission, we and Hexion Holdings have adopted the definition of independence used by the New York Stock Exchange. Under the New York Stock Exchange's definition of independence, Messrs. Joyce and Manna are independent.

ITEM 14 - PRINCIPAL ACCOUNTING FEES AND SERVICES

PricewaterhouseCoopers LLP ("PwC") is the Company's principal accounting firm. The following table sets forth the fees billed by PwC to the Company in 2017 and 2016 (in millions):

	PwC	
	2017	**2016**
Audit fees [(1)]	$ 4.3	$ 4.7
Audit-related fees [(2)]	2.4	2.5
Tax fees [(3)]	0.7	0.4
Other fees [(4)]	1.1	0.8
Total	$ 8.5	$ 8.4

(1) **Audit Fees:** This category includes fees and expenses billed by PwC for the audits of the Company's financial statements and for the reviews of the financial statements included in the Company's Quarterly Reports on Form 10-Q. This category includes audit fees and expenses for engagements performed at U.S. and international locations, including stand-alone audits of Hexion International Holdings Cooperatief U.A. for the fiscal years ended December 31, 2017 and 2016.

(2) **Audit-Related Fees:** This category includes fees and expenses billed by PwC for assurance and related services that are reasonably related to the performance of the audit or review of the Company's financial statements. This category includes fees for the reviews of SEC registration statements and other SEC reporting services as well as audit fees for other stand-alone financial statements of certain entities of the registrant.

(3) **Tax Fees:** This category includes fees and expenses billed by PwC for domestic and international tax compliance and planning services and tax advice.

(4) **Other Fees:** This category includes other fees billed for non-recurring work, related to transactions, due diligence or other one-time services.

Pre-Approval Policy and Procedures

Under a policy adopted by the Audit Committee, all audit and non-audit services provided by our principal accounting firms must be pre-approved by the Audit Committee or a member designated by the Audit Committee. All services pre-approved by the designated member are reported to the full Audit Committee at its next regularly scheduled meeting. The pre-approval of audit and non-audit services may be made at any time up to a year before the commencement of the specified service. Under the policy, the Company is prohibited from using its principal accounting firms for certain non-audit services, the list of which is based upon the list of prohibited activities in the SEC's rules and regulations. Pursuant to the pre-approval provisions set forth above, the Audit Committee approved all services related to the Audit Fees described in (1) above.

PART IV

ITEM 15 - EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(1) Consolidated Financial Statements – The financial statements and related notes of Hexion Inc., and the reports of independent registered public accounting firms are included at Item 8 of this report.

(2) Financial Statement Schedules – Schedule II – Valuation and Qualifying Accounts and Reserves. Also included are the financial statements and related notes of Hexion International Holdings Cooperatief U.A., as its securities collateralize the Company's securities that have been registered, as defined by Rule 3-16 of Regulation S-X under the Securities Act of 1933, and the reports of independent registered public accounting firms. All other schedules are omitted because they are not applicable or not required, or because that required information is shown in either the Consolidated Financial Statements or in the notes thereto.

(3) Exhibits Required by SEC Regulation S-K – The following Exhibits are filed herewith or incorporated herein by reference:

		Incorporated by Reference				
Exhibit Number	Exhibit Description	Form	File Number	Exhibit	Filing Date	Filed Herewith
2.1†	Transaction Agreement dated as of April 22, 2005 among RPP Holdings, Resolution Specialty Materials Holdings LLC, BHI Acquisition Corp., BHI Merger Sub One, BHI Merger Sub Two Inc. and Borden Chemical Inc.	S-1/A	333-124287	2.1	7/15/2005	
2.2†	SOC Resins Master Sale Agreement dated July 10, 2000 among Shell Oil Company, Resin Acquisition, LLC and Shell Epoxy Resins Inc.	S-4	333-57170	2.1	3/16/2001	
2.3†	SPNV Resins Sale Agreement dated as of September 11, 2000 between Shell Petroleum N.V. and Shell Epoxy Resins Inc.	S-4	333-57170	2.2	3/16/2001	
2.4	Assignment and Assumption Agreement dated November 13, 2000 between Shell Epoxy Resins Inc. and Shell Epoxy Resins LLC	S-4	333-57170	2.3	3/16/2001	
2.5	Assignment and Assumption Agreement dated November 14, 2000 between Resin Acquisition, LLC and RPP Holdings LLC	S-4	333-57170	2.4	3/16/2001	
3.1	Restated Certificate of Incorporation of Hexion Inc. dated as of January 15, 2015	10-K	001-00071	3.1	3/10/2015	
3.2	Amended and Restated Bylaws of Hexion Inc.	10-K	001-00071	3.2	3/10/2015	
4.1	Form of Indenture between Borden, Inc. and The Bank of New York, as Trustee, dated as of December 15, 1987, as supplemented by the First Supplemental Indenture dated as of December 15, 1987, the Second Supplemental Indenture dated as of February 1, 1993 and the Third Supplemental Indenture dated as of June 26, 1996, related to the $200,000,000 9.20% Debentures due 2021 and $750,000,000 7.875% Debentures due 2023	S-3	33-45770	4(a) thru 4(d)		
4.2	Indenture, dated as of January 29, 2010, by and among Hexion Finance Escrow LLC, Hexion Escrow Corporation and Wilmington Trust FSB, as trustee, related to the $1,000,000,000 8.875% Senior Secured Notes due 2018	8-K	001-00071	4.1	2/4/2010	
4.3	Supplemental Indenture, dated as of January 29, 2010, by and among Hexion U.S. Finance Corp., Hexion Nova Scotia Finance, ULC, the guarantors party thereto and Wilmington Trust FSB, as trustee, related to the 8.875% Senior Secured Notes due 2018	8-K	001-00071	4.2	2/4/2010	
4.4	Supplemental Indenture, dated as of June 4, 2010, by and among NL COOP Holdings LLC, Hexion U.S. Finance Corp., Hexion Nova Scotia Finance, ULC, the guarantors party thereto and Wilmington Trust Company, as trustee, related to the 8.875 Senior Secured Notes due 2018	8-K	001-00071	4.1	6/9/2010	
4.5	Indenture, dated as of November 5, 2010, among Hexion U.S. Finance Corp., Hexion Nova Scotia Finance, ULC, the Company, the guarantors named therein and Wilmington Trust Company, as trustee, related to the $574,016,000 9.0% Second-Priority Senior Secured Notes due 2020	8-K	001-00071	4.1	11/12/2010	
4.6	Indenture, dated as of March 14, 2012, among Hexion U.S. Finance Corp., Momentive Specialty Chemicals Inc., the guarantors named therein and Wilmington Trust, National Association, as trustee, related to the $450,000,000 First-Priority Senior Secured Notes due 2020	8-K	001-00071	4.1	3/20/2012	
4.7	Second Supplemental Indenture, dated as of January 14, 2013, among Hexion U.S. Finance Corp., Hexion Nova Scotia Finance, ULC, Momentive Specialty Chemicals Inc., the subsidiary guarantors party thereto and Wilmington Trust, National Association, as trustee, related to the additional $200,000,000 8.875% Senior Secured Notes due 2018	8-K	001-00071	4.1	1/18/2013	
4.8	First Supplemental Indenture, dated as of January 31, 2013, among Hexion U.S. Finance Corp., Momentive Specialty Chemicals Inc., the subsidiary guarantors party thereto and Wilmington Trust, National Association, as trustee, related to the additional $1,100,000,000 First-Priority Senior Secured Notes due 2020	8-K	001-00071	4.1	2/6/2013	

Exhibit Number	Exhibit Description	Incorporated by Reference Form	File Number	Exhibit	Filing Date	Filed Herewith
4.9	Second Supplemental Indenture, dated as of March 28, 2013, by and among Hexion U.S. Finance Corp., the guarantors party thereto and Wilmington Trust, National Association, as trustee, related to the 6.625% First-Priority Senior Secured Notes due 2020	8-K	001-00071	4.1	4/3/2013	
4.10	Third Supplemental Indenture, dated as of December 2, 2014, by and among Momentive Specialty Chemicals Inc., the guarantors party thereto and Wilmington Trust, National Association, as trustee, related to the 6.625% First-Priority Senior Secured Notes due 2020	8-K	001-00071	4.1	12/2/2014	
4.11	Third Supplemental Indenture, dated as of December 2, 2014, by and among Momentive Specialty Chemicals Inc., Hexion Nova Scotia Finance ULC, the guarantors party thereto and Wilmington Trust, National Association, as trustee, related to the 8.875% Senior Secured Notes due 2018	8-K	001-00071	4.2	12/2/2014	
4.12	First Supplemental Indenture, dated as of December 2, 2014, by and among Momentive Specialty Chemicals Inc., Hexion Nova Scotia Finance ULC, the guarantors party thereto and Wilmington Trust Company, as trustee, related to the 9.00% Second-Priority Senior Secured Notes due 2020	8-K	001-00071	4.3	12/2/2014	
4.13	Indenture, dated as of April 15, 2015, by and among Hexion Inc., the Guarantors named therein and Wilmington Trust, National Association, as trustee, related to the $315,000,000 10.00% First-Priority Senior Secured Notes due 2020	8-K	001-00071	4.1	4/15/2015	
4.14	Indenture, dated as of February 8, 2017, between Hexion 2 U.S. Finance Corp. and Wilmington Trust, National Association, as trustee, related to the $485,000,000 10.375% First-Priority Senior Secured Notes due 2022.	8-K	001-00071	4.1	2/10/2017	
4.15	Supplemental Indenture, dated as of February 8, 2017, among Hexion Inc., the guarantors party thereto and Wilmington Trust, National Association, as trustee, related to the $485,000,000 10.375% First-Priority Senior Secured Notes due 2022.	8-K	001-00071	4.2	2/10/2017	
4.16	Indenture, dated as of February 8, 2017, among Hexion Inc., the guarantors named therein and Wilmington Trust, National Association, as trustee, related to the $225,000,000 13.75% Senior Secured Notes due 2022.	8-K	001-00071	4.3	2/10/2017	
4.17	Second Supplemental Indenture, dated as of May 12, 2017, by and among Hexion Inc., the guarantors party thereto and Wilmington Trust, National Association, as trustee, related to the $75,000,000 additional 10.375% First-Priority Senior Secured Notes due 2022.	8-K	001-00071	4.1	5/12/2017	
10.1‡	BHI Acquisition Corp. 2004 Deferred Compensation Plan	10-Q	001-00071	10(iv)	11/15/2004	
10.2‡	BHI Acquisition Corp. 2004 Stock Incentive Plan	10-Q	001-00071	10(v)	11/15/2004	
10.3‡	Resolution Performance Products Inc. 2000 Stock Option Plan	S-4	333-57170	10.26	3/16/2001	
10.4‡	Resolution Performance Products Inc. 2000 Non - Employee Directors Stock Option Plan	S-4	333-57170	10.27	3/16/2001	
10.5‡	Amended and Restated Resolution Performance Products, Inc. Restricted Unit Plan, as amended and restated May 31, 2005	S-1/A	333-124287	10.34	9/19/2005	
10.6‡	Form of Non-Qualified Stock Option Agreement between BHI Acquisition Corp. and certain optionees	S-4	333-122826	10.12	2/14/2005	
10.7‡	Resolution Specialty Materials Inc. 2004 Stock Option Plan	S-1/A	333-124287	10.52	7/15/2005	
10.8‡	Form of Nonqualified Stock Option Agreement for Resolution Specialty Materials Inc. 2004 Stock Option Plan	S-1/A	333-124287	10.53	7/15/2005	
10.9‡	Form of Nonqualified Stock Option Agreement for Resolution Performance Products Inc. 2000 Stock Option Plan	S-1/A	333-124287	10.54	7/15/2005	
10.10‡	Form of Nonqualified Stock Option Agreement for Resolution Performance Products Inc. 2000 Non-Employee Director Stock Option Plan	S-1/A	333-124287	10.55	7/15/2005	
10.11‡	Hexion LLC 2007 Long-Term Incentive Plan dated April 30, 2007	10-Q	001-00071	10.1	8/14/2007	
10.12	Amended and Restated Investor Rights Agreement dated as of May 31, 2005 between Hexion LLC, Hexion Specialty Chemicals, Inc. and the holders that are party thereto	S-1/A	333-124287	10.63	7/15/2005	
10.13	Registration Rights Agreement dated as of May 31, 2005 between Hexion Specialty Chemicals, Inc. and Hexion LLC	S-1/A	333-124287	10.64	7/15/2005	
10.14‡	Amended and Restated Executives' Supplemental Pension Plan for Hexion Specialty Chemicals, Inc., dated as of September 7, 2005	8-K	001-00071	10	9/12/2005	
10.15‡	Amended and Restated Employment Agreement dated as of August 12, 2004 between Hexion Specialty Chemicals, Inc. and Craig O. Morrison	10-Q	001-00071	10(i)	11/15/2004	
10.16‡	Amended and Restated Employment Agreement dated as of August 12, 2004 between Hexion Specialty Chemicals, Inc. and Joseph P. Bevilaqua	10-Q	001-00071	10(ii)	11/15/2004	

Exhibit Number	Exhibit Description	Incorporated by Reference Form	File Number	Exhibit	Filing Date	Filed Herewith
10.17‡	Summary of Terms of Employment between Hexion Specialty Chemicals, Inc. and Joseph P. Bevilaqua dated August 10, 2008	10-K	001-00071	10.23	3/9/2010	
10.18‡	Summary of Terms of Employment between Hexion Specialty Chemicals, Inc. and Judith A. Sonnett dated September 21, 2007	10-K	001-00071	10.29	3/9/2010	
10.19‡	Momentive Specialty Chemicals Inc. Supplemental Executive Retirement Plan, dated as of December 31, 2011	8-K	001-00071	99.1	1/6/2012	
10.20	Master Asset Conveyance and Facility Support Agreement, dated as of December 20, 2002, between Borden Chemical and Borden Chemicals and Plastics Operating Limited Partnership	10-K	001-00071	(10)(xxvi)	3/28/2003	
10.21	Environmental Servitude Agreement, dated as of December 20, 2002, between Borden Chemical and Borden Chemicals and Plastics Operating Limited Partnership	10-K	001-00071	(10)(xxvii)	3/28/2003	
10.22	Intellectual Property Transfer and License Agreement and Contribution Agreement dated as of November 14, 2000 between Shell Oil Company and Shell Epoxy Resins LLC	S-4	333-57170	10.13	3/16/2001	
10.23	Intellectual Property Transfer and License Agreement and Contribution Agreement dated as of November 14, 2000 between Shell Internationale Research Maatschappij B.V. and Shell Epoxy Resins Research B.V	S-4	333-57170	10.14	3/16/2001	
10.24	First Amended and Restated Deer Park Site Services, Utilities, Materials and Facilities Agreement dated November 1, 2000 between Shell Chemical Company, for itself and as agent for Shell Oil Company, and Shell Epoxy Resins LLC	S-4	333-57170	10.19	3/16/2001	
10.25	First Amended and Restated Pernis Site Services, Utilities, Materials and Facilities Agreement dated November 1, 2000 between Resolution Europe B.V. (f/k/a Resolution Nederland B.V., f/k/a Shell Epoxy Resins Nederland B.V.) and Shell Nederland Raffinaderij B.V.	S-4	333-57170	10.21	3/16/2001	
10.26	First Amended and Restated Pernis Site Services, Utilities, Materials and Facilities Agreement dated November 1, 2000 between Resolution Europe B.V. (f/k/a Resolution Nederland B.V., f/k/a Shell Epoxy Resins Nederland B.V.) and Shell Nederland Chemie B.V.	S-4	333-57170	10.22	3/16/2001	
10.27†	Second Amended and Restated Norco Site Services, Utilities, Materials and Facilities Agreement dated November 1, 2004 between Shell Chemical L.P. and Resolution Performance Products LLC.	10-K	001-00071	10.45	3/22/2007	
10.28	Deer Park Ground Lease and Grant of Easements dated as of November 1, 2000 between Shell Oil Company and Shell Epoxy Resins LLC	S-4	333-57170	10.23	3/16/2001	
10.29	Norco Ground Lease and Grant of Servitudes dated as of November 1, 2000 between Shell Oil Company and Shell Epoxy Resins LLC	S-4	333-57170	10.24	3/16/2001	
10.30	Amended and Restated Agreement of Sub-Lease (Pernis) dated as of November 1, 2000 between Resolution Europe B.V. (f/k/a Resolution Nederland B.V., f/k/a Shell Epoxy Resins Nederland B.V.) and Shell Nederland Raffinaderij B.V.	S-4	333-57170	10.25	3/16/2001	
10.31	Amended and Restated Management Consulting Agreement dated as of May 31, 2005 between Borden Chemical, Inc. and Apollo Management V, L.P.	S-1/A	333-124287	10.66	7/15/2005	
10.32	Collateral Agreement dated as of November 3, 2006 among Hexion Specialty Chemicals, Inc. and subsidiary parties thereto, and Wilmington Trust Company, as Collateral Agent	10-K	001-00071	10.57	3/11/2009	
10.33	Credit Agreement with exhibits and schedules dated as of March 3, 2009 among Hexion Specialty Chemicals, Inc., Borden Luxembourg S.a.r.l., Euro V (BC) S.a.r.l., Euro VI (BC) S.a.r.l. and AAA Co-Invest VI (EHS-BC) S.a.r.l.	10-Q	001-00071	10.4	8/13/2009	
10.34	SUPPLEMENT dated as of June 4, 2010, to the Collateral Agreement dated as of November 3, 2006, among HEXION SPECIALTY CHEMICALS, INC., a New Jersey corporation, each Subsidiary Party party thereto and WILMINGTON TRUST COMPANY, as Collateral Agent (in such capacity, the “Collateral Agent”) for the Secured Parties (as defined therein)	8-K	001-00071	10.5	6/9/2010	
10.35	Joinder and Supplement to Collateral Agreement dated November 5, 2010 among the Company and subsidiary parties thereto, and Wilmington Trust Company, as trustee and collateral agent	8-K	001-00071	10.2	11/12/2010	
10.36‡	Form of Restricted Deferred Unit Award Agreement of Momentive Performance Materials Holdings LLC	S-4	333-172943	10.70	3/18/2011	
10.37‡	Form of Unit Option Agreement of Momentive Performance Materials Holdings LLC	S-4	333-172943	10.71	3/18/2011	
10.38‡	Form of Director Unit Option Agreement of Momentive Performance Materials Holdings LLC	S-4	333-172943	10.72	3/18/2011	

Exhibit Number	Exhibit Description	Incorporated by Reference Form	File Number	Exhibit	Filing Date	Filed Herewith
10.39‡	Management Investor Rights Agreement, dated as of February 23, 2011 by and among Momentive Performance Materials Holdings LLC and the Holders	S-4	333-172943	10.73	3/18/2011	
10.40	Master Confidentiality and Joint Development Agreement entered into on March 17, 2011 by and between Momentive Performance Materials Inc. and Momentive Specialty Chemicals Inc.	8-K	001-00071	10.2	3/17/2011	
10.41	Fourth Joinder and Supplement to Intercreditor Agreement, dated as of March 14, 2013, by and among Wilmington Trust, National Association, as trustee, JPMorgan Chase Bank N.A., as intercreditor agent, Wilmington Trust Company, as trustee and collateral agent and as second-priority agent, Momentive Specialty Chemicals Holdings LLC, Momentive Specialty Chemicals Inc. and each subsidiary of Momentive Specialty Chemicals Inc. party thereto.	8-K	001-00071	10.5	3/20/2012	
10.42‡	First Amended Resolution Specialty Materials Inc 2004 Stock Option Plan	10-Q	001-00071	10.1	11/13/2012	
10.43‡	First Amended Hexion LLC 2007 Long-Term Incentive Plan	10-Q	001-00071	10.2	11/13/2012	
10.44	Fifth Joinder and Supplement to Intercreditor Agreement, dated January 14, 2013, by and among Wilmington Trust, National Association, as trustee, JPMorgan Chase Bank N.A., as intercreditor agent, Wilmington Trust, National Association, as trustee and collateral agent and as second-priority agent, Momentive Specialty Chemicals Holdings LLC, Momentive Specialty Chemicals Inc. and each subsidiary of Momentive Specialty Chemicals Inc. party thereto.	8-K	001-00071	10.2	1/18/2013	
10.45	Amended and Restated Intercreditor Agreement, dated as of January 31, 2013, among JPMorgan Chase Bank, N.A., as intercreditor agent, Wilmington Trust Company, as trustee and as collateral agent, Wilmington Trust, National Association (as successor by merger to Wilmington Trust FSB), as senior-priority agent for the holders of the notes issued under the 1.5 Lien Indenture (as defined therein), Wilmington Trust, National Association, as senior-priority agent for the holders of the notes issued under the First Lien Indenture (as defined therein), Momentive Specialty Chemicals Holdings LLC, Momentive Specialty Chemicals Inc. and subsidiaries of Momentive Specialty Chemicals Inc. party thereto.	8-K	001-00071	10.1	2/6/2013	
10.46	Additional Secured Party Consent, dated January 31, 2013, among Wilmington Trust Bank, National Association, as trustee and as authorized representative, JPMorgan Chase Bank, N.A., as applicable first lien representative and collateral agent, Momentive Specialty Chemicals Holdings LLC, Momentive Specialty Chemicals Inc. and subsidiaries of Momentive Specialty Chemicals Inc. party thereto.	8-K	001-00071	10.2	2/6/2013	
10.47	Amendment No. 1 to the Momentive Performance Materials Holdings LLC 2011 Equity Incentive Plan	8-K	001-00071	10.1	3/6/2013	
10.48	Form of Restricted Deferred Unit Agreement of Momentive Performance Materials Holdings LLC	8-K	001-00071	10.2	3/6/2013	
10.49	Form of Unit Option Agreement of Momentive Performance Materials Holdings LLC	8-K	001-00071	10.3	3/6/2013	
10.50‡	Momentive Performance Materials Holdings LLC 2012 Long-Term Cash Incentive Plan	10-K	001-00071	10.92	4/1/2013	
10.51‡	Amended and Restated Momentive Performance Materials Holdings LLC 2011 Equity Incentive Plan	10-K	001-00071	10.93	4/1/2013	
10.52	ABL Intercreditor Agreement, dated as of March 28, 2013, by and among JPMorgan Chase Bank, N.A., as the ABL facility collateral agent, Wilmington Trust, National Association, as applicable first-lien agent and first-lien collateral agent, Momentive Specialty Chemicals Inc. and subsidiaries of Momentive Specialty Chemicals Inc. party thereto.	8-K	001-00071	10.2	4/3/2013	
10.53‡	Collateral Agreement, dated as of March 28, 2013, by and among Momentive Specialty Chemicals Inc., subsidiaries of Momentive Specialty Chemicals Inc. party thereto and JPMorgan Chase Bank, N.A. as collateral agent.	8-K	001-00071	10.3	4/3/2013	
10.54	Collateral Agreement, dated as of March 28, 2013, by and among Momentive Specialty Chemicals Inc., subsidiaries of Momentive Specialty Chemicals Inc. party thereto and Wilmington Trust, National Association, as collateral agent.	8-K	001-00071	10.4	4/3/2013	
10.55	Joinder and Supplement to Second Lien Intercreditor Agreement, dated as of March 28, 2013, among JPMorgan Chase Bank, N.A., as ABL credit agreement agent, former intercreditor agent and new intercreditor agent, Wilmington Trust Company, as second-lien trustee, Wilmington Trust, National Association, as 1.5 lien trustee, Wilmington Trust, National Association, as first lien trustee, Momentive Specialty Chemicals Holdings LLC, Momentive Specialty Chemicals Inc. and subsidiaries of Momentive Specialty Chemicals Inc. party thereto.	8-K	001-00071	10.6	4/3/2013	

Exhibit Number	Exhibit Description	Incorporated by Reference				
		Form	File Number	Exhibit	Filing Date	Filed Herewith
10.56‡	Momentive Performance Materials Holdings LLC 2014 Incentive Compensation Plan	10-K	001-00071	10.87	3/31/2014	
10.57‡	Second Amended and Restated Shared Services Agreement, dated as of October 24, 2014, by and among Momentive Specialty Chemicals Inc., Momentive Performance Materials Inc., and the subsidiaries of the Momentive Performance Materials Inc., party thereto	8-K	001-00071	10.1	10/30/2014	
10.58‡	Momentive Performance Materials Holdings LLC Long-Term Cash Incentive Plan	10-Q	001-00071	10.1	11/10/2014	
10.59‡	Form of 2014 Cash-based Long-Term Incentive Award Agreement	10-Q	001-00071	10.2	11/10/2014	
10.60‡	Summary of Terms of Employment between Momentive Performance Materials Inc. and Douglas Johns dated October 3, 2010	10-K	001-00071	10.82	3/10/2015	
10.61	First Lien Intercreditor Agreement, dated as of April 15, 2015, among Wilmington Trust, National Association, as collateral agent, Wilmington	8-K	001-00071	10.1	4/15/2015	
10.62	Additional Secured Party Consent, dated April 15, 2015, among Wilmington Trust, National Association, as authorized representative for the new secured parties, Wilmington Trust, National Association, as collateral agent, and Hexion Inc.	8-K	001-00071	10.2	4/15/2015	
10.63	Fourth Joinder and Supplement to Intercreditor Agreement, dated as of April 15, 2015, by and among JPMorgan Chase Bank, N.A., as intercreditor agent, JPMorgan Chase Bank, N.A., as senior-priority agent for the ABL secured parties, Wilmington Trust, National Association, as senior-priority agent for the existing first lien notes, Wilmington Trust, National Association, as trustee and senior-priority agent for the new first lien notes, Wilmington Trust, National Association, as trustee and second-priority agent for the existing 1.5 lien notes, Hexion LLC, Hexion Inc. and subsidiaries of Hexion Inc. party thereto.	8-K	001-00071	10.3	4/15/2015	
10.64	Second Joinder and Supplement to Intercreditor Agreement, dated as of April 15, 2015, by and among JPMorgan Chase Bank, N.A., as intercreditor agent, JPMorgan Chase Bank, N.A., as senior-priority agent for the ABL secured parties, Wilmington Trust, National Association, as trustee and senior-priority agent for the existing first lien notes, Wilmington Trust, National Association, as senior-priority agent for the new first lien notes, Wilmington Trust, National Association, as senior-priority agent for the 1.5 lien notes, Wilmington Trust Company, as trustee and second-priority agent for the existing second lien notes, Hexion LLC, Hexion Inc. and subsidiaries of Hexion Inc. party thereto.	8-K	001-00071	10.4	4/15/2015	
10.65	Joinder Agreement to ABL Intercreditor Agreement, dated as of April 15, 2015, by and among JPMorgan Chase Bank, N.A., as ABL facility collateral agent, Wilmington Trust, National Association, as new representative, applicable first-lien agent and first-lien collateral agent, and Hexion Inc.	8-K	001-00071	10.5	4/15/2015	
10.66‡	Hexion Holdings LLC 2015 Incentive Compensation Plan	10-Q	001-00071	10.1	5/13/2015	
10.67‡	Summary of Terms of Employment between Hexion Inc. and Douglas A. Johns dated May 6, 2015	10-Q	001-00071	10.1	8/12/2015	
10.68	Amendment Agreement, dated as of July 27, 2015, among Hexion LLC, Hexion Inc., as U.S. borrower, Hexion Canada Inc., as Canadian borrower, Hexion B.V., as Dutch borrower, Hexion UK Limited and Borden Chemical UK Limited, as U.K. borrowers, Hexion GmbH, as German borrower, the other subsidiaries of Hexion LLC party thereto, as loan parties, the lenders party thereto and JPMorgan Chase Bank, N.A., as administrative agent and collateral agent.	10-Q	001-00071	10.2	8/12/2015	
10.69‡	Summary of Terms of Employment between Hexion Inc. and George F. Knight dated October 22, 2015	10-K	001-00071	10.79	3/14/2016	
10.70	2015 Audited Financial Statements of Unconsolidated Affiliate of Hexion Inc.	10-K	001-00071	10.80	3/14/2016	
10.71‡	Hexion Holdings LLC 2016 Incentive Compensation Plan	8-K	001-00071	10.2	5/6/2016	
10.72‡	Form of 2016 Cash-Based Long-Term Incentive Award Agreement	10-Q	001-00071	10.1	11/14/2016	
10.73	Amendment Agreement, dated as of December 21, 2016, among Hexion LLC, certain subsidiaries of Hexion LLC party thereto, the lenders party thereto and JPMorgan Chase Bank, N.A., as administrative agent and collateral agent.	8-K	001-00071	10.1	12/23/2016	
10.74‡	Letter Agreement with Judith A. Sonnett dated June 30, 2016	10-K	001-00071	10.75	3/8/2017	
10.75‡	2016 Cash-Based Long-Term Incentive Award Agreement for Nathan E. Fisher dated January 3, 2017	10-K	001-00071	10.76	3/8/2017	
10.76	2016 Audited Financial Statements of Unconsolidated Affiliate of Hexion Inc.	10-K	001-00071	10.77	3/8/2017	

Exhibit Number	Exhibit Description	Incorporated by Reference Form	File Number	Exhibit	Filing Date	Filed Herewith
10.77	Additional Secured Party Consent, dated as of February 8, 2017, among Wilmington Trust, National Association, as authorized representative for the new secured parties, Wilmington Trust, National Association, as collateral agent, Wilmington Trust, National Association, as authorized representative of the new secured parties, Wilmington Trust, National Association, as authorized representative for the notes obligations, Wilmington Trust, National Association, as authorized representative for the initial other first priority obligations, Hexion Inc. and subsidiaries of Hexion Inc. party thereto.	8-K	001-00071	10.1	2/10/2017	
10.78	Third Joinder and Supplement to Intercreditor Agreement, dated as of February 8, 2017, by and among JPMorgan Chase Bank, N.A., as intercreditor agent, JPMorgan Chase Bank, N.A., as senior-priority agent for the ABL secured parties, Wilmington Trust, National Association, as trustee and senior-priority agent for the existing first lien notes, Wilmington Trust, National Association, as senior-priority agent for the new first lien notes, Wilmington Trust, National Association, as senior-priority agent for the new 1.5 lien notes, Wilmington Trust Company, as trustee and second-priority agent for the existing second lien notes, Hexion LLC, Hexion Inc. and subsidiaries of Hexion Inc. party thereto.	8-K	001-00071	10.2	2/10/2017	
10.79	Second Joinder Agreement to ABL Intercreditor Agreement, dated as of February 8, 2017, among JPMorgan Chase Bank, N.A., as ABL facility collateral agent, Wilmington Trust, National Association, as new representative, applicable first-lien agent and first-lien collateral agent, and Hexion Inc.	8-K	001-00071	10.3	2/10/2017	
10.80	Collateral Agreement, dated as of February 8, 2017, among Wilmington Trust, National Association, as collateral agent, Hexion Inc. and subsidiaries of Hexion Inc. party thereto.	8-K	001-00071	10.4	2/10/2017	
10.81	Amended and Restated Intercreditor Agreement, dated as of February 8, 2017, among JPMorgan Chase Bank, N.A., as intercreditor agent, JPMorgan Chase Bank, N.A., as senior-priority agent for the ABL secured parties, Wilmington Trust, National Association, as senior-priority agent for the existing first lien notes, Wilmington Trust, National Association, as trustee and senior-priority agent for the new first lien notes, Wilmington Trust, National Association, as trustee and second-priority agent for the new 1.5 lien notes, Hexion LLC, Hexion Inc. and subsidiaries of Hexion Inc. party thereto.	8-K	001-00071	10.5	2/10/2017	
10.82	Fourth Joinder and Supplement to Intercreditor Agreement, dated as of February 8, 2017, among JPMorgan Chase Bank, N.A., as intercreditor agent, JPMorgan Chase Bank, N.A., as senior-priority agent for the ABL secured parties, Wilmington Trust, National Association, as trustee and senior-priority agent for the existing first lien notes, Wilmington Trust, National Association, as senior-priority agent for the new first lien notes, Wilmington Trust, National Association, as senior-priority agent for the new 1.5 lien notes, Wilmington Trust Company, as trustee and second-priority agent for the existing second lien notes, Hexion LLC, Hexion Inc. and subsidiaries of Hexion Inc. party thereto.	8-K	001-00071	10.6	2/10/2017	
10.83	Additional Extending Lender Joinder Agreement and Amendment, dated as of January 18, 2017, related to the Amended and Restated Asset-Based Revolving Credit Agreement, dated as of December 21, 2016, among Hexion LLC, Hexion Inc., as U.S. Borrower, Hexion Canada Inc., as Canadian Borrower, Hexion B.V., as Dutch Borrower, Hexion UK Limited and Borden Chemical UK Limited, as UK Borrowers, Hexion GmbH, as German Borrower, each subsidiary loan party party thereto, the lenders party thereto from time to time and JPMorgan Chase Bank, N.A., as administrative agent, collateral agent, swingline lender and initial issuing bank.	10-K	001-00071	10.84	3/8/2017	
10.84	Hexion Holdings LLC 2017 Incentive Compensation Plan	10-Q	001-00071	10.3	5/5/2017	
10.85	Additional Secured Party Consent, dated as of May 12, 2017, among Wilmington Trust, National Association, as authorized representative for the new secured parties, Wilmington Trust, National Association, as collateral agent, Wilmington Trust, National Association, as authorized representative for the notes obligations, Wilmington Trust, National Association, as authorized representative for the initial other first priority obligations, Hexion Inc. and subsidiaries of Hexion Inc. party thereto.	8-K	001-00071	10.1	5/12/2017	
10.86	Fifth Joinder and Supplement to Intercreditor Agreement, dated as of May 12, 2017, by and among JPMorgan Chase Bank, N.A., as intercreditor agent, JPMorgan Chase Bank, N.A., as senior-priority agent for the ABL secured parties, Wilmington Trust, National Association, as trustee and senior-priority agent for the existing first lien notes, Wilmington Trust, National Association, as senior-priority agent for the new notes, Wilmington Trust, National Association, as senior-priority agent for the 1.5 lien notes, Wilmington Trust Company, as trustee and second-priority agent for the existing second lien notes, Hexion LLC, Hexion Inc. and subsidiaries of Hexion Inc. party thereto.	8-K	001-00071	10.2	5/12/2017	
10.87‡	Separation Agreement, dated June 12, 2017, by and between Hexion Inc. and Craig O. Morrison	10-Q	001-00071	10.1	8/11/2017	

Exhibit Number	Exhibit Description	Incorporated by Reference Form	File Number	Exhibit	Filing Date	Filed Herewith
10.88‡	Employment Agreement, by and between Hexion Inc. and Craig A. Rogerson	10-Q	001-00071	10.2	8/11/2017	
10.89‡	Long Term Incentive Compensation Award Agreement, by and between Hexion Inc. and Craig A. Rogerson	10-Q	001-00071	10.3	8/11/2017	
10.90	2017 Audited Financial Statements of Unconsolidated Affiliate of Hexion Inc.					X
12.1	Statement regarding Computation of Ratios					X
18.1	Letter from PricewaterhouseCoopers, dated May 13, 2015 regarding preferability of a change in accounting principle	10-Q	001-00071	18.1	5/13/2015	
21.1	List of Subsidiaries of Hexion Inc.					X
31.1	Rule 13a-14 Certifications:					
	(a) Certificate of the Chief Executive Officer					X
	(b) Certificate of the Chief Financial Officer					X
32.1	Section 1350 Certifications					X
101.INS*	XBRL Instance Document					X
101.SCH*	XBRL Schema Document					X
101.CAL*	XBRL Calculation Linkbase Document					X
101.LAB*	XBRL Label Linkbase Document					X
101.PRE*	XBRL Presentation Linkbase Document					X
101.DEF*	XBRL Definition Linkbase Document					X

† The schedules and exhibits to these agreements are omitted pursuant to Item 601(b)(2) of Regulation S-K. The Company agrees to furnish supplementally to the SEC, upon request, a copy of any omitted schedule or exhibit.

‡ Represents a management contract or compensatory plan or arrangement.

* Attached as Exhibit 101 to this report are documents formatted in XBRL (Extensible Business Reporting Language). The financial information in the XBRL-related documents is “unaudited” or “unreviewed.”

ITEM 16 - FORM 10-K SUMMARY

None.

SIGNATURES

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

HEXION INC.

By: /s/ George F. Knight
George F. Knight
Executive Vice President and Chief Financial Officer

Date: March 2, 2018

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

Name	Title	Signature	Date
Craig A. Rogerson	Director, President and Chief Executive Officer (Principal Executive Officer) and Manager, Hexion Holdings LLC	/s/ Craig A. Rogerson	March 2, 2018
George F. Knight	Director, Executive Vice President and Chief Financial Officer (Principal Financial Officer) and Manager, Hexion Holdings LLC	/s/ George F. Knight	March 2, 2018
Colette B. Barricks	Senior Vice President and General Controller (Principal Accounting Officer)	/s/ Colette B. Barricks	March 2, 2018
Samuel Feinstein	Manager, Hexion Holdings LLC	/s/ Samuel Feinstein	March 2, 2018
William H. Joyce	Manager, Hexion Holdings LLC	/s/ William H. Joyce	March 2, 2018
Robert Kalsow-Ramos	Manager, Hexion Holdings LLC	/s/ Robert Kalsow-Ramos	March 2, 2018
Scott M. Kleinman	Manager, Hexion Holdings LLC	/s/ Scott M. Kleinman	March 2, 2018
Geoffrey A. Manna	Manager, Hexion Holdings LLC	/s/ Geoffrey A. Manna	March 2, 2018
Jonathan D. Rich	Manager, Hexion Holdings LLC	/s/ Jonathan D. Rich	March 2, 2018
Marvin O. Schlanger	Manager, Hexion Holdings LLC	/s/ Marvin O. Schlanger	March 2, 2018

HEXION INTERNATIONAL COOPERATIEF U.A.
CONSOLIDATED BALANCE SHEETS

(In millions)	December 31, 2017	December 31, 2016
Assets		
Current assets:		
Cash and cash equivalents (including restricted cash of $18 and $17, respectively) (see Note 2)	$ 56	$ 113
Accounts receivable (net of allowance for doubtful accounts of $8 and $11, respectively)	246	208
Accounts receivable from affiliates (see Note 4)	90	87
Loans receivable from affiliates (see Note 9)	4	173
Inventories:		
Finished and in-process goods	113	100
Raw materials and supplies	54	54
Current assets held for sale (see Note 13)	5	—
Other current assets	24	18
Total current assets	592	753
Long-term loans receivable from affiliates (see Note 9)	208	1
Investments in unconsolidated entities	11	10
Long-term assets held for sale (see Note 13)	2	—
Other long-term assets	34	36
Property and equipment		
Land	38	34
Buildings	145	127
Machinery and equipment	1,238	1,064
	1,421	1,225
Less accumulated depreciation	(912)	(785)
	509	440
Goodwill (see Note 5)	108	98
Other intangible assets, net (see Note 5)	25	27
Total assets	$ 1,489	$ 1,365
Liabilities and Deficit		
Current liabilities:		
Accounts payable	$ 226	$ 192
Accounts payable to affiliates (see Note 4)	104	79
Debt payable within one year (see Note 8)	86	79
Affiliated debt payable within one year (see Note 9)	31	46
Income taxes payable	5	5
Accrued payroll and incentive compensation	24	26
Other current liabilities	62	48
Current liabilities associated with assets held for sale (see Note 13)	2	—
Total current liabilities	540	475
Long-term liabilities:		
Long-term debt (see Note 8)	76	18
Affiliated long-term debt (see Note 9)	1,096	1,039
Deferred income taxes (see Note 17)	7	9
Long-term pension and postretirement benefit obligations (see Note 11)	230	204
Other long-term liabilities	79	68
Total liabilities	2,028	1,813
Commitments and contingencies (see Notes 8 and 10)		
Deficit		
Paid-in capital	25	179
Loans receivable from parent	—	(179)
Accumulated other comprehensive loss	(59)	(86)
Accumulated deficit	(504)	(361)
Total Hexion International Cooperatief U.A. shareholders’ deficit	(538)	(447)
Noncontrolling interest	(1)	(1)
Total deficit	(539)	(448)
Total liabilities and deficit	$ 1,489	$ 1,365

See Notes to Consolidated Financial Statements

HEXION INTERNATIONAL COOPERATIEF U.A.
CONSOLIDATED STATEMENTS OF OPERATIONS

	Year ended December 31,		
(In millions)	2017	2016	2015
Net sales	$ 2,011	$ 1,948	$ 2,344
Cost of sales	1,736	1,652	1,956
Gross profit	275	296	388
Selling, general and administrative expense	175	185	179
Asset impairments (see Note 2)	—	—	6
Business realignment costs (see Note 3)	28	15	9
Gain on dispositions (see Note 12)	—	(28)	—
Other operating expense (income), net	15	(3)	(7)
Operating income	57	127	201
Interest expense, net	13	10	8
Affiliated interest expense, net (see Note 9)	75	72	79
Other non-operating expense (income), net (see Note 4)	97	(28)	(98)
(Loss) income before income taxes and earnings from unconsolidated entities	(128)	73	212
Income tax expense (see Note 17)	16	31	27
(Loss) income before earnings from unconsolidated entities	(144)	42	185
Earnings from unconsolidated entities, net of taxes	1	1	1
Net (loss) income	(143)	43	186
Net income attributable to noncontrolling interest	—	—	(1)
Net (loss) income attributable to Hexion International Cooperatief U.A.	$ (143)	$ 43	$ 185

See Notes to Consolidated Financial Statements

HEXION INTERNATIONAL COOPERATIEF U.A.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE (LOSS) INCOME

	Year Ended December 31,		
(In millions)	**2017**	**2016**	**2015**
Net (loss) income	$ (143)	$ 43	$ 186
Other comprehensive income (loss), net of tax:			
Foreign currency translation adjustments	29	(24)	(45)
Loss recognized from pension and postretirement benefits	(2)	(1)	(1)
Other comprehensive income (loss)	27	(25)	(46)
Comprehensive (loss) income	(116)	18	140
Comprehensive income attributable to noncontrolling interest	—	—	(1)
Comprehensive (loss) income attributable to Hexion International Cooperatief U.A.	$ (116)	$ 18	$ 139

See Notes to Consolidated Financial Statements

HEXION INTERNATIONAL COOPERATIEF U.A.
CONSOLIDATED STATEMENTS OF CASH FLOWS

(In millions)	Year Ended December 31, 2017	2016	2015
Cash flows provided by operating activities			
Net (loss) income	$ (143)	$ 43	$ 186
Adjustments to reconcile net (loss) income to net cash provided by operating activities:			
Depreciation and amortization	52	62	63
Non-cash asset impairments and accelerated depreciation	—	—	7
Deferred tax expense	1	2	8
Gain on disposition (see Note 12)	—	(28)	—
Loss on sale of assets	1	—	—
Amortization of deferred financing fees	2	—	—
Gain on step acquisition (see Note 14)	—	—	(5)
Unrealized foreign currency loss (gain)	38	(54)	10
Unrealized losses (gains) on pension and postretirement benefit plan liabilities	3	33	(13)
Allocations of corporate overhead, net (see Note 4)	4	5	6
Loss (gain) on foreign exchange guarantee agreement with parent (see Note 4)	86	(18)	(93)
Loss on cash pooling guarantee agreement with parent (Note 4)	—	2	1
Other non-cash adjustments	(1)	1	(10)
Net change in assets and liabilities:			
Accounts receivable	(13)	29	(11)
Inventories	1	(24)	35
Accounts payable	(48)	12	14
Income taxes payable	4	18	4
Other assets, current and non-current	(14)	(21)	14
Other liabilities, current and non-current	32	100	8
Net cash provided by operating activities	5	162	224
Cash flows (used in) provided by investing activities			
Capital expenditures	(77)	(72)	(81)
Capitalized interest	(1)	—	(1)
Purchase of businesses, net of cash acquired	—	—	(7)
Proceeds from disposition, net	—	107	—
Proceeds from the sale of assets	3	4	13
Change in restricted cash	1	(9)	(3)
Proceeds from sale of investments, net	—	—	6
Net cash (used in) provided by investing activities	(74)	30	(73)
Cash flows provided by (used in) financing activities			
Net short-term debt borrowings (repayments)	11	(36)	9
Borrowings of long-term debt	373	283	21
Repayments of long-term debt	(328)	(254)	(39)
Affiliated loan repayments, net	(47)	(215)	(127)
Capital contribution from parent	—	13	26
Deferred financing fees paid	(2)	—	—
Net cash provided by (used in) financing activities	7	(209)	(110)
Effect of exchange rates on cash and cash equivalents	4	(2)	(9)
(Decrease) increase in cash and cash equivalents	(58)	(19)	32
Cash and cash equivalents (unrestricted) at beginning of year	96	115	83
Cash and cash equivalents (unrestricted) at end of year	$ 38	$ 96	$ 115
Supplemental disclosures of cash flow information			
Cash paid for:			
Interest, net	$ 89	$ 83	$ 85
Income taxes, net of cash refunds	9	15	13
Non-cash investing activity:			
Non-cash assumption of debt on step acquisition (see Note 14)	$ —	$ —	$ 18

See Notes to Consolidated Financial Statements

HEXION INTERNATIONAL COOPERATIEF U.A.
CONSOLIDATED STATEMENTS OF DEFICIT

(In millions)	Paid-in Capital	Loans Receivable from Parent	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Hexion International Cooperatief U.A. Shareholders' Deficit	Noncontrolling Interest	Total
Balance at December 31, 2014	$ 128	$ (1)	$ (15)	$ (591)	$ (479)	$ (2)	$ (481)
Net income	—	—	—	185	185	1	186
Other comprehensive loss	—	—	(46)	—	(46)	—	(46)
Non-cash changes in principal and translation adjustment	—	(85)	—	—	(85)	—	(85)
Capital contribution from parent	30	—	—	—	30	—	30
Allocations of corporate overhead (see Note 4)	6	—	—	—	6	—	6
Balance at December 31, 2015	164	(86)	(61)	(406)	(389)	(1)	(390)
Net income	—	—	—	43	43	—	43
Other comprehensive loss	—	—	(25)	—	(25)	—	(25)
Non-cash changes in principal and translation adjustment	—	(93)	—	—	(93)	—	(93)
Capital contribution from parent	13	—	—	—	13	—	13
Deconsolidation of subsidiary	(3)			2	(1)		(1)
Allocations of corporate overhead (see Note 4)	5	—	—	—	5	—	5
Balance at December 31, 2016	179	(179)	(86)	(361)	(447)	(1)	(448)
Net loss	—	—	—	(143)	(143)	—	(143)
Other comprehensive income	—	—	27	—	27	—	27
Non-cash changes in principal and translation adjustment	—	6	—	—	6	—	6
Reclassification of affiliated loan receivable	—	173	—	—	173	—	173
Non-cash return of capital to parent	(158)	—	—	—	(158)	—	(158)
Allocations of corporate overhead (see Note 4)	4	—	—	—	4	—	4
Balance at December 31, 2017	$ 25	$ —	$ (59)	$ (504)	$ (538)	$ (1)	$ (539)

See Notes to Consolidated Financial Statements

HEXION INTERNATIONAL COOPERATIEF U.A.

Notes to Consolidated Financial Statements
(In millions)

1. Background and Basis of Presentation

Hexion International Cooperatief U.A. (“CO-OP”) is a holding company whose primary assets are its investments in Hexion Holding B.V. and Hexion Canada, Inc. (“Hexion Canada”), and their respective subsidiaries. Due to an internal reorganization within the Hexion group in 2017, the membership interests in Hexion International Holdings Coöperatief U.A. (“Old CO-OP”) were contributed to CO-OP. In connection with these transactions, the pledge of Old CO-OP’s membership interest was released under the existing collateral documents and the membership interests of CO-OP have been pledged as collateral under the applicable collateral documents.

Together, CO-OP, through its investments in Hexion Canada and Hexion Holding B.V. and their respective subsidiaries (collectively referred to as the “Company”), is engaged in the manufacture and marketing of urea, phenolic, epoxy and epoxy specialty resins and coatings applications primarily used in forest and industrial and construction products and other specialty and industrial chemicals worldwide. At December 31, 2017, the Company’s operations included 32 manufacturing facilities in Europe, North America, South America, Australia, New Zealand, China and Korea.

The Company is a wholly owned subsidiary of Hexion Inc. (“Hexion”), which, through a series of intermediate holding companies, is controlled by investment funds managed by affiliates of Apollo Management Holdings, L.P. (together with Apollo Global Management, LLC and its subsidiaries, “Apollo”). The Company has significant related party transactions with Hexion, as discussed in Note 4. CO-OP operates as a business under the direction and with support of its parent, Hexion. All entities are under the common control of Hexion.

Hexion serves global industrial markets through a broad range of thermoset technologies, specialty products and technical support for customers in a diverse range of applications and industries.

2. Summary of Significant Accounting Policies

Principles of Consolidation—The Consolidated Financial Statements include the accounts of the Company and its majority-owned subsidiaries, all of which are under the common control and management of Hexion, and for which no substantive participating rights are held by minority shareholders. Intercompany transactions and balances have been eliminated. Noncontrolling interests exist for the equity interests in subsidiaries that are not 100% owned by the Company.

Foreign Currency Translations and Transactions—Assets and liabilities of foreign affiliates are translated at the exchange rates in effect at the balance sheet date. Income, expenses and cash flows are translated at average exchange rates during the year. The Company recognized transaction losses of $21, gains of $19 and losses of $2 for the years ended December 31, 2017, 2016 and 2015, respectively, which are included as a component of “Net (loss) income.” In addition, gains or losses related to the Company’s intercompany loans payable and receivable denominated in a foreign currency other than the subsidiary’s functional currency that are deemed to be permanently invested are remeasured to cumulative translation and recorded in “Accumulated other comprehensive loss” in the Consolidated Balance Sheets. The effect of translation is included in “Accumulated other comprehensive loss.”

Use of Estimates—The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and also the disclosure of contingent assets and liabilities at the date of the financial statements. In addition, it requires management to make estimates and assumptions that affect the reported amounts of revenues and expenses during the reporting period. The most significant estimates that are included in the financial statements are environmental remediation liabilities, legal liabilities, deferred tax assets and liabilities and related valuation allowances, income tax accruals, pension and postretirement assets and liabilities, valuation allowances for accounts receivable and inventories, general insurance liabilities, asset impairments and fair values of assets acquired and liabilities assumed in business acquisitions. Actual results could differ from these estimates.

Cash and Cash Equivalents—The Company considers all highly liquid investments that are purchased with an original maturity of three months or less to be cash equivalents. At December 31, 2017 and 2016, the Company had interest-bearing time deposits and other cash equivalent investments of $9 and $7, respectively. These amounts are included in the Consolidated Balance Sheets as a component of “Cash and cash equivalents.”

Allowance for Doubtful Accounts—The allowance for doubtful accounts is estimated using factors such as customer credit ratings and past collection history. Receivables are charged against the allowance for doubtful accounts when it is probable that the receivable will not be collected.

Inventories—Inventories are stated at lower of cost or net realizable value using the first-in, first-out method. Costs include direct material, direct labor and applicable manufacturing overheads, which are based on normal production capacity. Abnormal manufacturing costs are recognized as period costs and fixed manufacturing overheads are allocated based on normal production capacity. An allowance is provided for excess and obsolete inventories based on management’s review of inventories on-hand compared to estimated future usage and sales. Inventories in the Consolidated Balance Sheets are presented net of an allowance for excess and obsolete inventory of $4 and $3 at December 31, 2017 and 2016, respectively.

Deferred Expenses—Deferred debt financing costs are included in "Long-term debt" in the Consolidated Balance Sheets, with the exception of deferred financing costs related to revolving line of credit arrangements, which are included in "Other long-term assets" in the Consolidated Balance Sheets. These costs are amortized over the life of the related debt or credit facility using the effective interest method. Upon extinguishment of any debt, the related debt issuance costs are written off. At December 31, 2017 and 2016, the Company's unamortized deferred financing costs included in "Other long-term assets" were $4 and $3, respectively.

Property and Equipment—Land, buildings and machinery and equipment are stated at cost less accumulated depreciation. Depreciation is recorded on a straight-line basis over the estimated useful lives of properties (the average estimated useful lives for buildings and machinery and equipment are 20 years and 15 years, respectively). Assets under capital leases are amortized over the lesser of their useful life or the lease term. Major renewals and betterments are capitalized. Maintenance, repairs, minor renewals and turnarounds (periodic maintenance and repairs to major units of manufacturing facilities) are expensed as incurred. When property and equipment is retired or disposed of, the asset and related depreciation are removed from the accounts and any gain or loss is reflected in operating income. The Company capitalizes interest costs that are incurred during the construction of property and equipment. Depreciation expense was $46, $54 and $54 for the years ended December 31, 2017, 2016 and 2015, respectively.

Capitalized Software—The Company capitalizes certain costs, such as software coding, installation and testing, that are incurred to purchase or create and implement computer software for internal use. Amortization is recorded on the straight-line basis over the estimated useful lives, which range from 1 to 5 years.

Goodwill and Intangibles—The excess of purchase price over net tangible and identifiable intangible assets of businesses acquired is carried as "Goodwill" in the Consolidated Balance Sheets. Separately identifiable intangible assets that are used in the operations of the business (e.g., patents and technology, tradenames, customer lists and contracts) are recorded at cost (fair value at the time of acquisition) and reported as "Other intangible assets, net" in the Consolidated Balance Sheets. Costs to renew or extend the term of identifiable intangible assets are expensed as incurred. The Company does not amortize goodwill. Intangible assets with determinable lives are amortized on a straight-line basis over the shorter of the legal or useful life of the assets, which range from 1 to 30 years (see Note 5).

Impairment—The Company reviews property and equipment and all amortizable intangible assets for impairment whenever events or changes in circumstances indicate that the carrying amount of these assets may not be recoverable. Recoverability is based on estimated undiscounted cash flows or other relevant observable measures. The Company tests goodwill for impairment annually, or when events or changes in circumstances indicate impairment may exist, by comparing the estimated fair value of each reporting unit to its carrying value to determine if there is an indication that a potential impairment may exist.

Long-Lived Assets and Amortizable Intangible Assets

There were no long-lived asset impairments recorded during the years ended December 31, 2017 and 2016. During the year ended December 31, 2015, the Company recorded long-lived asset impairments of $6, which are included in "Asset impairments" in the Consolidated Statements of Operations (see Note 6).

Goodwill

The Company performs an annual assessment of qualitative factors to determine whether the existence of any events or circumstances leads to a determination that it is more likely than not that the fair value of a reporting unit is less than the carrying amount of the reporting unit's net assets. If, after assessing all events and circumstances, the Company determines it is more likely than not that the fair value of a reporting unit is less than the carrying amount of the reporting unit's net assets, the Company uses a probability weighted market and income approach to estimate the fair value of the reporting unit. The Company's market approach is a comparable analysis technique commonly used in the investment banking and private equity industries based on the EBITDA (earnings before interest, income taxes, depreciation and amortization) multiple technique. Under this technique, estimated fair value is the result of a market-based EBITDA multiple that is applied to an appropriate historical EBITDA amount, adjusted for the additional fair value that would be assigned by a market participant obtaining control over the reporting unit. The Company's income approach is a discounted cash flow model. When the carrying amount of the reporting unit's goodwill is greater than the estimated fair value of the reporting unit's goodwill, an impairment loss is recognized for the difference.

At October 1, 2017 and 2016, the estimated fair value of the Company's reporting unit was deemed to be substantially in excess of the carrying amount of assets (including goodwill) and liabilities assigned to the reporting unit.

Assets and Liabilities Held for Sale - The assets and liabilities at December 31, 2017 related to the proposed sale of the Company's Additive Technology Group business ("ATG") are classified as "Current assets held for sale", "Long-term assets held for sale", and "Current liabilities associated with assets held for sale" within the Consolidated Balance Sheets. See Note 13 for more information.

General Insurance—The Company is generally insured for losses and liabilities for workers' compensation, physical damage to property, business interruption and comprehensive general, product and vehicle liability under high-deductible insurance policies. The Company records losses when they are probable and reasonably estimable and amortizes insurance premiums over the life of the respective insurance policies (see Note 4).

Legal Claims and Costs—The Company accrues for legal claims and costs in the period in which a claim is made or an event becomes known, if the amounts are probable and reasonably estimable. Each claim is assigned a range of potential liability and the most likely amount is accrued. If there is no amount in the range of potential liability that is most likely, the low end of the range is accrued. The amount accrued includes all costs associated with the claim, including settlements, assessments, judgments and fines. Legal fees are expensed as incurred (see Note 10).

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. Environmental accruals are reviewed on a quarterly basis and as events and developments warrant (see Note 10).

Asset Retirement Obligations—Asset retirement obligations are initially recorded at their estimated net present values in the period in which the obligation occurs, with a corresponding increase to the related long-lived asset. Over time, the liability is accreted to its settlement value and the capitalized cost is depreciated over the useful life of the related asset. When the liability is settled, a gain or loss is recognized for any difference between the settlement amount and the liability that was recorded.

Revenue Recognition—Revenue for product sales, net of estimated allowances and returns, is recognized as risk and title to the product transfer to the customer, which either occurs at the time shipment is made or upon delivery. In situations where product is delivered by pipeline, risk and title transfers when the product moves across an agreed-upon transfer point, which is typically the customers' property line. Product sales delivered by pipeline are measured based on daily flow meter readings. The Company's standard terms of delivery are included in its contracts of sale or on its invoices. On January 1, 2018, the Company adopted Accounting Standards Board Update No. 2014-09: *Revenue from Contracts with Customers (Topic 606).* See further discussion below.

Shipping and Handling—Freight costs that are billed to customers are included in "Net sales" in the Consolidated Statements of Operations. Shipping costs are incurred to move the Company's products from production and storage facilities to the customer. Handling costs are incurred from the point the product is removed from inventory until it is provided to the shipper and generally include costs to store, move and prepare the products for shipment. Shipping and handling costs are recorded in "Cost of sales" in the Consolidated Statements of Operations.

Research and Development Costs—Funds are committed to research and development activities for technical improvement of products and processes that are expected to contribute to future earnings. All costs associated with research and development are charged to expense as incurred. Research and development and technical service expense was $25, $29 and $32 for the years ended December 31, 2017, 2016 and 2015, respectively, and is included in "Selling, general and administrative expense" in the Consolidated Statements of Operations.

Business Realignment Costs—The Company incurred "Business realignment costs" totaling $28, $15 and $9 for the years ended December 31, 2017, 2016 and 2015, respectively. These costs primarily included expenses from the Company's restructuring and cost optimization programs, as well as costs for environmental remediation at certain formerly owned locations.

Pension and Other Non-Pension Postretirement Benefit Liabilities—Pension and other non-pension postretirement benefit ("OPEB") assumptions are significant inputs to the actuarial models that measure pension and OPEB benefit obligations and related effects on operations. Two assumptions, discount rate and expected return on assets, are important elements of plan expense and asset/liability measurement. The Company evaluates these critical assumptions at least annually on a plan and country-specific basis. The Company periodically evaluates other assumptions involving demographic factors, such as retirement age, mortality and turnover, and updates them to reflect the Company's experience and expectations for the future. Actual results in any given year will often differ from actuarial assumptions because of economic and other factors.

Accumulated and projected benefit obligations are measured as the present value of future cash payments. The Company discounts these cash payments using a split-rate interest approach. This approach uses multiple interest rates from market-observed forward yield curves which correspond to the estimated timing of the related benefit payments. Lower discount rates increase present values and subsequent-year pension expense; higher discount rates decrease present values and subsequent-year pension and OPEB expense.

To determine the expected long-term rate of return on pension plan assets, the Company considers current and expected asset allocations, as well as historical and expected returns on various categories of plan assets. In developing future return expectations for the principal benefit plans' assets, the Company evaluates general market trends as well as key elements of asset class returns such as expected earnings growth, yields and spreads across a number of potential scenarios.

Upon the Company's annual remeasurement of its pension and OPEB liabilities in the fourth quarter, or on an interim basis as triggering events warrant remeasurement, the Company immediately recognizes gains and losses as a mark-to-market ("MTM") gain or loss through earnings. As such, the Company's net periodic pension and OPEB expense consists of i) service cost, interest cost, expected return on plan assets, amortization of prior service cost/credits recognized on a quarterly basis and ii) MTM adjustments recognized annually in the fourth quarter upon remeasurement of pension and OPEB liabilities or when triggering events warrant remeasurement.

Income Taxes—The Company recognizes deferred tax assets and liabilities for the expected future tax consequences of temporary differences between the financial statement carrying amounts and the tax bases of the assets and liabilities.

Deferred tax balances are adjusted to reflect tax rates, based on current tax laws, which will be in effect in the years in which temporary differences are expected to reverse. Deferred tax assets are reduced by a valuation allowance when, in the opinion of management, it is more likely than not that some portion or all of the deferred tax assets will not be realized. For purposes of these financial statements, the international subsidiaries are treated as foreign subsidiaries of a domestic parent, the Company, for all periods presented. Income tax expense for the Company as well as a rate reconciliation is provided in Note 17.

Unrecognized tax benefits are generated when there are differences between tax positions taken in a tax return and amounts recognized in the consolidated financial statements. Tax benefits are recognized in the consolidated financial statements when it is more likely than not that a tax position will be sustained upon examination. Tax benefits are measured as the largest amount of benefit that is greater than 50% likely of being realized upon settlement. The Company classifies interest and penalties as a component of tax expense.

The Company monitors changes in tax laws and reflects the impact of tax law changes in the period of enactment. In response to the United States tax reform legislation enacted on December 22, 2017, the SEC issued guidance that allows companies to record provisional amounts for the impacts of U.S. tax reform if the full accounting cannot be completed before filing its 2017 financial statements. For provisions of the tax law where companies are unable to make a reasonable estimate of the impact, the guidance allows companies to continue to apply the historical tax provisions in computing its income tax liability and deferred tax assets and liabilities as of December 31, 2017. The guidance also allows companies to finalize accounting for the U.S. tax reform changes within one year of the enactment date.

Derivative Financial Instruments—The Company is a party to forward exchange contracts, foreign exchange rate swaps, interest rate swaps, natural gas futures and electricity forward contracts to reduce its cash flow exposure to changes in interest rates and natural gas and electricity prices. The Company does not hold or issue derivative financial instruments for trading purposes. These instruments are not accounted for using hedge accounting, but are measured at fair value and recorded in the balance sheet as an asset or liability, depending upon the Company's underlying rights or obligations. Changes in fair value are recognized in earnings (see Note 7).

Stock-Based Compensation—Stock-based compensation cost is measured at the grant date based on the fair value of the award which is amortized as expense over the requisite service period on a graded-vesting basis. The Company does not maintain any stock-based compensation plans; however, certain of the Company's employees have been granted equity awards denominated in units of Hexion Holdings LLC, Hexion's ultimate parent. The Company is allocated a share of the related compensation expense (see Note 4).

Transfers of Financial Assets—The Company executes factoring and sales agreements with respect to its trade accounts receivable to support its working capital requirements. The Company accounts for these transactions as either sales-type or financing-type transfers of financial assets based on the terms and conditions of each agreement. For the portion of the sales price that is deferred in a reserve account and subsequently collected, the Company's policy is to classify the cash in-flows as cash flows from operating activities as the predominant source of the cash flows pertains to the Company's trade accounts receivable. When the Company retains the servicing rights on the transfers of accounts receivable, it measures these rights at fair value, if material.

Concentrations of Credit Risk—Financial instruments that potentially subject the Company to concentrations of credit risk are primarily temporary investments and accounts receivable. The Company places its temporary investments with high quality institutions and, by policy, limits the amount of credit exposure to any one institution. Concentrations of credit risk for accounts receivable are limited due to the large number of customers in the Company's customer base and their dispersion across many different industries and geographies. The Company generally does not require collateral or other security to support customer receivables.

Corporate Overhead Allocations—In order to properly present the financial results of the Company on a stand-alone basis, corporate controlled expenses incurred by Hexion that are not reimbursed by the Company are allocated to the Company. The amounts are allocated on the basis of "Net sales." Management believes that the amounts allocated in such a manner are reasonable and consistent. However, the amounts are not necessarily indicative of the costs that would have been incurred if the Company had operated independently (see Note 4).

Concentrations of Supplier Risk—The Company relies on long-term agreements with key suppliers for most of its raw materials. The loss of a key source of supply or a delay in shipments could have an adverse effect on its business. Should any of the suppliers fail to deliver or should any of the key long-term supply contracts be canceled, the Company would be forced to purchase raw materials at current market prices. The Company's largest supplier provides approximately 10% of raw material purchases. In addition, several of the feedstocks at various facilities are transported through a pipeline from one supplier.

Subsequent Events—The Company has evaluated events and transactions subsequent to December 31, 2017 through the date of issuance of its Consolidated Financial Statements.

Reclassifications—Certain prior period balances have been reclassified to conform with current presentations.

Standard Guarantees / Indemnifications—In the ordinary course of business, the Company enters into a number of agreements that contain standard guarantees and indemnities where the Company may indemnify another party for, among other things, breaches of representations and warranties. These guarantees or indemnifications are granted under various agreements, including those governing (i) purchases and sales of assets or businesses, (ii) leases of real property, (iii) licenses of intellectual property, (iv) long-term supply agreements, (v) employee benefits services agreements and (vi) agreements with public authorities on subsidies for designated research and development projects. These guarantees or indemnifications are for the benefit of the (i) buyers in sale agreements and sellers in purchase agreements, (ii) landlords or lessors in lease contracts, (iii) licensors or licensees in license agreements, (iv) vendors or customers in long-term supply agreements, (v) service providers in employee benefits services agreements and (vi) governments or agencies subsidizing research or development. In addition, the Company guarantees some of the payables of its subsidiaries to purchase raw materials in the ordinary course of business.

These parties may also be indemnified against any third party claim resulting from the transaction that is contemplated in the underlying agreement. Additionally, in connection with the sale of assets and the divestiture of businesses, the Company may agree to indemnify the buyer for liabilities related to the pre-closing operations of the assets or businesses sold. Indemnities for pre-closing operations generally include tax liabilities, environmental liabilities and employee benefit liabilities that are not assumed by the buyer in the transaction.

Indemnities related to the pre-closing operations of sold assets normally do not represent additional liabilities to the Company, but simply serve to protect the buyer from potential liability associated with the Company's existing obligations at the time of sale. As with any liability, the Company has accrued for those pre-closing obligations that it considers to be probable and reasonably estimable. The amounts recorded at December 31, 2017 and 2016 are not significant.

While some of these guarantees extend only for the duration of the underlying agreement, many survive the expiration of the term of the agreement or extend into perpetuity (unless they are subject to a legal statute of limitations). There are no specific limitations on the maximum potential amount of future payments that the Company could be required to make under its guarantees, nor is the Company able to estimate the maximum potential amount of future payments to be made under these guarantees because the triggering events are not predictable.

Our corporate charter also requires us to indemnify, to the extent allowed by New Jersey state corporate law, our directors and officers as well as directors and officers of our subsidiaries and other agents against certain liabilities and expenses incurred by them in carrying out their obligations.

Warranties—The Company does not make express warranties on its products, other than that they comply with the Company's specifications; therefore, the Company does not record a warranty liability. Adjustments for product quality claims are not material and are charged against net sales.

Recently Issued Accounting Standards

Newly Issued Accounting Standards

In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Board Update No. 2014-09: *Revenue from Contracts with Customers (Topic 606)* ("ASU 2014-09"). ASU 2014-09 supersedes the existing revenue recognition guidance and most industry-specific guidance applicable to revenue recognition. According to the new guidance, an entity will apply a principles-based five step model to recognize revenue upon the transfer of promised goods or services to customers and in an amount that reflects the consideration for which the entity expects to be entitled in exchange for those goods or services. The effective date for ASU 2014-09 is for annual and interim periods beginning on or after December 15, 2017. Entities will have the option of using either a full retrospective approach or a modified approach to adopt the guidance in ASU 2014-09. The Company adopted ASU 2014-09 utilizing a modified retrospective approach, which resulted in a cumulative adjustment to equity on the adoption date of January 1, 2018. The implementation of this standard resulted only in timing differences for certain revenue items, which will not have a material impact on the Company's financial statements. Additionally, ASU 2014-09 contains expanded footnote disclosure requirements, which will be reflected in the Company's SEC filings beginning in 2018.

In February 2016, the FASB issued Accounting Standards Board Update No. 2016-02: *Leases (Topic 842)* ("ASU 2016-02"). ASU 2016-02 supersedes the existing lease guidance in Topic 840. According to the new guidance, all leases, with limited scope exceptions, will be recorded on the balance sheet in the form of a liability to make lease payments (lease liability) and a right-of-use asset representing the right to use the underlying asset for the lease term. The guidance is effective for annual and interim periods beginning on or after December 15, 2018, and early adoption is permitted. The Company is assessing the potential impact of this standard on its financial statements through a formalized implementation project.

In August 2016, the FASB issued Accounting Standards Board Update No. 2016-15: *Statement of Cash Flows (Topic 230)* ("ASU 2016-15") as part of the FASB simplification initiative. ASU 2016-15 provides guidance on treatment in the statement of cash flows for eight specific cash flow topics, with the objective of reducing existing diversity in practice. Of the eight cash flow topics addressed in the new guidance, the topics which could have an impact on the Company include debt prepayment or debt extinguishment costs, accounts receivable factoring, proceeds from the settlement of insurance claims and distributions received from equity method investees. The guidance is effective for annual periods beginning after December 15, 2017, including interim periods within that reporting period. The Company is currently assessing the potential impact of ASU 2016-15 on its financial statements.

In November 2016, the FASB issued Accounting Standards Board Update No. 2016-18: *Statement of Cash Flows (Topic 230) Restricted Cash* ("ASU 2016-18") as part of the FASB simplification initiative. ASU 2016-18 requires that amounts generally described as restricted cash and restricted cash equivalents should be included with cash and cash equivalents when reconciling the beginning-of-period and end-of period total amounts shown on the statement of cash flows. ASU 2016-18 also requires supplemental disclosure regarding the nature of restrictions on a company's cash and cash equivalents, such as the purpose and terms of the restriction, expected duration of the restriction and the amount of cash subject to restriction. The guidance is effective for annual periods beginning after December 15, 2017, including interim periods within that reporting period. Based on restricted cash balances at December 31, 2017 and 2016, beginning and ending cash balances in the Consolidated Statements of Cash Flows would include $18 and $17, respectively, of restricted cash upon adoption of this standard.

In January 2017, the FASB issued Accounting Standards Board Update No. 2017-01: *Clarifying the Definition of a Business (Topic 805)* ("ASU 2017-01"). ASU 2017-01 clarifies the definition of a business with the objective of adding guidance to assist entities with evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. The definition of a business affects many areas of accounting including acquisitions, disposals, goodwill, and consolidation. The guidance is effective for annual periods beginning after December 15, 2017, including interim periods within that reporting period. The Company is currently assessing the potential impact of ASU 2017-01 on its financial statements.

In March 2017, the FASB issued Accounting Standards Board Update No. 2017-07: *Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost* ("ASU 2017-07"). ASU 2017-07 requires that an employer report the service cost component of its net periodic pension and postretirement benefit costs ("net benefit cost") in the same line item or items as other compensation costs arising from services rendered by employees during the period. Additionally, ASU 2017-07 only allows the service cost component of net benefit cost to be eligible for capitalization into inventory. All other components of net benefit cost, which primarily include interest cost, expected return on assets and the annual mark-to-market liability remeasurement, are required to be presented in the income statement separately from the service cost component and outside of income from operations. The guidance is effective for annual periods beginning after December 15, 2017, including interim periods within that reporting period. Based on the non-service cost components of net benefit cost in the Consolidated Statements of Operations, there would be no net impact for the year ended December 31, 2017 and for the years ended December 31, 2016 and 2015, losses of $34 and gains of $17, respectively, would be reclassified from "Operating income" to "Other non-operating expense (income), net" upon adoption of this standard.

Newly Adopted Accounting Standards

In July 2015, the FASB issued Accounting Standards Board Update No. 2015-11: Simplifying the Measurement of Inventory (Topic 330) ("ASU 2015-11") as part of the FASB simplification initiative. ASU 2015-11 replaces the existing concept of market value of inventory (where market was defined as replacement cost, with a ceiling of net realizable value and floor of net realizable value less a normal profit margin) with the single measurement of net realizable value. The guidance was effective for annual periods beginning after December 15, 2016, including interim periods within that reporting period. The Company adopted ASU 2015-11 as of January 1, 2017 and adoption of this standard had no impact on the Company's financial statements.

In March 2016, the FASB issued Accounting Standards Board Update No. 2016-07: *Simplifying the Transition to the Equity Method of Accounting (Topic 323)* ("ASU 2016-07") as part of the FASB simplification initiative. ASU 2016-07 eliminates the requirement that when an existing investment qualifies for use of the equity method, an investor adjust the investment, results of operations and retained earnings retroactively as if the equity method has been in effect in all previous periods that the investment had been held. Under the new guidance, the equity method investor is only required to adopt the equity method as of the date the investment qualifies for the equity method, with no retrospective adjustment required. The guidance was effective for annual periods beginning after December 15, 2016, including interim periods within that reporting period. The Company adopted ASU 2016-07 as of January 1, 2017 and adoption of this standard had no impact on the Company's financial statements.

In March 2016, the FASB issued Accounting Standards Board Update No. 2016-09: *Improvements to Employee Share-Based Payment Accounting (Topic 718)* ("ASU 2016-09") as part of the FASB simplification initiative. ASU 2016-09 simplifies various aspects of share-based payment accounting, including the income tax consequences, classification of equity awards as either equity or liabilities and classification on the statement of cash flows. The guidance was effective for annual periods beginning after December 15, 2016, including interim periods within that reporting period. The Company adopted ASU 2016-09 as of January 1, 2017 and adoption of this standard had no impact on the Company's financial statements.

In January 2017, the FASB issued Accounting Standards Board Update No. 2017-04: *Simplifying the Test for Goodwill Impairment (Topic 350)* ("ASU 2017-04") as part of the FASB simplification initiative. To simplify the subsequent measurement of goodwill, ASU 2017-04 eliminated Step 2 from the goodwill impairment test. Instead, under the amendments in ASU 2017-04, an entity should perform its annual, or interim, goodwill impairment test by comparing the fair value of the reporting unit with its carrying amount, which is Step 1 of the goodwill impairment test. An impairment charge should be recognized for the amount by which the carrying amount exceeds the reporting unit's fair value, not to exceed the total amount of goodwill allocated to that reporting unit. The guidance is effective for goodwill impairment tests performed after December 15, 2019 and early adoption is permitted. The Company early adopted ASU 2017-04 during 2017. See Note 5 for more information.

3. Restructuring

2017 Restructuring Activities

In November 2017, the Company initiated new restructuring actions with the intent to optimize its cost structure. The total one-time cash costs expected to be incurred for these restructuring activities are estimated at $15, consisting primarily of workforce reduction costs.

The following table summarizes restructuring information:

Total restructuring costs expected to be incurred	$	15
Restructuring costs incurred through December 31, 2017	$	12
Accrued liability at December 31, 2016	$	—
Restructuring charges		12
Payments		(1)
Accrued liability at December 31, 2017	$	11

4. Related Party Transactions

Product Sales and Purchases

The Company sells finished goods and certain raw materials to Hexion and certain of its subsidiaries. Total sales were $223, $220 and $233 for the years ended December 31, 2017, 2016 and 2015, respectively. The Company also purchases raw materials and finished goods from Hexion and certain of its subsidiaries. Total purchases were $66, $62 and $63 for the years ended December 31, 2017, 2016 and 2015, respectively. These transactions are included in “Net sales” and “Cost of sales” in the Consolidated Statements of Operations, accordingly.

The Company sells products to certain Apollo affiliates and other related parties. These sales were $14, $11 and $27 for the years ended December 31, 2017, 2016 and 2015, respectively. Accounts receivable from these affiliates were $3 at both December 31, 2017 and 2016. The Company also purchases raw materials and services from certain Apollo affiliates and other related parties. These purchases were $25, $27 and $29 for the years ended December 31, 2017, 2016 and 2015, respectively. During the years ended December 31, 2017, 2016, and 2015, the Company earned $1 as compensation for acting as distributor of products. The Company had accounts payable to these affiliates of $2 at both December 31, 2017 and 2016.

Billed Allocated Expenses

Hexion incurs various administrative and operating costs on behalf of the Company that are reimbursed by the Company. These costs include engineering and technical support, purchasing, quality assurance, sales and customer service, information systems, research and development and certain administrative services. These service costs have been allocated to the Company generally based on sales or sales volumes and when determinable, based on the actual usage of resources. These costs were $43, $39 and $43 for the years ended December 31, 2017, 2016 and 2015, respectively, and are primarily included within “Selling, general and administrative expense” in the Consolidated Statements of Operations.

Hexion provides global services related to procurement to the Company. These types of services are a raw materials based charge as a result of the global services being primarily related to procurement. The Company’s expense relating to these services totaled $15, $13 and $18 for the years ended December 31, 2017, 2016 and 2015, respectively, and is classified in “Selling, general and administrative expense” in the Consolidated Statements of Operations.

The Company also has various technology and royalty agreements with Hexion. Charges under these agreements are based on revenue or profits generated. The Company’s total expense related to these agreements was $10, $11 and $20 for the years ended December 31, 2017, 2016 and 2015, respectively, and is classified in “Selling, general and administrative expense” in the Consolidated Statements of Operations.

In addition, Hexion maintains certain insurance policies that benefit the Company. Expenses related to these policies are allocated to the Company based upon sales, and were $4, $5 and $5 for the years ended December 31, 2017, 2016 and 2015, respectively. These expenses are included in “Selling, general and administrative expense” in the Consolidated Statements of Operations.

Foreign Exchange Gain/Loss Agreement

The Company entered into a foreign exchange gain/loss guarantee agreement in 2011 (which was renewed in each year from 2012 through 2017) with Hexion, whereby Hexion agreed to hold the Company neutral for any foreign exchange gains or losses incurred by the Company for statutory purposes associated with certain of its affiliated loans. The Company recorded unrealized (losses)/gains of ($86), $18 and $93 for the years ended December 31, 2017, 2016 and 2015, respectively, which has been recorded within “Other non-operating expense (income), net” in the Consolidated Statements of Operations.

During the year ended December 31, 2015, $85 of the outstanding receivable related to the hedge agreement results from 2014 was converted into an affiliated loan from Hexion to the Company. During the year ended December 31, 2016, $93 of the outstanding receivable related to the hedge agreement results from 2015 was also converted into the outstanding affiliated loan from Hexion to the Company. During the year ended December 31, 2017, the balance of this affiliated loan was reduced by $6 related to the hedge agreement results from 2016 and the first half of 2017, combined with the impact of interest and foreign exchange on the existing loan balance. At December 31, 2016, the balance of this affiliated loan was recorded in "Loans receivable from parent" within the equity section of the Consolidated Balance Sheets. At December 31, 2017, the balance of this affiliated loan is recorded in “Long-term loans receivable from affiliates” within the asset section of the Consolidated Balance Sheets.

Cash Pooling Agreement Guarantee

In March 2012, the Company entered into a guarantee agreement with Hexion whereby Hexion agreed to hold the Company neutral for any interest income or expense exposure incurred by the Company for statutory purposes associated with certain of its affiliated loans that were entered into under an internal cash management agreement. In connection with this agreement, the Company recorded less than $1, $2 and $1 for the years ended December 31, 2017, 2016 and 2015, respectively, which has been recorded within “Other non-operating expense (income), net” in the Consolidated Statements of Operations.

Accounts Receivable Factoring Agreement Guarantee

In December 2013, the Company entered into a guarantee agreement with Hexion whereby Hexion agreed to hold the Company neutral for any foreign exchange or bad debt exposure incurred by the Company for statutory purposes associated with purchases and sales of accounts receivable under an internal accounts receivable purchase and sale agreement. In connection with this agreement, the Company recorded income of less than $1 for the years ended December 31, 2017, 2016 and 2015, which has been recorded within “Other non-operating expense (income), net” in the Consolidated Statements of Operations.

Other Allocated Expenses

At December 31, 2017 and 2016, the Company had affiliated receivables of $90 and $87, respectively, and affiliated payables of $104 and $79, respectively, pertaining to all of the billed related party transactions described above.

Unbilled Allocated Corporate Controlled Expenses

In addition to direct charges, Hexion provides certain administrative services that are not reimbursed by the Company. These costs include corporate controlled expenses such as executive management, legal, health and safety, accounting, tax and credit, and have been allocated herein to the Company on the basis of “Net sales.” The charges also include allocated stock-based compensation expense of less than $1 for the years ended December 31, 2017, 2016 and 2015, which is included in the Finance section of the table below. Management believes that the amounts are allocated in a manner that is reasonable and consistent, and that these allocations are necessary in order to properly depict the financial results of the Company on a stand-alone basis. However, the amounts are not necessarily indicative of the costs that would have been incurred if the Company had operated independently. These charges are included in “Selling, general and administrative expense” in the Consolidated Statements of Operations, with the offsetting credit recorded in “Paid-in capital.” There is no income tax provided on these amounts because they are not deductible for tax purposes.

The following table summarizes the corporate controlled expense allocations for the years ended December 31, 2017, 2016 and 2015:

	2017	2016	2015
Executive group	$ —	$ —	$ 3
Environmental, health and safety services	—	1	1
Finance	4	4	2
Total	$ 4	$ 5	$ 6

See Note 9 for a description of the Company’s affiliated financing and investing activities.

5. Goodwill and Other Intangible Assets

The gross carrying amount and accumulated impairments of goodwill consist of the following as of December 31, 2017 and 2016:

2017				2016			
Gross Carrying Amount	**Accumulated Impairments**	**Accumulated Foreign Currency Translation**	**Net Book Value**	**Gross Carrying Amount**	**Accumulated Impairments**	**Accumulated Foreign Currency Translation**	**Net Book Value**
$ 116	$ (5)	$ (2)	$ 109	$ 116	$ (5)	$ (13)	$ 98

The changes in the carrying amount of goodwill for the years ended December 31, 2017 and 2016 are as follows:

	Total
Goodwill balance at December 31, 2015	$ 101
Foreign currency translation	(3)
Goodwill balance at December 31, 2016	98
Foreign currency translation	11
Goodwill balance at December 31, 2017 (1)	$ 109

(1) Includes $1 of goodwill related to the ATG Business, included in "Long-term assets held for sale" in the Consolidated Balance Sheets.

The Company's intangible assets with identifiable useful lives consist of the following as of December 31, 2017 and 2016:

	2017				2016			
	Gross Carrying Amount	Accumulated Impairments	Accumulated Amortization	Net Book Value	Gross Carrying Amount	Accumulated Impairments	Accumulated Amortization	Net Book Value
Patents and technology	$ 67	$ —	$ (57)	$ 10	$ 67	$ —	$ (54)	$ 13
Customer lists and contracts	78	(17)	(57)	4	78	(17)	(57)	4
Other	19	—	(8)	11	19	—	(9)	10
Total	$ 164	$ (17)	$ (122)	$ 25	$ 164	$ (17)	$ (120)	$ 27

The impact of foreign currency translation on intangible assets is included in accumulated amortization.

Total intangible amortization expense for the years ended December 31, 2017, 2016 and 2015 was $6, $8 and $9, respectively.

Estimated annual intangible amortization expense for 2018 through 2022 is as follows:

2018	$ 4
2019	4
2020	4
2021	2
2022	1

6. Fair Value

Fair value is the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Fair value measurement provisions establish a fair value hierarchy which requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. This guidance describes three levels of inputs that may be used to measure fair value:

- **Level 1:** Inputs are quoted prices (unadjusted) for identical assets or liabilities in active markets.
- **Level 2:** Pricing inputs are other than quoted prices in active markets included in Level 1, which are either directly or indirectly observable as of the reported date.
- **Level 3:** Unobservable inputs that are supported by little or no market activity and are developed based on the best information available in the circumstances. For example, inputs derived through extrapolation or interpolation that cannot be corroborated by observable market data.

Recurring Fair Value Measurements

Following is a summary of assets and liabilities measured at fair value on a recurring basis as of December 31, 2017 and 2016:

	Fair Value Measurements Using			
	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Unobservable Inputs (Level 3)	Total
December 31, 2017				
Derivative assets	$ —	$ 135	$ —	$ 135
December 31, 2016				
Derivative assets	$ —	$ 197	$ —	$ 197

Level 2 derivative liabilities consist of derivative instruments transacted primarily in over-the-counter markets. There were no transfers between Level 1, Level 2 or Level 3 measurements during the years ended December 31, 2017 and 2016.

The Company calculates the fair value of its Level 2 derivative liabilities using standard pricing models with market-based inputs, adjusted for nonperformance risk. When its financial instruments are in a liability position, the Company evaluates its credit risk as a component of fair value. At December 31, 2017 and 2016, no adjustment was made by the Company to reduce its derivative liabilities for nonperformance risk.

When its financial instruments are in an asset position, the Company is exposed to credit loss in the event of nonperformance by other parties to these contracts and evaluates their credit risk as a component of fair value.

Non-recurring Fair Value Measurements

Following is a summary of losses as a result of the Company measuring assets at fair value on a non-recurring basis during the years ended December 31, 2017, 2016 and 2015, all of which were valued using Level 3 inputs.

	Year Ended December 31,		
	2017	2016	2015
Long-lived assets held and used	$ —	$ —	$ 4
Long-lived assets held for disposal/abandonment	—	—	2
Total	$ —	$ —	$ 6

In 2015, as a result of the likelihood that certain long-lived assets would be disposed of before the end of their estimated useful lives resulting in lower future cash flows associated with these assets, the Company wrote down long-lived assets with a carrying value of $5 to fair value of $1, resulting in an impairment charge of $4.

In 2015, as a result of the Company’s decision to dispose of certain long-lived assets before the end of their estimated useful lives, the Company wrote down long-lived assets with a carrying value of $2 to fair value of $0, resulting in an impairment charge of $2.

Non-derivative Financial Instruments

The following table summarizes the carrying amount and fair value of the Company’s non-derivative financial instruments:

		Fair Value			
	Carrying Amount	Level 1	Level 2	Level 3	Total
December 31, 2017					
Non-affiliated debt	$ 162	$ —	$ 160	$ 2	$ 162
December 31, 2016					
Non-affiliated debt	$ 97	$ —	$ 95	$ 2	$ 97

Fair values of debt classified as Level 2 are determined based on other similar financial instruments, or based upon interest rates that are currently available to the Company for the issuance of debt with similar terms and maturities. Level 3 amounts represent capital leases whose fair value is determined through the use of present value and specific contract terms. The carrying amounts of cash and cash equivalents, short term investments, accounts receivable, accounts payable and other accrued liabilities are considered reasonable estimates of their fair values due to the short-term maturity of these financial instruments.

7. Derivative Instruments and Hedging Activities

Derivative Financial Instruments

The Company is exposed to certain risks related to its ongoing business operations. The primary risks managed by using derivative instruments are foreign currency exchange risk and interest rate risk. The Company does not hold or issue derivative financial instruments for trading purposes.

Foreign Exchange Rate Swaps

International operations account for a significant portion of the Company’s revenue and operating income. The Company’s policy is to reduce foreign currency cash flow exposure from exchange rate fluctuations by hedging anticipated and firmly committed transactions when it is economically feasible. The Company periodically enters into forward contracts to buy and sell foreign currencies to reduce foreign exchange exposure and protect the U.S. dollar value of certain transactions to the extent of the amount under contract. The counter-parties to our forward contracts are financial institutions with investment grade ratings. The Company does not apply hedge accounting to these derivative instruments.

The Company is party to various foreign exchange rate swaps in Brazil in order to reduce the foreign currency risk associated with certain assets and liabilities of its Brazilian subsidiary that are denominated in U.S. dollars. The counter-parties to the foreign exchange rate swap agreements are financial institutions with investment grade ratings. The Company does not apply hedge accounting to these derivative instruments.

Foreign Exchange Gain/Loss Agreement

The Company entered into a foreign exchange gain/loss guarantee agreement in 2011 (which was renewed in each of 2012 through 2017) with Hexion whereby Hexion agreed to hold the Company neutral for any foreign exchange gains or losses incurred by the Company for income tax purposes associated with certain of its affiliated loans. This arrangement qualifies as a derivative and is recorded at fair value in the Consolidated Balance Sheets. The Company does not apply hedge accounting to this derivative instrument.

The following table summarizes the Company's derivative financial instrument assets and liabilities as of December 31:

	2017				2016				
Derivatives not designated as hedging instruments	**Average Days to Maturity**	**Average Contract Rate**	**Notional Amount**	**Fair Value Asset**	**Average Days to Maturity**	**Average Contract Rate**	**Notional Amount**	**Fair Value Asset**	**Location of Derivative Asset**
Foreign Exchange Gain/Loss Agreement									
Foreign exchange gain/loss agreement with affiliate	365	—	$ 665	$ 135	365	—	$ 506	$ 197	Accounts payable to affiliates and Long-term loans receivable from affiliates
Foreign Exchange Rate Swaps									
Brazil foreign exchange rate swaps - asset	—	—	5	—	—	—	7	—	Other current assets
Brazil foreign exchange rate swaps - liability	—	—	17	—	—	—	4	—	Other current liabilities
Total				$ 135				$ 197	

The following table summarizes gains and losses recognized on the Company's derivative financial instruments, which are recorded in "Other non-operating expense (income), net" in the Consolidated Statements of Operations:

	Amount of Gain (Loss) Recognized in Income for the Year Ended December 31:		
Derivatives not designated as hedging instruments	**2017**	**2016**	**2015**
Foreign Exchange Gain/Loss Agreement			
Foreign exchange gain/loss agreement with affiliate	$ (86)	$ 18	$ 93
Foreign Exchange Rate Swaps			
Brazil foreign exchange rate swaps	—	—	1
Total	$ (86)	$ 18	$ 94

8. Non-Affiliated Debt and Lease Obligations

Non-affiliated debt outstanding at December 31, 2017 and 2016 is as follows:

	2017		2016	
	Long-Term	**Due Within One Year**	**Long-Term**	**Due Within One Year**
ABL Facility	$ 63	$ —	$ —	$ —
Other Borrowings:				
Australia Facility due 2018 at 4.6% and 4.1% at December 31, 2017 and 2016, respectively	—	50	—	51
Brazilian bank loans at 9.9% and 11.2% at December 31, 2017 and 2016	9	34	14	26
Capital leases and other	4	2	4	2
Total	$ 76	$ 86	$ 18	$ 79

ABL Facility

In March 2013, Hexion entered into a $400 asset-based revolving loan facility, subject to a borrowing base (the “ABL Facility”). The ABL Facility replaced Hexion's senior secured credit facilities, which included a $171 revolving credit facility and the $47 synthetic letter of credit facility at the time of the termination of facilities upon Hexion's entry into the ABL Facility.

In December 2016, Hexion amended and restated the ABL Facility, with modifications to, among other things, permit the refinancing of the Old Senior Secured Notes with new first-priority senior secured notes, new senior secured notes and/or other secured or unsecured indebtedness. In connection with the issuance of the new notes in February 2017, certain lenders under the ABL Facility provided extended revolving facility commitments in an aggregate principal amount of approximately $350 with a maturity date of December 5, 2021 (subject to the early maturity triggers described below), the existing commitments were terminated and the size of the ABL Facility was reduced from $400 to $350.

As amended, the ABL Facility has a maturity date of December 5, 2021 unless, if 91 days prior to the scheduled maturity of the 6.625% First-Priority Senior Notes due 2020 and the 10.00% First-Priority Senior Secured Notes, more than $50 aggregate principal amount of these notes are outstanding, in which case the ABL Facility will mature on such earlier date. Additionally, if 91 days prior to the scheduled maturity of the 9.00% Second-Priority Senior Secured Notes due 2020, more than $50 aggregate principal amount of these notes are outstanding, the ABL Facility will mature on such earlier date.

The ABL Facility bears interest at a floating rate based on, at the Company’s option, an adjusted LIBOR rate plus an initial applicable margin of 2.25% or an alternate base rate plus an initial applicable margin of 1.25%. From and after the date of delivery of the Company's financial statements for the first fiscal quarter ended after the effective date of the ABL Facility, the applicable margin for such borrowings will be adjusted depending on the availability under the ABL Facility. As of December 31, 2017, the applicable margin for LIBOR rate loans was 2.25% and for alternate base rate loans was 1.25%. In addition to paying interest on outstanding principal under the ABL Facility, the Company is required to pay a commitment fee to the lenders in respect of the unutilized commitments at an initial rate equal to 0.50% per annum, subject to adjustment depending on the usage. The ABL Facility does not have any financial maintenance covenants, other than a fixed charge coverage ratio of 1.0 to 1.0 that only applies if availability under the ABL Facility is less than the greater of (a) $35 and (b) 12.5% of the lesser of the borrowing base and the total ABL Facility commitments at such time. The fixed charge coverage ratio under the credit agreement governing the ABL Facility is generally defined as the ratio for the most recent four consecutive fiscal quarters of (a) Adjusted EBITDA minus non-financed capital expenditures and cash taxes to (b) debt service plus cash interest expense plus certain restricted payments, each measured for the four most recent quarters in which financial statements have been delivered. The ABL Facility is secured by, among other things, first-priority liens on most of the inventory and accounts receivable and related assets of Hexion, its domestic subsidiaries and certain of its foreign subsidiaries (the “ABL Priority Collateral”), and by second-priority liens on certain collateral that generally includes most of Hexion’s, its domestic subsidiaries’ and certain of its foreign subsidiaries’ assets other than the ABL Priority Collateral, in each case subject to certain exceptions and permitted liens.

Available borrowings to the Company’s subsidiaries under the ABL Facility were $137 as of December 31, 2017, and there were $63 outstanding borrowings under the ABL Facility as of December 31, 2017.

Other Borrowings

The Company’s Australian Term Loan Facility has a variable interest rate equal to the 90 day Australian or New Zealand Bank Bill Rates plus an applicable margin. The agreement also provides access to a $8 revolving credit facility. There were no outstanding balances on the revolving credit facility at either December 31, 2017 or 2016. In February 2018, the Company extended its Australian Term Loan Facility through January 2021.

The Brazilian bank loans represent various bank loans, primarily for working capital purposes and to finance the construction of manufacturing facilities.

In addition to available borrowings under Hexion’s revolving credit facility, the Company has available borrowings under various international credit facilities. At December 31, 2017, under these international credit facilities the Company had $18 available to fund working capital needs and capital expenditures. While these facilities are primarily unsecured, portions of the lines are collateralized by equipment and cash and short term investments at December 31, 2017.

Hexion Nova Scotia Finance, ULC (a subsidiary of CO-OP, “Hexion NSF”), along with Hexion, are co-issuers and obligors of $574 of 9.00% Second-Priority Senior Secured Notes due 2020, as well as the 8.875% Senior Secured Notes due 2018, which were satisfied and discharged by Hexion on February 8, 2017. These notes are guaranteed by Hexion’s subsidiaries, and are not reflected in the Company's Consolidated Financial Statements.

Aggregate maturities of debt and minimum annual rentals under operating leases at December 31, 2017, for the Company are as follows:

Year	Debt	Minimum Rentals Under Operating Leases	Minimum Payments Under Capital Leases
2018	$ 86	$ 8	$ —
2019	4	7	—
2020	68	4	—
2021	3	3	—
2022	—	2	—
2023 and beyond	—	5	1
Total minimum payments	$ 161	$ 29	1
Less: Amount representing interest			(1)
Present value of minimum payments			$ —

The Company's operating leases consist primarily of vehicles, equipment, land and buildings. Rental expense under operating leases amounted to $8, $6 and $7 for the years ended December 31, 2017, 2016 and 2015, respectively.

9. Affiliated Financing

The following table summarizes the Company's outstanding loans payable and loans receivable with unconsolidated affiliates as of December 31, 2017 and 2016, as well as the corresponding interest expense (income) for the years ended December 31, 2017 and 2016:

	2017			2016		
	Long-Term	Due Within One Year	Interest Expense (Income)	Long-Term	Due Within One Year	Interest Expense (Income)
Affiliated debt payable:						
Loan payable to Hexion due 2020 at 9.0% at December 31, 2017 and 2016 (1)	$ 306	$ —	$ 26	$ 268	$ —	$ 25
Loan payable to Hexion due 2020 at 10.0% at December 31, 2017 and 2016 (2)	148	—	13	125	—	12
Loan payable to Hexion due 2020 at 6.6% at December 31, 2017 and 2016 (3)	583	—	39	583	—	38
Loan payable to Hexion due 2017 at 2.6% at December 31, 2016 (4)	—	—	—	—	—	2
Other loans due to Hexion and affiliates at 5.3% and 4.8% at December 31, 2017 and 2016, respectively (5)	59	31	5	63	46	5
Total affiliated debt payable (6)	$ 1,096	$ 31	$ 83	$ 1,039	$ 46	$ 82
Affiliated debt receivable:						
Loan receivable from Hexion due 2017 at 2.5% at December 31, 2016 (7)	$ —	$ —	$ —	$ —	$ 145	$ (4)
Other loans due from Hexion and affiliates at 3.7% and 3.3% at December 31, 2017 and 2016, respectively (8)(9)	208	4	(8)	180	28	(7)
Total affiliated debt receivable (10)	$ 208	$ 4	$ (8)	$ 180	$ 173	$ (11)

(1) Loan issued in 2010 in conjunction with CO-OP's acquisition of a German subsidiary.
(2) Loan issued in 2010 in conjunction with Canadian tax restructuring.
(3) Loan issued in 2012 in conjunction with Hexion's refinancing activities in 2012 and 2013.
(4) Loan issued in 2014 for cash management purposes and settled in 2016.
(5) Other loans payable for tax and cash management purposes.
(6) The total outstanding loans payable balances are included in "Affiliated debt payable within one year" and "Affiliated long-term debt" in the Consolidated Balance Sheets.
(7) Loan issued in 2015 for cash management purposes and settled in 2017.
(8) Other loans receivable for tax and cash management purposes.
(9) Included in other loans receivable as of December 31, 2017 and 2016 is $173 and $179, respectively, related to the conversion of outstanding receivables related to the FX hedge agreement results into an affiliated loan from Hexion to the Company. At December 31, 2016, the balance of this affiliated was recorded as in equity in the Consolidated Balance Sheets as the loan receivable from Hexion was permanent in nature and not expected to be repaid in the foreseeable future. In 2017, the impact of the internal reorganization within the Hexion group resulted in the Company no longer designating this loan receivable as permanent. As a result, the outstanding balance of this loan was reclassified from equity to "Long-term loans receivable from affiliates" in the Consolidated Balance Sheets at December 31, 2017.
(10) The total outstanding loans receivable balances are included in "Loans receivable from affiliates" and "Long-term loans receivable from affiliates" in the Consolidated Balance Sheets.

10. Commitments and Contingencies

Environmental Matters

The Company's operations involve the use, handling, processing, storage, transportation and disposal of hazardous materials. The Company is subject to extensive environmental regulation and is therefore exposed to the risk of claims for environmental remediation or restoration. In addition, violations of environmental laws or permits may result in restrictions being imposed on operating activities, substantial fines, penalties, damages or other costs, any of which could have a material adverse effect on the Company's business, financial condition, results of operations or cash flows.

Environmental Institution of Paraná IAP—On August 10, 2005, the Environmental Institute of Paraná (IAP), an environmental agency in the State of Paraná, provided Hexion Quimica Industria, the Company's Brazilian subsidiary, with notice of an environmental assessment in the amount of 12 Brazilian reals. The assessment related to alleged environmental damages to the Paranagua Bay caused in November 2004 from an explosion on a shipping vessel carrying methanol purchased by the Company. The investigations performed by the public authorities have not identified any actions of the Company that contributed to or caused the accident. The Company responded to the assessment by filing a request to have it cancelled and by obtaining an injunction precluding execution of the assessment pending adjudication of the issue. In November 2010, the Court denied the Company's request to cancel the assessment and lifted the injunction that had been issued. The Company responded to the ruling by filing an appeal in the State of Paraná Court of Appeals. In March 2012, the Company was informed that the Court of Appeals had denied the Company's appeal, and on June 4, 2012 the Company filed appeals to the Superior Court of Justice and the Supreme Court of Brazil. In September 2016, the Superior Court of Justice decided that strict liability does not apply to administrative fines issued by environmental agencies and reversed the decision of the State of Paraná Court of Appeals. The Superior Court of Justice remanded the case back to the Court of Appeals to determine if the IAP met its burden of proving negligence by the Company. In September 2017, the State of Paraná Court of Appeals decided that IAP did not prove that the Company was negligent and granted the Company's request to annul the environmental assessment. IAP filed a motion for clarification regarding the Court of Appeals' analysis of the case and the Company filed a motion for clarification regarding attorney fees. After the pending motions are resolved, IAP will have 15 business days to file an appeal with the Superior Court of Justice. The Company does not believe that a loss is probable. At December 31, 2017, the amount of the assessment, including tax, penalties, monetary correction and interest, is 44 Brazilian reals, or approximately $13.

The following table summarizes all probable environmental remediation, indemnification and restoration liabilities, including related legal expenses, at December 31, 2017 and 2016.

	Liability		2017 Range of Reasonably Possible Costs	
Site Description	**December 31, 2017**	**December 31, 2016**	**Low**	**High**
Currently-owned	$ 3	$ 2	$ 2	$ 6
Formerly-owned:				
Remediation	1	1	1	2
Monitoring only	—	—	—	—
Total	$ 4	$ 3	$ 3	$ 8

These amounts include estimates for unasserted claims that the Company believes are probable of loss and reasonably estimable. The estimate of the range of reasonably possible costs is less certain than the estimates upon which the liabilities are based. To establish the upper end of a range, assumptions less favorable to the Company among the range of reasonably possible outcomes were used. As with any estimate, if facts or circumstances change, the final outcome could differ materially from these estimates. At both December 31, 2017 and 2016, $1 and $2, respectively, has been included in "Other current liabilities" in the Consolidated Balance Sheets with the remaining amount included in "Other long-term liabilities."

Non-Environmental Legal Matters

The Company is involved in various product liability, commercial and employment litigation, personal injury, property damage and other legal proceedings that are considered to be in the ordinary course of business. The Company has reserves of $1 and $2 at December 31, 2017 and 2016, respectively, for all non-environmental legal defense costs incurred and settlement costs that it believes are probable and estimable. At December 31, 2017 and 2016, $1 has been included in "Other current liabilities" in the Consolidated Balance Sheets with the remaining amount included in "Other long-term liabilities."

Other Commitments and Contingencies

Purchase Commitments

The Company has entered into contractual agreements with third parties for the supply of site services, utilities, materials and facilities and for operation and maintenance services necessary to operate certain of the Company's facilities on a stand-alone basis. The duration of the contracts range from less than one year to 20 years, depending on the nature of services. These contracts may be terminated by either party under certain conditions as provided for in the respective agreements; generally, 90 days notice is required for short-term contracts and three years notice is required for longer-term contracts (generally those contracts in excess of five years). Contractual pricing generally includes a fixed and variable component.

In addition, the Company has entered into contractual agreements with third parties to purchase feedstocks or other services. The terms of these agreements vary from one to ten years and may be extended at the Company's request and are cancelable by either party as provided for in each agreement. Feedstock prices are based on market prices less negotiated volume discounts or cost input formulas. The Company is required to make minimum annual payments under these contracts as follows:

Year	Minimum Annual Purchase Commitments
2018	$ 174
2019	80
2020	80
2021	9
2022	9
2023 and beyond	68
Total minimum payments	420
Less: Amount representing interest	(29)
Present value of minimum payments	$ 391

11. Pension and Non-Pension Postretirement Benefit Plans

Certain of the Company's subsidiaries sponsor defined benefit pension plans covering certain associates primarily in Canada, Netherlands, Germany, Brazil, France, Belgium and Malaysia. Depending on the plan, benefits are based on eligible compensation and/or years of credited service. The Company also sponsors defined contribution plans in some locations. Non-pension postretirement benefit plans are also provided to associates in Canada, Brazil and to certain associates in the Netherlands. The Canadian plan provides retirees and their dependents with medical and life insurance benefits, which are supplemental benefits to the respective provincial healthcare plan in Canada. The Brazilian plan became effective in 2012 as a result of a change in certain regulations, and provides retirees with access to medical benefits, with the retiree being responsible for 100% of the premiums. In 2014, the plan was amended such that 100% of the premiums of active employees are paid by the Company. The Netherlands' plan provides a lump sum payment at retirement for grandfathered associates.

The following table presents the change in benefit obligation, change in plan assets and components of funded status for the Company's defined benefit pension and non-pension postretirement benefit plans for the years ended December 31:

	Pension Benefits		Postretirement Benefits	
	2017	2016	2017	2016
Change in Benefit Obligation				
Benefit obligation at beginning of year	$ 548	$ 492	$ 10	$ 9
Service cost	16	14	—	—
Interest cost	9	10	1	1
Actuarial (gains) losses	(6)	57	—	(1)
Foreign currency exchange rate changes	77	(13)	—	1
Benefits paid	(11)	(10)	—	—
Reduction due to divestitures	—	(3)	—	—
Plan amendments	2	—	—	—
Employee contributions	1	1	—	—
Benefit obligation at end of year	636	548	11	10
Change in Plan Assets				
Fair value of plan assets at beginning of year	349	316	—	—
Actual return on plan assets	4	33	—	—
Foreign currency exchange rate changes	48	(10)	—	—
Employer contributions	21	19	—	—
Benefits paid	(11)	(10)	—	—
Employee contributions	1	1	—	—
Fair value of plan assets at end of year	412	349	—	—
Funded status of the plan at end of year	$ (224)	$ (199)	$ (11)	$ (10)

The foreign currency impact reflected in these rollforward tables are primarily for changes in the euro and Canadian dollar versus the U.S. dollar.

	Pension Benefits		Postretirement Benefits	
	2017	2016	2017	2016
Amounts recognized in the Consolidated Balance Sheets at December 31 consist of:				
Other current liabilities	$ (5)	$ (4)	$ (1)	$ —
Long-term pension obligations	(220)	(195)	(10)	(10)
Accumulated other comprehensive loss	—	(3)	1	2
Net amounts recognized	$ (225)	$ (202)	$ (10)	$ (8)
Amounts recognized in Accumulated other comprehensive loss at December 31 consist of:				
Net prior service (benefit) cost	$ (1)	$ (4)	$ 2	$ 3
Deferred income taxes	1	1	(1)	(1)
Net amounts recognized	$ —	$ (3)	$ 1	$ 2
Accumulated benefit obligation	$ 587	$ 504		
Accumulated benefit obligation for funded plans	393	350		
Pension plans with underfunded or non-funded accumulated benefit obligations at December 31:				
Aggregate projected benefit obligation	$ 615	$ 173		
Aggregate accumulated benefit obligation	567	164		
Aggregate fair value of plan assets	391	9		
Pension plans with projected benefit obligations in excess of plan assets at December 31:				
Aggregate projected benefit obligation	$ 615	$ 548		
Aggregate fair value of plan assets	391	349		

Following are the components of net pension and postretirement expense (benefit) recognized for the years ended December 31:

	Pension Benefits			Postretirement benefits		
	2017	2016	2015	2017	2016	2015
Service cost	$ 16	$ 14	$ 16	$ —	$ —	$ —
Interest cost on projected benefit obligation	9	10	12	1	1	1
Expected return on assets	(11)	(10)	(13)	—	—	—
Amortization of prior service benefit	(1)	(1)	—	—	—	—
Unrealized actuarial loss (gain)	1	35	(16)	1	(1)	(1)
Net expense (benefit)	$ 14	$ 48	$ (1)	$ 2	$ —	$ —

The following amounts were recognized in "Accumulated other comprehensive loss" during the year ended December 31, 2017:

	Pension Benefits	Non-Pension Postretirement Benefits	Total
Prior service benefit from plan amendments	$ 2	$ —	$ 2
Amortization of prior service benefit	1	(1)	—
Loss (gain) recognized in accumulated other comprehensive loss, net of tax	$ 3	$ (1)	$ 2

The amounts in "Accumulated other comprehensive loss" that are expected to be recognized as components of net periodic benefit cost (benefit) during the next fiscal year are less than $1.

Determination of actuarial assumptions

The Company's actuarial assumptions are determined separately for each plan, taking into account the demographics of the population, the target asset allocations for funded plans, regional economic trends, statutory requirements and other factors that could impact the benefit obligation and plan assets. For the European plans, most assumptions are set by country, as the plans within these countries have similar demographics, and are impacted by the same regional economic trends and statutory requirements.

The discount rates selected reflect the rate at which pension obligations could be effectively settled. The Company selects the discount rates based on cash flow models using the yields of high-grade corporate bonds or the local equivalent with maturities consistent with the Company's anticipated cash flow projections. The Company's pension and OPEB liabilities and related service and interest cost are calculated using a split-rate interest discounting methodology, whereby expected future cash flows related to these liabilities are discounted using multiple interest rates on a forward curve that correspond to the timing of the expected cash flows.

The expected rates of future compensation level increases are based on salary and wage trends in the chemical and other similar industries, as well as the Company's specific compensation targets by country. Input is obtained from the Company's internal Human Resources group and from outside actuaries. These rates include components for wage rate inflation and merit increases.

The expected long-term rate of return on Canadian plan assets is determined based on the plan's current and projected asset mix. To determine the expected overall long-term rate of return on assets, the Company takes into account the rates on long-term debt investments held within the portfolio, as well as expected trends in the equity markets. Peer data and historical returns are reviewed and the Company consults with its actuaries, as well as investment professionals, to confirm that the Company's assumptions are reasonable.

The weighted average rates used to determine the benefit obligations were as follows at December 31:

	Pension Benefits		Postretirement Benefits	
	2017	2016	2017	2016
Discount rate	1.9%	1.9%	5.3%	6.0%
Rate of increase in future compensation levels	2.4%	2.4%	—	—
The weighted average assumed health care cost trend rates are as follows at December 31:				
Health care cost trend rate assumed for next year	—	—	5.8%	5.9%
Rate to which the cost trend rate is assumed to decline (the ultimate trend rate)	—	—	4.5%	4.5%
Year that the rate reaches the ultimate trend rate	—	—	2023	2030

The weighted average rates used to determine net periodic pension and postretirement expense were as follows for the years ended December 31:

	Pension Benefits			Postretirement Benefits		
	2017	2016	2015	2017	2016	2015
Discount rate	1.9%	2.3%	2.2%	6.0%	5.5%	6.1%
Rate of increase in future compensation levels	2.4%	2.4%	3.0%	—	—	—
Expected long-term rate of return on plan assets	2.9%	3.1%	3.8%	—	—	—

A one-percentage-point change in the assumed health care cost trend rates would change the projected benefit obligation for non-pension postretirement benefits by $2 and service cost and interest cost by a negligible amount.

Pension Investment Policies and Strategies

The Company's investment strategy for the assets of its Canadian defined benefit pension plans is to maximize the long-term return on plan assets using a mix of equities and fixed income investments with a prudent level of risk. Risk tolerance is established through careful consideration of plan liabilities, plan funded status and expected timing of future cash flow requirements. The investment portfolio contains a diversified blend of equity and fixed-income investments. Equity investments are also diversified across Canadian and foreign stocks, as well as growth, value and small and large capitalization investments. Investment risk and performance are measured and monitored on an ongoing basis through periodic investment portfolio reviews, annual liability measurements and periodic asset and liability studies.

The Company periodically reviews its target allocation of Canadian plan assets among various asset classes. The targeted allocations are based on anticipated asset performance, discussions with investment professionals and on the projected timing of future benefit payments.

The Company observes local regulations and customs regarding its European pension plans in determining asset allocations, which generally require a blended weight leaning toward more fixed income securities, including government bonds.

	Actual		Target
	2017	2016	2017
Weighted average allocations of pension plan assets at December 31:			
Equity securities	22%	23%	22%
Debt securities	76%	74%	78%
Cash, short-term investments and other	2%	3%	—%
Total	100%	100%	100%

Fair Value of Plan Assets

Fair value is the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Fair value measurement provisions establish a fair value hierarchy which requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. This guidance describes three levels of inputs that may be used to measure fair value:

- **Level 1:** Inputs are quoted prices (unadjusted) for identical assets or liabilities in active markets.
- **Level 2:** Pricing inputs are other than quoted prices in active markets included in Level 1, which are either directly or indirectly observable as of the reported date.
- **Level 3:** Unobservable inputs that are supported by little or no market activity and are developed based on the best information available in the circumstances. For example, inputs derived through extrapolation or interpolation that cannot be corroborated by observable market data.

Certain investments measured at net asset value ("NAV"), as a practical expedient for fair value, have been excluded from the fair value hierarchy.

The following table presents pension plan investments measured at fair value on a recurring basis as of December 31, 2017 and 2016:

	Fair Value Measurements Using							
	2017				2016			
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Unobserv-able Inputs (Level 3)	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Unobserv-able Inputs (Level 3)	Total
Pooled insurance products with fixed income guarantee (1)	$ —	$ 11	$ —	$ 11	$ —	$ 9	$ —	$ 9
Total	$ —	$ 11	$ —	$ 11	$ —	$ 9	$ —	$ 9
Investments measured at fair value using net asset value as a practical expedient:								
Other international equity funds (2)				$ 90				$ 82
Other fixed income securities (2)				311				258
Total				$ 412				$ 349

(1) Level 2 equity and fixed income securities are primarily in pooled asset and mutual funds and are valued based on underlying net asset value multiplied by the number of shares held. The underlying asset values are based on observable inputs and quoted market prices.

(2) Represents investments in commingled funds with exposure to a variety of hedge fund strategies, which are not publicly traded and have ongoing redemption restrictions. The Company's interest in these investments is measured at net asset value per share as a practical expedient for fair value, which is derived from the underlying asset values in these funds, only some of which represent observable inputs and quoted market prices. In accordance with ASU 2015-07, these investments are excluded from the fair value hierarchy.

Projections of Plan Contributions and Benefit Payments

The Company expects to make contributions of $23 to its defined benefit pension plans in 2018.

Estimated future plan benefit payments as of December 31, 2017 are as follows:

	Pension Benefits	Postretirement Benefits
2018	$ 12	$ 1
2019	13	—
2020	12	—
2021	14	—
2022	15	—
2023-2027	97	2

Defined Contribution and Other Plans

The Company sponsors a number of defined contribution plans for its associates in various countries. For most plans, employee contributions are voluntary, and the Company provides contributions ranging from 2% to 10%. Total charges to operations for matching contributions under these plans were $3, $2 and $4 for the years ended December 31, 2017, 2016 and 2015, respectively.

The Company's German subsidiaries offer a government subsidized early retirement program to eligible associates called an Altersteilzeit Plan. The German government provides a subsidy in certain cases where the participant is replaced with a qualifying candidate. This subsidy was discontinued for associates electing participation in the program after December 31, 2009. The Company had liabilities for these arrangements of $1 both at December 31, 2017 and 2016, respectively. The Company incurred expense for these plans of less than $1 for each of the years ended December 31, 2017, 2016 and 2015.

Also included in the Consolidated Balance Sheets at both December 31, 2017 and 2016 are other post-employment benefit obligations primarily relating to liabilities for jubilee benefit plans offered to certain European associates of $2.

12. Hexion PAC Business Disposition

On June 30, 2016, Hexion completed the sale of its Performance Adhesives, Powder Coatings, Additives & Acrylic Coatings and Monomers businesses (“Hexion PAC Business”) pursuant to the terms of a Purchase Agreement with Synthomer plc (the “Buyer”) dated March 18, 2016. Assets included in the transaction are the Company’s manufacturing sites in Sokolov, Czech Republic; Sant’Albano, Italy; Leuna, Germany; and Asua, Spain. The Hexion PAC Business produces resins, polymers, monomers and additives that provide enhanced performance for adhesives, sealants, paints, coatings, mortars and cements used primarily in consumer, industrial and building and construction applications. Hexion also agreed to provide certain transitional services to the Buyer for a limited period of time following the closing of the transaction.

Hexion received gross cash consideration for the Hexion PAC business in the amount of $226, less approximately $6 relating to liabilities transferred to the Buyer, net of cash and estimated working capital that transferred to the Buyer as part of the Purchase Agreement. A subsequent post-closing adjustment to the purchase price of less than $1 was made in accordance with the Purchase Agreement. The Company received allocated proceeds from the sale of $107, and recognized a gain on this disposition of $28, which is recorded in “Gain on disposition” in the Consolidated Statements of Operations.

The Hexion PAC Business had pre-tax income of $8 for the years ended December 31, 2016 and 2015, which is reported as a component of “(Loss) income before income taxes and earnings from unconsolidated entities” in the Consolidated Statements of Operations.

13. Assets and Liabilities Held for Sale

In December 2017, Hexion announced the proposed sale of its Additives Technology Group business (“ATG”) to MÜNZING CHEMIE GmbH (“MÜNZING”), a privately-owned specialty additive company headquartered in Abstatt, Germany. On January 8, 2018, the sale was completed and Hexion received gross cash considerations of approximately $50, subject to customary post-closing adjustments. The Company received allocated proceeds from the sale of $26, and recognized a gain on this disposition of $21. Proceeds from the sale will be used for general corporate purposes.

14. Step Acquisition

In August 2015, the Company acquired the remaining 50% interest in Momentive Union Specialty Chemicals Ltd (“MUSC”), a joint venture that manufactures phenolic specialty resins in China, from its joint venture partner to better position the Company to serve its customers in this region. As a result of the transaction, the Company now owns a 100% interest in MUSC. This transaction was accounted for as a step acquisition and the allocation of the consideration exchanged was based upon a valuation of MUSC’s net identifiable assets and liabilities as of the transaction date. A gain of $5 was recorded in “Other operating (income) expense, net” in the Consolidated Statements of Operations, which represents the difference between the $10 fair value and $5 carrying value of the Company’s previously held 50% non-controlling interest in MUSC on the acquisition date. The fair value of the non-controlling interest was determined using a market approach.

15. Deficit

Shareholder’s deficit reflects the common equity of the Company with all of the common equity of its subsidiaries eliminated as of December 31, 2017 and 2016.

In 2016 and 2015, $93 and $85, respectively, of the Company’s outstanding receivable related to the results of the foreign exchange gain/loss guarantee agreement with Hexion was converted into an affiliated loan from Hexion to the Company (see Note 4), which was reflected in "Loans receivable from parent" in the Consolidated Balance Sheets at December 31, 2016 and 2015 due to the Company’s determination that this affiliated loan was permanent in nature. In 2017, the balance of this affiliated loan was reduced by $6 related to the results of the foreign exchange gain/loss guarantee agreement from 2016 and the first half of 2017, combined with the impact of interest and foreign exchange on the existing loan balance. Further, the impact of the internal reorganization within the Hexion group resulted in the Company no longer designating this affiliated loan as permanent. As a result, the outstanding balance of this loan was reclassified from equity to “Long-term loans receivable from affiliates” in the Consolidated Balance Sheets at December 31, 2017.

In 2017, the Company made a non-cash return of capital to Hexion of $158, which is reflected as a reduction to “Paid-in capital” in the Consolidated Statements of Deficit.

16. Changes in Accumulated Other Comprehensive Loss

Following is a summary of changes in “Accumulated other comprehensive loss” for the years ended December 31, 2017 and 2016:

	Year Ended December 31, 2017			Year Ended December 31, 2016		
	Defined Benefit Pension and Postretirement Plans	**Foreign Currency Translation Adjustments**	**Total**	**Defined Benefit Pension and Postretirement Plans**	**Foreign Currency Translation Adjustments**	**Total**
Beginning balance	$ —	$ (86)	$ (86)	$ 1	$ (62)	$ (61)
Other comprehensive (loss) income before reclassifications, net of tax	(2)	29	27	(1)	(24)	(25)
Ending balance	$ (2)	$ (57)	$ (59)	$ —	$ (86)	$ (86)

17. Income Taxes

Income tax expense for the Company for the years ended December 31, 2017, 2016 and 2015 is as follows:

	2017	2016	2015
Current:			
Federal	$ —	$ 6	$ —
Foreign	15	23	19
Total current	15	29	19
Deferred:			
Federal	(2)	2	—
Foreign	3	—	8
Total deferred	1	2	8
Income tax expense	$ 16	$ 31	$ 27

A reconciliation of the Company's combined differences between income taxes computed at the Dutch federal statutory tax rate of 25.0% and provisions for income taxes for the years ended December 31, 2017, 2016 and 2015 is as follows:

	2017	2016	2015
Income taxes computed at federal statutory tax rate	$ (32)	$ 18	$ 53
Foreign rate differentials	(1)	(5)	11
Losses (gains) and other expenses (income) not deducted (excluded) for tax	18	(2)	—
Increase (decrease) in the taxes due to changes in valuation allowance	27	(15)	(45)
Additional tax expense on foreign unrepatriated earnings	1	1	3
Additional expense for uncertain tax positions	4	14	5
Write-off of foreign net operating losses	—	20	—
Tax recognized in other comprehensive income	(1)	—	—
Income tax expense	$ 16	$ 31	$ 27

The domestic and foreign components of the Company's (loss) income before income taxes for the years ended December 31, 2017, 2016 and 2015 is as follows:

	2017	2016	2015
Domestic	$ (143)	$ 122	$ 156
Foreign	15	(49)	56
Total	$ (128)	$ 73	$ 212

The tax effects of the Company's significant temporary differences and net operating loss and credit carryforwards which comprise the deferred tax assets and liabilities at December 31, 2017 and 2016, are as follows:

	2017	2016
Assets:		
Non-pension post-employment	$ 4	$ 3
Accrued and other expenses	15	14
Property, plant and equipment	1	2
Intangibles	6	6
Net operating loss and credit carryforwards	108	82
Pension liabilities	40	37
Gross deferred tax assets	174	144
Valuation allowance	(146)	(119)
Net deferred tax asset	28	25
Liabilities:		
Property, plant and equipment	(17)	(12)
Unrepatriated earnings of foreign subsidiaries	(5)	(4)
Intangibles	(5)	(6)
Gross deferred tax liabilities	(27)	(22)
Net deferred tax asset	$ 1	$ 3

The following table summarizes the presentation of the Company's net deferred tax asset in the Consolidated Balance Sheets at December 31, 2017 and 2016:

Assets:	**2017**	**2016**
Long-term deferred income taxes (Other long-term assets)	$ 8	$ 12
Liabilities:		
Long-term deferred income taxes	(7)	(9)
Net deferred tax asset	$ 1	$ 3

The Company's deferred tax assets primarily include domestic and foreign net operating loss carryforwards and disallowed interest carryforwards. As of December 31, 2017, the domestic net operating loss carryforwards available are $344, which expire beginning in 2019. A valuation allowance of $86 has been provided against a portion of these attributes. The foreign net operating loss carryforwards and disallowed interest carryforwards available are $149. These attributes are related primarily to Germany which have an unlimited carryover and do not expire. A valuation allowance has been provided against these foreign tax attributes.

The Company conducts business globally and, as a result, certain of its subsidiaries file income tax returns in various foreign jurisdictions. In the normal course of business, the Company is subject to examinations by taxing authorities throughout the world, including major jurisdictions such as the Netherlands, Brazil, Canada, Germany, Italy, and the United Kingdom.

With minor exceptions, the Company's closed tax years for major jurisdictions are years prior to: 2010 for Netherlands, 2011 for Brazil, 2010 for Canada, 2014 for Germany, 2007 for Italy, and 2012 for the United Kingdom.

The Company continuously reviews issues that are raised from ongoing examinations and open tax years to evaluate the adequacy of its liabilities. As the various taxing authorities continue with their audit/examination programs, The Company will adjust its reserves accordingly to reflect these settlements.

Unrecognized Tax Benefits

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

	2017	**2016**
Balance at beginning of year	$ 54	$ 44
Additions based on tax positions related to the current year	3	4
Additions for tax positions of prior years	—	41
Reductions for tax positions of prior years	(1)	(35)
Lapse of statue of limitations	1	—
Foreign currency translation	5	—
Balance at end of year	$ 62	$ 54

During the year ended December 31, 2017, the Company increased the amount of its unrecognized tax benefits, including its accrual for interest and penalties, by $10, primarily as a result of increases in the unrecognized tax benefit for various intercompany transactions, offset by releases of unrecognized tax benefits from negotiations with foreign jurisdictions and lapses of statute of limitations. During the years ended December 31, 2017, 2016 and 2015, the Company recognized approximately $3, $4 and $2, respectively, in interest and penalties. The Company had approximately $14 and $11 accrued for the payment of interest and penalties at December 31, 2017 and 2016, respectively.

$62 of unrecognized tax benefits, if recognized, would affect the effective tax rate; however, a portion of the unrecognized tax benefit would be in the form of a net operating loss carryforward, which would be subject to a full valuation allowance. The Company anticipates recognizing less than $1 of the total amount of the unrecognized tax benefits within the next 12 months as a result of negotiations with foreign jurisdictions and completion of audit examinations.

Report of Independent Registered Public Accounting Firm

To the Management of
Hexion International Cooperatief U.A.

We have audited the accompanying consolidated financial statements of Hexion International Cooperatief U.A. and its subsidiaries, which comprise the consolidated balance sheets as of December 31, 2017 and 2016, and the related consolidated statements of operations, deficit, comprehensive income (loss) and cash flows for each of the three years in the period ended December 31, 2017.

Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on the consolidated financial statements based on our audits. We conducted our audits 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 from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the Company's preparation and fair presentation of the consolidated financial statements in order to design 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. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Hexion International Cooperatief U.A. and its subsidiaries as of December 31, 2017 and 2016, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2017 in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matter

As discussed in Note 2 to the consolidated financial statements, the Company changed the manner in which it accounts for goodwill impairments in 2017. Our opinion is not modified with respect to this matter.

/s/ PricewaterhouseCoopers LLP
Columbus, Ohio
March 2, 2018

Exhibit 10.90

MOMENTIVE UV COATINGS (SHANGHAI) CO., LTD.

FINANCIAL STATEMENTS AND
REPORT OF THE AUDITORS
FOR THE YEAR ENDED 31 DECEMBER 2017

Audit Report

SAAF (2018) AR.NO.070

TO THE BOARD OF DIRECTORS OF
MOMENTIVE UV COATINGS (SHANGHAI) CO., LTD.

We have audited the accompanying financial statements of Momentive UV Coatings (Shanghai) Co., Ltd. (hereinafter referred to as “the Company”),including the balance sheet as of 31 December 2017 and the income statement, cash flow statement for the year then ended as well as notes to the financial statements.

1. Responsibility of the Company’s management on these financial statements

Management is responsible for the preparation of these financial statements. This responsibility includes: (1) these financial statements are prepared in accordance with Accounting Standards for Business Enterprises and the Accounting System for Business Enterprises, and present fairly. (2) designing, implementing and maintaining internal control relevant to the preparation of the financial statements that are free from material misstatement, whether due to fraud or error.

2. Responsibility of certified public accountants

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in United States of America. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor’s judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, we consider the internal control relevant to the preparation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

3. Auditor’s opinion

In our opinion, the financial statements of Momentive UV Coatings (Shanghai) Co., Ltd. have been prepared in accordance with U.S. Generally accepted accounting principles, and present fairly, in all material respects, the financial position of the Company as of 31 December 2017, and the results of its operations and cash flows for the year then ended.

/s/ Shanghai Asahi Accounting Firm Chinese CPA : Li Can

Chinese CPA : Zhu Jun

Shanghai P. R. China February 22, 2018

BALANCE SHEET (to be continued)

AS AT 31 DECEMBER 2017

(All amounts in Rmb Yuan unless otherwise stated)

ASSETS	Notes	31 December 2017	31 December 2016
Current assets			
Cash at bank and in hand	4.1	17,028,827.70	11,677,321.79
Notes receivable	4.2	34,706,282.28	26,576,197.31
Accounts receivable	2.6, 4.3	82,854,248.92	89,902,219.94
Other receivables	2.6	2,400.00	2,400.00
Inventories	2.7, 4.4	15,844,695.65	18,707,271.67
Prepaid expenses		—	4,512.95
Total current assets		**150,436,454.55**	**146,869,923.66**
Fixed assets			
Fixed assets - cost	2.8, 4.5	6,652,902.87	6,628,202.01
Less: Accumulated depreciation	2.8, 4.5	6,105,199.31	5,881,545.21
Fixed assets - net		547,703.56	746,656.8
Less: Provision for impairment of fixed assets		—	—
Fixed assets - net book value		547,703.56	746,656.8
Other assets			
Long-term prepaid expenses	2.9	482,063.89	142,500.00
Deferred tax - debit		126,654.49	240,760.17
TOTAL ASSETS		**151,592,876.49**	**147,999,840.63**

The accompanying notes form an integral part of these financial statements.

BALANCE SHEET (continued)

AS AT 31 DECEMBER 2017

(All amounts in Rmb Yuan unless otherwise stated)

LIABILITIES AND OWNERS' EQUITY	**Notes**	**31 DECEMBER 2017**	**31 DECEMBER 2016**
Current liabilities			
Short-term bank borrowings		15,000,000.00	—
Accounts payable	4.6	34,208,095.93	47,965,757.51
Salary payable		650,000.00	980,000.00
Tax payable	4.7	3,672,341.93	7,834,795.03
Other surcharges		—	10,543.40
Dividend payable		9,000,000.00	22,461,693.80
Other payable	4.8	1,513,164.86	1,887,909.46
Total current liabilities		**64,043,602.72**	**81,140,699.20**
Total liabilities		**64,043,602.72**	**81,140,699.20**
Owners' equity			
Paid-in capital	4.9	4,138,525.00	4,138,525.00
Surplus reserve	4.10	2,100,000.00	2,100,000.00
Undistributed profits	4.11	81,310,748.77	60,620,616.43
Total owners' equity		**87,549,273.77**	**66,859,141.43**
TOTAL LIABILITIES AND OWNERS' EQUITY		**151,592,876.49**	**147,999,840.63**

The accompanying notes form an integral part of these financial statements.

INCOME STATEMENT
FOR THE YEAR ENDED 31 DECEMBER 2017
(All amounts in Rmb Yuan unless otherwise stated)

	Notes	Year 2017	Year 2016	Year 2015
Revenues from main operations	2.10 4.12	**344,034,346.69**	**334,219,891.26**	**342,012,867.83**
Less: Costs main operations	4.12	246,795,208.60	233,818,221.1	261,367,286.76
Surcharges for main operations		845,169.28	979,176.41	786,737.38
Profit from main operations		**96,393,968.81**	**99,422,493.75**	**79,858,843.69**
Less: Selling and distribution expenses	4.13	3,311,996.76	4,128,783.69	4,820,806.92
Other operation income		256.41	388.89	47,638.49
General and administrative expenses	4.14	42,741,332.18	17,416,177.1	11,657,992.28
Finance (income) expenses - net	4.15	2,964,599.83	(2,695,350.25)	(1,092,332.51)
Operating profit		**47,376,296.45**	**80,573,272.1**	**64,520,015.49**
Non-operating income	4.16	273,121.29	191,919.03	87,342.07
Non-operating expense	4.16	—	2,046.15	—
Total profit		**47,649,417.74**	**80,763,144.98**	**64,607,357.56**
Less: Income taxes	2.11	11,959,285.40	20,237,953.84	16,196,870.02
Net profit		**35,690,132.34**	**60,525,191.14**	**48,410,487.54**

The accompanying notes form an integral part of these financial statements.

CASHFLOW STATEMENT
FOR THE YEAR ENDED 31 DECEMBER 2017
(All amounts in Rmb Yuan unless otherwise stated)

1. Cash flows from operating activities	**Year 2017**	**Year 2016**	**Year 2015**
Cash received from sales of goods or rendering of services	403,969,468.06	406,222,940.09	382,507,558.14
Cash received relating to other operating activities	273,121.29	191,919.03	87,342.07
Sub-total of cash inflows	**404,242,589.35**	**406,414,859.12**	**382,594,900.21**
Cash paid for goods and services	(305,120,883.87)	(277,618,516.29)	(287,000,379.42)
Cash paid to and on behalf of employees	(8,168,074.26)	(7,989,408.44)	(7,633,928.62)
Payments of taxes and levies	(32,730,895.84)	(47,133,802.28)	(21,917,429.15)
Cash paid relating to other operating activities	(37,162,567.98)	(5,730,450.09)	(6,870,003.19)
Sub-total of cash outflows	**(383,182,421.95)**	**(338,472,177.1)**	**(323,421,740.38)**
Net cash flows from operating activities	**21,060,167.40**	**67,942,682.02**	**59,173,159.83**
2. Cash flows from investing activities			
intangible assets and other long-term assets	—	23,398.06	—
Sub-total of cash inflows	**—**	**23,398.06**	**—**
Cash paid to acquire fixed assets, intangible assets and other long-term assets	(595,246.68)	(212,142.73)	(356,027.35)
Sub-total of cash outflows	**(595,246.68)**	**(212,142.73)**	**(356,027.35)**
Net cash flows used in investing activities	**(595,246.68)**	**(188,744.67)**	**(356,027.35)**
3. Cash flows from financing activities			
Cash received from bank loans	15,000,000.00	—	—
Sub-total of cash inflows	**15,000,000.00**	—	—
Cash payments for distribution of dividends or profits	(29,346,226.12)	(87,145,723.63)	(57,000,000)
Sub-total of cash outflows	**(29,346,226.12)**	**(87,145,723.63)**	**(57,000,000.00)**
Net cash flows used in financing activities	**(14,346,226.12)**	**(87,145,723.63)**	**(57,000,000.00)**
4. Effect of foreign exchange rate changes on cash and cash equivalents	**(767,188.69)**	**(415,321.51)**	**(458,617)**
5. Net increase (used) in cash and cash equivalents	**5,351,505.91**	**(19,807,107.79)**	**1,358,515.48**

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEARS ENDED 31 DECEMBER 2017

(Amounts expressed in Renminbi (“RMB”) unless otherwise stated)

1. COMPANY BACKGROUND AND PRINCIPAL ACTIVITIES

Momentive UV Coatings (Shanghai) Co., Ltd., formally known as Borden UV (Shanghai) Co., Ltd.□□”the Company”□©is a Sino-foreign equity joint venture enterprise between Borden UV Coatings Holdings (Shanghai) Limited and Prime Union Limited. The Company was established on 18 March 2004 with the approval of the Shanghai Municipal Government in Shangwaihuhuiduzizi[2004]0768 and the business license number is 913101157595925826 with the operation period of 30 years. The Company’s registered capital is USD$500,000.00.

The approved Company’s business operation scope includes manufacture and sale of various kinds of UV coatings and provision of related technical consulting services (Comment: extracted from Articles of Associations of the Company.)

In 2007, the Company’s prior shareholder Borden UV Coating Holding (Shanghai) Limited was renamed Hexion Specialty UV Coating (Shanghai) Limited and transferred 0.01% of its shares to Prime Union Limited, and the Company was renamed Hexion UV Coatings (Shanghai) Co., Ltd.. In 2013, based on the approvals of the Company’s Board of Directors and the Pudong District of Shanghai Municipal government, the Company was renamed Momentive UV Coatings (Shanghai) Co., Ltd., and one of the Company’s investors, Hexion Specialty UV Coatings (Shanghai) Ltd., was renamed Momentive Specialty UV Coatings (Shanghai) Limited. In 2016 Momentive Specialty UV Coatings (Shanghai) Limited was renamed Hexion UV Coatings (Shanghai) Limited.

2. PRINCIPAL ACCOUNTING POLICIES

2.1 Accounting standards

The Company adopts accounting principles generally accepted in the United States of America.

2.2 Accounting period

The Company’s accounting year starts on 1 January and ends on 31 December.

2.3 Basis of accounting and measurement bases

The Company follows the accrual method of accounting. Assets are initially recorded at their actual costs and are subsequently adjusted for impairment, if any, as events and circumstances warrant.

2.4 Reporting currency

The recording currency of the Company is RMB Yuan.

2.5 Foreign currency translation

Except for the accounting treatment for paid-in capital, foreign currency transactions are translated into RMB at the exchange rates stipulated by the People’s Bank of China on the first day of the month in which the transactions took place. Monetary assets and liabilities denominated in foreign currencies at the balance sheet date are translated into RMB at the stipulated exchange rates by the People’s Bank of China at the balance sheet date. Exchange differences arising from these translations are expensed, except for those which occurred in the pre-operation period, which are recorded as long-term deferred expenses, and those attributable to foreign currency borrowings that have been taken out specifically for the construction of fixed assets, which are capitalized as part of the fixed asset costs.

2.6 Provision for Bad Debt

Full provisions are applied to receivables where events or changes in circumstances indicate that the balances cannot be collected (the debtor is deregistered, bankrupt and the Company can not take back the accounts receivable according to the bankruptcy procedure in law; the debtor is dead, has no heritage to pay or has no haeres; has solid evidence that the accounts receivable aged over three years and can not be taken back). When the bad debt occurs, it is written off through the bad debt provision with the approvals according to the authorized level.

2.7 Inventories

2.7.1 Inventories include materials in transit, raw materials, work in progress, finished goods, low cost consumables and packaging materials.

2.7.2 Inventories are stated at the lower of cost or market.

2.7.3 The inventory issuance cost was determined using the weighted average method.

2.7.4 Low cost consumables are fully amortized when issued for use.

2.8 Fixed assets and depreciation

2.8.1 Fixed assets include buildings, machinery and equipment used in production or rendering of services, or held for management purposes, which have useful lives of more than one year.

2.8.2 Fixed assets purchased or constructed by the Company are recorded at actual cost.

2.8.3 Fixed assets are depreciated using the straight-line method to write off the cost of the assets to their residual values of 0% which represents their estimated salvage value over their estimated useful lives. Their estimated useful lives are as follows:

Category:	useful lives (years) :	Annual depreciation rate (%):
Machinery	10	10
Electronic equipment	10	10
Motor vehicle	10	10
Other equipment	10	10

2.9 Long-term prepaid expenses

Long-term prepaid expenses was recorded in actual cost and are amortized on the straight-line basis over the expected beneficial periods and are presented at cost net of accumulated amortization.

2.10 Sales of goods

Revenue from the sale of goods is recognized when significant risks and rewards of ownership of the goods are transferred to the buyer, the Company retains neither continuing managerial involvement to the degree usually associated with ownership nor effective control over the goods sold, and it is probable that the economic benefit associated with the transaction will flow to the Company and the relevant revenue and costs can be measured reliably.

2.11 Enterprise income tax (“EIT”)

EIT is recognized under the liability method (balance sheet approach).

3. Taxations

The Company’s applicable major taxations and rate are as follows:

Category:	Tax base:	Statutory Tax %:
Value added tax	Valuation amount	17
EIT	Taxable income	25

The actual EIT rate applicable for 2017 was 25%.

4. NOTES TO MAJOR ACCOUNTS IN THE FINANCIAL STATEMENTS

4.1 Cash at bank and in hand

Item:	31 December 2017			31 December 2016		
	Original currency	Exchange rate	RMB equivalent	Original currency	Exchange rate	RMB equivalent
Cash in hand			**20,988.16**			**42,907.15**
RMB			20,988.16			42,907.15
Cash at bank			**17,007,839.54**			**11,634,414.64**
RMB			13,452,674.30			7,973,653.18
USD	544,085.77	6.5342	3,555,165.24	527,715.36	6.937	3,660,761.46
Total			**17,028,827.70**			**11,677,321.79**

4.2 Notes Receivable

Category:	31 December 2017	31 December 2016
Bank Note	34,706,282.28	26,576,197.31

The top major debtors are as follows:

No.	Debtor Name:	Note Quantity:	31 December 2017
1	Zhong Tian Technology Optical Fiber Co., Ltd.	12	23,495,820.80
2	Changfei Optical Fiber Co., Ltd.	5	7,223,975.61
3	Jiangdong Science and Technology Co., Ltd.	3	3,500,000.00
4	Chengdu Zhongzhu Optic fiver Co., Ltd	1	260,147.10
5	Nanjing Wasin Fujikura Optical Communication Ltd.	1	138,338.77
	Total		34,618,282.28

No.	Debtor Name:	Note Quantity:	31 December 2016
1	Zhong Tian Technology Optical Fiber Co., Ltd.	3	14,335,673.48
2	Changfei Optical Fiber Co., Ltd.	7	7,746,600.00
3	Nanjing Fiberhome Fujikura Optical Communication Ltd.	3	3,800,000.00
4	Zhongzhu Optic fiber Co., Ltd	4	693,923.83
	Total		26,576,197.31

4.3 Accounts Receivable

31 December 2017	31 December 2016
82,854,248.92	89,902,219.94

The top 5 major debtors are as follows:

Debtor Name:	Nature:	31 December 2017	%
Furukawa Japan	Goods sold	28,660,953.62	35%
Changfei Optical Fiber Co., Ltd.	Goods sold	12,555,200.09	15%
OFSLLC	Goods sold	10,416,000.29	13%
Jiangdong Science and Technology Co., Ltd.	Goods sold	10,244,520.00	12%
Zhong Tian Technology Optical Fiber Co., Ltd.	Goods sold	9,676,269.00	12%
Total		71,552,943.00	86%

There was no receivable from related parties as of 31 December 2017.

Aging:	31 December 2017	%	31 December 2016	%
Within 1 year	82,854,248.92	100	89,901,173.79	99.999
1 to 2 years	—	—	1,046.15	0.001
Total	82,854,248.92	100	89,902,219.94	100

4.4 Inventory

Item:	31 December 2017		31 December 2016	
	Amount	Reserve	Amount	Reserve
Raw materials	8,227,171.32	—	9,093,245.46	—
Packing material	100,480.10	—	121,466.70	—
Low valued consumables	504,684.53	—	513,825.99	—
Finished goods	7,012,359.70	—	8,978,733.52	—
Total	15,844,695.65	—	18,707,271.67	—

4.5 Fixed Assets and Accumulated Depreciation

Original Cost

Category:	31 December 2017	Addition	Deductions	31 December 2016
Machinery	3,014,713.91	—	—	3,014,713.91
Electronic equipment	946,226.85	7,094.02	—	939,132.83
Motor Vehicle	413,071.79	—	—	413,071.79
Other equipment	2,278,890.32	17,606.84	—	2,261,283.48
Total	6,652,902.87	24,700.86	—	6,628,202.01

Accumulated depreciation

Category:	31 December 2017	Addition	Deductions	31 December 2016
Machinery	2,834,972.35	122,073.39	—	2,712,898.96
Electronic equipment	852,763.03	19,541.34	—	833,221.69
Motor Vehicle	232,906.67	7,114.42	—	225,792.25
Other equipment	2,184,557.26	74,924.95	—	2,109,632.31
Total	6,105,199.31	223,654.10	—	5,881,545.21

4.6 Accounts Payable

31 December 2017	31 December 2016
34,208,095.93	47,965,757.51

The top 5 major Creditors are as follows:

Creditor Name:	Nature:	31 December 2017
Sartomer Logistics (Shanghai) Co., Ltd.	Goods Purchased	10,409,966.94
MIWON	Goods Purchased	10,181,015.43
Shuangjian	Goods Purchased	2,747,500.00
Tianjin Jiuruixianghe	Goods Purchased	1,781,000.00
Allnex Resins (Shanghai) Co., Ltd.	Goods Purchased	1,485,212.63
Total		26,604,695.00

Creditor Name:	Nature:	31 December 2016
MIWON	Goods Purchased	15,236,204.82
Sartomer Logistics (Shanghai) Co., Ltd.	Goods Purchased	14,174,942.96
Shuangjian	Goods Purchased	6,354,397.84
Linjia Machine	Goods Purchased	2,040,680.00
Allnex Resins (Shanghai) Co., Ltd.	Goods Purchased	1,634,068.80
Total		39,440,294.42

4.7 Taxes Payable

Item:	31 December 2017	31 December 2016
VAT payable	1,389,892.02	637,109.93
EIT payable	1,921,599.59	6,858,152.38
Individual income tax payable	277,456.80	276,272.32
City construction tax	13,898.92	10,543.40
Extra charges of education funds	69,494.60	52,717.00
Total	3,672,341.93	7,834,795.03

4.8 Other Payables

31 December 2017	31 December 2016
1,513,164.86	1,887,909.46

The top 3 major Creditors are as follows:

Creditor Name:	Nature:	31 December 2017
Fishand Richardson PC	Lawyer fee	1,164,880.98
Caribou Specialty Materials	Technology service charge	294,039.00
TaiWan Polychem	Market promotion	52,681.27

Creditor Name:	Nature:	31 December 2016
Fishand Richardson PC	Lawyer fee	1,478,573.62
Caribou Specialty Materials	Technology service charge	288,416.74
Momentive Chemical	Overseas market promotion	152,614.00

4.9 Paid-in Capital

Investor Name:	31 December 2017, 2016, 2015		
	In USD$	RMB equivalent	(%)
Hexion UV coatings (Shanghai) Limited	249,950.00	2,068,848.65	49.99%
Prime Union Limited	250,050.00	2,069,676.35	50.01%
Total	500,000.00	4,138,525.00	100.00%

4.10 Surplus Reserve

Item:	31 December 2017, 2016, 2015
Reserve fund	2,100,000.00
Total	2,100,000.00

4.11 Retained Earnings

Item:	2017	2016	2015
Retained earning, beginning	60,620,616.43	96,557,119.09	118,292,355.18
Add: current year profit	35,690,132.34	60,525,191.14	48,410,487.54
Less: Profit distribution to equity owners	15,000,000.00	96,461,693.8	70,145,723.63
Retained earning, ending	81,310,748.77	60,620,616.43	96,557,119.09

4.12 Operation Income / Operation Cost

Operation Income for Year 2017		Operation Income for Year 2016		Operation Income for year 2015	
Sales	Other Operation Income	Sales	Other Operation Income	Sales	Other Operation Income
344,034,346.69	256.41	334,219,891.26	388.89	342,012,867.83	47,638.49

Operation Cost for year 2017		Operation Cost for year 2016		Operation Cost for year 2015	
Cost of sales	Other Operation Cost	Cost of sales	Other Operation Cost	Cost of sales	Other Operation Cost
246,795,208.60	—	233,818,221.10	—	261,367,286.76	—

4.13 Selling and distribution expenses

Year 2017	Year 2016	Year 2015
3,311,996.76	4,128,783.69	4,820,806.92

The major 2017 items include:

Item:	Year 2017	Year 2016	Year 2015
Transportation	3,148,268.11	2,709,713.24	2,918,723.12
Market promotion	(143,252.00)	1,042,392.38	369,000.00
Gas and parking	88,505.85	111,927.71	126,631.67
Custom inspection	59,391.23	50,334.64	74,999.99
Office expense	46,950.82	33,284.66	45,743.30

4.14 G&A Expenses

Year 2017	Year 2016	Year 2015
42,741,332.18	17,416,177.10	11,657,992.28

The major 2017 items include:

Item	Year 2017	Year 2016	Year 2015
Consultant fees	32,420,062.21	7,425,998.20	—
Overseas R & D fee	4,067,513.60	3,466,126.79	3,384,203.73
Payroll	3,893,449.31	4,010,501.34	3,829,369.58
Statutory social insurance	522,638.10	458,919.92	453,578.50
Entertainment expenses	453,526.00	453,334.71	416,872.58
Office expense	378,853.77	399,906.96	407,177.19
Taxes	204,579.96	310,493.10	190,366.33
Lawyer fees	—	—	1,928,804.70

4.15 Financial Expenses

Item:	Year 2017	Year 2016	Year 2015
Interest expense	884,532.32	455,052.04	45,584.94
Interest income	(41,330.03)	(162,426.65)	(82,315.96)
Foreign exchange loss (gain)	2,093,345.22	(3,049,485.53)	(1,133,604.97)
Bank charges	28,052.32	61,509.89	78,003.48
Total	2,964,599.83	(2,695,350.25)	(1,092,332.51)

4.16 Non-operation Income / Non-operation (Expense)

Item	Year 2017	Year 2016	Year 2015
Net non-operation result	**273,121.29**	**189,872.88**	**87,342.07**
Total non-operation income	**273,121.29**	**191,919.03**	**87,342.07**
1. tax return	—	122,322.16	18,000.00
2. service charge return for tax payment	—	16,423.10	45,966.07
3. sponsor	—	9,000.00	22,376.00
4. Government subsidies	200,000.00	—	—
5. other	73,121.29	44,173.77	1,000.00
Total non-operation expense	—	2,046.15	—

4.17 Cash Flow Information

Supplemental Information	Year 2017	Year 2016	Year 2015
Reconciliation of net profit to cash flows from operating activities			
Net profit	35,690,132.34	60,525,191.14	48,410,487.54
Adjust for:Provision for asset impairment	—	—	—
Depreciation of tangible assets	223,654.10	363,104.37	570,797.00
Amortization of long-term prepaid expenses	230,981.93	90,000.00	37,500.00
Amortization of prepaid expense	4,512.95	(320.95)	(4,192.00)
Losses on disposal of fixed assets, intangible assets and other long-term assets	—	(23,398.06)	—
Finance expenses	1,651,721.01	415,321.51	458,617.00
Decrease in deferred tax debit	114,105.68	(201,915.74)	479,683.42
Decrease in inventories	2,862,576.02	2,158,597.73	1,589,183.75
(Increase) Decrease in operating receivables	(1,082,113.95)	22,091,110.19	(16,040,544.12)
Increase in operating payables	(18,635,402.68)	(17,475,008.17)	23,671,627.24
Net cash flows from operating activities	21,060,167.40	67,942,682.02	59,173,159.83

5. Related party relationships and transactions

5.1 Related party relationships

Name:	Related party relationships
Momentive Specialty UV coatings (Shanghai) Limited (Renamed to Hexion UV Coating (Shanghai) Limited in 2015)	Investor
Prime Union Limited	Investor

5.2 Transactions

There were no material related party transactions in 2017.

6. Subsequent event

On October 31, 2016 DSM filed a petition with the International Trade Commission (ITC) to commence an investigation against MUV and its customer OFS for allegedly importing UV curable coatings that infringe four DSM patents. In response, the ITC commenced an investigation. On February 6, 2017, the Federal District Court in the Southern District of Ohio stayed the infringement case pending the outcome of the ITC investigation. On February 15, 2018, the Administrative Law Judge in the ITC investigation issued an Initial Determination recommending that the ITC find many of the claims invalid but also that MUV infringed certain claims in two of DSM’s patents. MUV is filing a petition with the ITC to request that it reject the infringement findings in the Initial Determination and find that MUV’s products do not infringe any valid claims in DSM’s patents. A decision from the ITC is expected in Q2 2018.

Exhibit 12.1

HEXION INC.
Statement Regarding Computation of Ratios
(Amounts in millions of dollars)

	Year ended December 31,				
	2017	**2016**	**2015**	**2014**	**2013**
	(dollars in millions, except per share data)				
Pre-tax loss from continuing operations before adjustment for noncontrolling interests in consolidated subsidiaries or earnings from unconsolidated entities	(220)	(11)	(22)	(222)	(210)
Fixed Charges:					
Interest expensed and capitalized	330	311	330	308	304
Interest element of lease costs	10	11	12	12	12
Total fixed charges	340	322	342	320	316
Pre-tax income from continuing operations before adjustment for noncontrolling interests in consolidated subsidiaries or earnings from unconsolidated entities, plus fixed charges	120	311	320	98	106
Ratio of earnings to fixed charges	N/A	N/A	N/A	N/A	N/A

(1) The interest element of lease costs has been calculated as 1/3 of the rental expense relating to operating leases as management believes this represents the interest portion hereof.
(2) Our earnings were insufficient to cover fixed charges by $220, $11, $22, $222, and $210 for the years ended December 31, 2017, 2016, 2015, 2014 and 2013, respectively.

Exhibit 21.1

Subsidiaries of the Registrant
As of December 31, 2017

Subsidiary	Jurisdiction	% Owned
Borden Chemical Holdings (Panama) S.A.	Panama	100%
Borden Chemical UK Limited	UK	100%
Borden International Holdings Limited	UK	100%
Borden Luxembourg S.a r.l.	Luxembourg	100%
Hexion (Caojing) Limited	Hong Kong	100%
Hexion (N.Z.) Limited	New Zealand	100%
Hexion Australia Finance Pty Ltd	Australia	100%
Hexion Australia General Partner Pty Ltd	Australia	100%
Hexion Australia Limited Partnership	Australia	100%
Hexion B.V.	Netherlands	100%
Hexion Brazil Coöperatief U.A.	Netherlands	100%
Hexion Canada Inc.	Canada	100%
Hexion CI Holding Company (China) LLC	Delaware	100%
Hexion Europe B.V.	Netherlands	100%
Hexion Forest Products GmbH	Germany	100%
Hexion GmbH	Germany	100%
Hexion Holding B.V.	Netherlands	100%
Hexion Holdings (China) Limited	Hong Kong	100%
Hexion Industria e Comercio de Epoxi Ltda.	Brazil	100%
Hexion International Coöperatief U.A.	Netherlands	100%
Hexion International Inc.	Delaware	100%
Hexion Investments Inc.	Delaware	100%
Hexion Italia S.r.l.	Italy	100%
Hexion Korea Company Limited	Korea	100%
Hexion Management (Shanghai) Co., Ltd.	China	100%
Hexion Moerdijk Lease B.V.	Netherlands	100%
Hexion Nova Scotia Finance, ULC	Nova Scotia, Canada	100%
Hexion Ontario Inc.	Ontario	100%
Hexion Oy	Finland	100%

Subsidiary	Jurisdiction	% Owned
Hexion Pernis Lease B.V.	Netherlands	100%
Hexion Pty Ltd	Australia	100%
Hexion Quimica do Brasil Ltda.	Brazil	100%
Hexion Quimica S. A.	Panama	100%
Hexion Research Belgium SA	Belgium	100%
Hexion SarL	France	100%
Hexion Shanxi Holdings Limited	Hong Kong	100%
Hexion Singapore Pte. Ltd.	Singapore	100%
Hexion Specialty Chemicals (Mumbai) Private Limited	India	100%
Hexion Specialty Chemicals Barbastro S.A.	Spain	100%
Hexion Specialty Chemicals Iberica S.A.	Spain	100%
Hexion Specialty Chemicals Lda.	Portugal	100%
Hexion Stanlow Limited	UK	100%
Hexion Stuttgart GmbH	Germany	100%
Hexion UK Limited	UK	100%
Hexion UV Coatings (Shanghai) Limited	Hong Kong	100%
Hexion VAD BV	Netherlands	100%
InfraTec Duisburg GmbH	Germany	70%
Lawter International Inc.	Delaware	100%
Momentive Union Specialty Chemicals Limited	Hong Kong	100%
Momentive UV Coatings (Shanghai) Co., Ltd.	China	49.99%
National Borden Chemical Germany GmbH	Germany	100%
NL Coop Holdings LLC	Delaware	100%
PT Hexion Lestari Nusantara	Indonesia	100%
Resolution Research Nederland B.V.	Netherlands	100%
Zhenjiang Momentive Union Specialty Chemicals Ltd.	China	100%

Exhibit 31.1(A)

Certification of Financial Statements and Internal Controls

I, Craig A. Rogerson, certify that:

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

Date: March 2, 2018

/s/ Craig A. Rogerson

Craig A. Rogerson
Chief Executive Officer

Exhibit 31.1(B)

Certification of Financial Statements and Internal Controls

I, George F. Knight, certify that:

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

Date: March 2, 2018

/s/ George F. Knight

George F. Knight
Chief Financial Officer

Exhibit 32.1

Certification Pursuant To
18 U.S.C. Section 1350,
As Adopted Pursuant to
Section 906 Of The Sarbanes-Oxley Act of 2002

In connection with the Annual Report of Hexion Inc. (the "Company") on Form 10-K for the period ended December 31, 2017 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

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

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Craig A. Rogerson	/s/ George F. Knight
Craig A. Rogerson	George F. Knight
Chief Executive Officer	Chief Financial Officer
March 2, 2018	March 2, 2018

A signed original of this statement required by Section 906 has been provided to Hexion Inc. and will be retained by Hexion Inc. and furnished to the Securities and Exchange Commission or its staff upon request.