

Celanese Corp  
Form 10-K  
February 09, 2018  
Table of Contents

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

Form 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934  
For the fiscal year ended December 31, 2017

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

(Commission File Number) 001-32410

CELANESE CORPORATION

(Exact Name of Registrant as Specified in its Charter)

Delaware

98-0420726

(State or Other Jurisdiction of Incorporation or Organization) (I.R.S. Employer Identification No.)

222 West Las Colinas Blvd., Suite 900N, Irving, TX

75039-5421

(Address of Principal Executive Offices)

(Zip Code)

(972) 443-4000

(Registrant's telephone number, including area code)

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

Title of Each Class	Name of Each Exchange on Which Registered
Series A Common Stock, par value \$0.0001 per share	New York Stock Exchange
3.250% Senior Notes due 2019	New York Stock Exchange
1.125% Senior Notes due 2023	New York Stock Exchange
1.250% Senior Notes due 2025	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act

None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes  No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes  No

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

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

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

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Act. (Check one):

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

(Do not check if a smaller reporting company)

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

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

The aggregate market value of the registrant's Series A Common Stock held by non-affiliates as of June 30, 2017 (the last business day of the registrants' most recently completed second fiscal quarter) was \$13,017,711,601.

The number of outstanding shares of the registrant's Series A Common Stock, \$0.0001 par value, as of February 2, 2018 was 135,817,634.

**DOCUMENTS INCORPORATED BY REFERENCE**

Certain portions of the registrant's Definitive Proxy Statement relating to the 2018 annual meeting of stockholders, to be filed with the Securities and Exchange Commission, are incorporated by reference into Part III.

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Table of Contents

CELANESE CORPORATION

Form 10-K

For the Fiscal Year Ended December 31, 2017

TABLE OF CONTENTS

	Page
<u>Special Note Regarding Forward-Looking Statements</u>	<u>3</u>
PART I	
<u>Item 1. Business</u>	<u>4</u>
<u>Item 1A. Risk Factors</u>	<u>18</u>
<u>Item 1B. Unresolved Staff Comments</u>	<u>28</u>
<u>Item 2. Properties</u>	<u>28</u>
<u>Item 3. Legal Proceedings</u>	<u>30</u>
<u>Item 4. Mine Safety Disclosures</u>	<u>30</u>
<u>Executive Officers of the Registrant</u>	<u>30</u>
PART II	
<u>Item 5. Market for the Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities</u>	<u>32</u>
<u>Item 6. Selected Financial Data</u>	<u>35</u>
<u>Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations</u>	<u>36</u>
<u>Item 7A. Quantitative and Qualitative Disclosures About Market Risk</u>	<u>59</u>
<u>Item 8. Financial Statements and Supplementary Data</u>	<u>60</u>
<u>Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure</u>	<u>61</u>
<u>Item 9A. Controls and Procedures</u>	<u>61</u>
<u>Item 9B. Other Information</u>	<u>61</u>
PART III	
<u>Item 10. Directors, Executive Officers and Corporate Governance</u>	<u>62</u>
<u>Item 11. Executive Compensation</u>	<u>62</u>
<u>Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters</u>	<u>63</u>
<u>Item 13. Certain Relationships and Related Transactions, and Director Independence</u>	<u>63</u>
<u>Item 14. Principal Accounting Fees and Services</u>	<u>63</u>
PART IV	
<u>Item 15. Exhibits and Financial Statement Schedules</u>	<u>64</u>
<u>Signatures</u>	<u>65</u>

Table of Contents

Special Note Regarding Forward-Looking Statements

Certain statements in this Annual Report on Form 10-K ("Annual Report") or in other materials we have filed or will file with the Securities and Exchange Commission ("SEC"), and incorporated herein by reference, are forward-looking in nature as defined in Section 27A of the Securities Act of 1933, as amended, Section 21E of the Securities Exchange Act of 1934, as amended, and the Private Securities Litigation Reform Act of 1995. You can identify these statements by the fact that they do not relate to matters of a strictly factual or historical nature and generally discuss or relate to forecasts, estimates or other expectations regarding future events. Generally, the words "believe," "expect," "intend," "estimate," "anticipate," "project," "plan," "may," "can," "could," "might," "will" and similar expressions identify forward-looking statements, including statements that relate to such matters as planned and expected capacity increases and utilization rates; anticipated capital spending; environmental matters; legal proceedings; sources of raw materials and exposure to, and effects of hedging of raw material and energy costs and foreign currencies; interest rate fluctuations; global and regional economic, political, business and regulatory conditions; expectations, strategies, and plans for individual assets and products, business segments, as well as for the whole Company; cash requirements and uses of available cash; financing plans; pension expenses and funding; anticipated restructuring, divestiture, and consolidation activities; planned construction or operation of facilities; cost reduction and control efforts and targets and integration of acquired businesses.

Forward-looking statements are not historical facts or guarantees of future performance but instead represent only our beliefs at the time the statements were made regarding future events, which are subject to significant risks, uncertainties, and other factors, many of which are outside of our control and certain of which are listed above. Any or all of the forward-looking statements included in this Annual Report and in any other materials incorporated by reference herein may turn out to be materially inaccurate. This can occur as a result of incorrect assumptions, in some cases based upon internal estimates and analyses of current market conditions and trends, management plans and strategies, economic conditions, or as a consequence of known or unknown risks and uncertainties. Many of the risks and uncertainties mentioned in this Annual Report, such as those discussed in Item 1A. Risk Factors, Item 3. Legal Proceedings and Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations will be important in determining whether these forward-looking statements prove to be accurate. Consequently, neither our stockholders nor any other person should place undue reliance on our forward-looking statements and should recognize that actual results may differ materially from those anticipated by us.

All forward-looking statements made in this Annual Report are made as of the date hereof, and the risk that actual results will differ materially from expectations expressed in this Annual Report will increase with the passage of time. We undertake no obligation, and disclaim any duty, to publicly update or revise any forward-looking statements, whether as a result of new information, future events, changes in our expectations or otherwise. However, we may make further disclosures regarding future events, trends and uncertainties in our subsequent reports on Forms 10-K, 10-Q and 8-K to the extent required under the Exchange Act. The above cautionary discussion of risks, uncertainties and possible inaccurate assumptions relevant to our business includes factors we believe could cause our actual results to differ materially from expected and historical results. Other factors beyond those listed above or in Item 1A. Risk Factors, Item 3. Legal Proceedings and Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations below, including factors unknown to us and factors known to us which we have determined not to be material, could also adversely affect us.

Table of Contents

Item 1. Business

Basis of Presentation

In this Annual Report on Form 10-K, the term "Celanese" refers to Celanese Corporation, a Delaware corporation, and not its subsidiaries. The terms "Company," "we," "our" and "us" refer to Celanese and its subsidiaries on a consolidated basis. The term "Celanese US" refers to the Company's subsidiary, Celanese US Holdings LLC, a Delaware limited liability company, and not its subsidiaries.

Industry

This Annual Report on Form 10-K includes industry data obtained from industry publications and surveys as well as our own internal company surveys. Third-party industry publications, surveys and forecasts generally state that the information contained therein has been obtained from sources believed to be reliable.

Overview

We are a global technology and specialty materials company. We are a leading global producer of high performance engineered polymers that are used in a variety of high-value applications, as well as one of the world's largest producers of acetyl products, which are intermediate chemicals, for nearly all major industries. As a recognized innovator in the chemicals industry, we engineer and manufacture a wide variety of products essential to everyday living. Our broad product portfolio serves a diverse set of end-use applications including automotive, chemical additives, construction, consumer and industrial adhesives, consumer and medical, energy storage, filtration, food and beverage, paints and coatings, paper and packaging, performance industrial and textiles. Our products enjoy leading global positions due to our differentiated business models, large global production capacity, operating efficiencies, proprietary technology and competitive cost structures.

Our large and diverse global customer base primarily consists of major companies across a broad array of industries. We hold geographically balanced global positions and participate in diversified end-use applications. We combine a demonstrated track record of execution, strong performance built on differentiated business models and a clear focus on growth and value creation. Known for operational excellence, reliability and execution of our business strategies, we partner with our customers around the globe to deliver best-in-class technologies and solutions.

Celanese's history began in 1918, the year that its predecessor company, The American Cellulose & Chemical Manufacturing Company, was incorporated. The company, which manufactured cellulose acetate, was founded by Swiss brothers Drs. Camille and Henri Dreyfus. Since that time, the Company has transformed into a leading global technology and specialty materials company. The current Celanese was incorporated in 2004 under the laws of the State of Delaware and is a US-based public company traded on the New York Stock Exchange under the ticker symbol CE.

Headquartered in Irving, Texas, our operations are primarily located in North America, Europe and Asia and consist of 31 global production facilities and an additional 9 strategic affiliate production facilities. As of December 31, 2017, we employed 7,592 people worldwide.

Table of Contents

## Business Segment Overview

We are organized around two complementary cores, Materials Solutions and the Acetyl Chain. Together, these two value drivers share raw materials, technology, integrated systems and research resources to increase efficiency and quickly respond to market needs. Within Materials Solutions and the Acetyl Chain, we operate principally through four business segments: Materials Solutions includes Advanced Engineered Materials and Consumer Specialties business segments (which includes our cellulose derivatives business), and the Acetyl Chain includes Industrial Specialties and Acetyl Intermediates business segments.

In Advanced Engineered Materials we leverage our proprietary opportunity pipeline model and bolt-on acquisitions to drive growth. In Consumer Specialties we have signed an agreement with The Blackstone Group L.P. (the "Blackstone Entities") to combine our cellulose derivatives assets in a joint venture to create incremental value for customers and shareholders, as further discussed below. Materials Solutions also includes certain strategic affiliates in both business segments.

In the Acetyl Chain, we create value by dynamically optimizing our global commercial and operational choices to deliver maximum profitability. Due to our geographic breadth, our net sales are balanced across global regions. See Business Segments below and [Note 26 - Segment Information](#) in the accompanying consolidated financial statements for further information.

## Business Segments

## Advanced Engineered Materials

Products	Major End-Use Applications	Principal Competitors	Key Raw Materials
<ul style="list-style-type: none"> <li>• Polyoxymethylene ("POM")</li> <li>• Ultra-high molecular weight polyethylene ("UHMW-PE")</li> <li>• Polybutylene terephthalate ("PBT")</li> <li>• Long-fiber reinforced thermoplastics ("LFRT")</li> <li>• Liquid crystal polymers ("LCP")</li> <li>• Thermoplastic elastomers ("TPE")</li> <li>• Nylon compounds or formulations</li> <li>• Polypropylene compounds or formulations</li> </ul>	<ul style="list-style-type: none"> <li>• Automotive</li> <li>• Medical</li> <li>• Industrial</li> <li>• Energy storage</li> <li>• Consumer electronics</li> <li>• Appliances</li> <li>• Filtration equipment</li> <li>• Telecommunications</li> </ul>	<ul style="list-style-type: none"> <li>• BASF SE</li> <li>• E. I. du Pont de Nemours and Company</li> <li>• Koninklijke DSM N.V.</li> <li>• SABIC Innovative Plastics</li> <li>• Solvay S.A.</li> </ul> <p>Other regional competitors:</p> <ul style="list-style-type: none"> <li>• Asahi Kasei Corporation</li> <li>• Braskem S.A.</li> <li>• Lanxess AG</li> <li>• Mitsubishi Gas Chemical Company, Inc.</li> <li>• Sumitomo Corporation</li> <li>• Teijin Limited</li> <li>• Toray Industries, Inc.</li> </ul>	<ul style="list-style-type: none"> <li>• Formaldehyde (for POM)</li> <li>• Ethylene (for UHMW-PE and TPE)</li> <li>• Polypropylene (for LFRT)</li> <li>• Fibers (for LFRT)</li> <li>• Acetic anhydride (for LCP)</li> <li>• Propylene (for TPE)</li> <li>• Styrene (for TPE)</li> <li>• Butadiene (for TPE)</li> <li>• PA6 (for nylon)</li> <li>• PA66 (for nylon)</li> </ul>

## Overview

Our Advanced Engineered Materials segment includes our engineered materials business and certain strategic affiliates. The engineered materials business leverages our leading project pipeline model to more rapidly commercialize projects. Our unique approach is based on deep customer engagement to develop new projects that are aligned with our skill domains to address critical customer needs and ensure our success and growth.

Advanced Engineered Materials is a project-based business where growth is driven by increasing new project commercializations from the pipeline. Our project pipeline model leverages competitive advantages that include our global assets and resources, marketplace presence, broad materials portfolio and differentiated capabilities. Our global assets and resources are represented by our operations, including polymerization, compounding, research and development, and customer technology centers in all regions of the world, including Brazil, China, Germany, Italy, Japan, Mexico, South Korea, the United Kingdom and the US, along with sites associated with our four strategic affiliates in Japan, Malaysia, Saudi Arabia, South Korea and the US.

## Table of Contents

Our broad marketplace presence reflects our deep understanding of global and customer trends, including the growing global demand for more sophisticated vehicles, elevated environmental considerations, increased global connectivity, and improved health and wellness. These global trends drive a range of needed customer solutions, such as vehicle lightweighting, precise components, aesthetics and appearance, low emissions, heat resistance and low-friction for medical applications, that we are uniquely positioned to address with our materials portfolio. In addition, the opportunity pipeline process identifies a number of emerging trends early, enabling faster growth.

Our materials portfolio offers differentiated chemical and physical properties that enable them to perform in a variety of conditions. These include enduring a wide range of temperatures, resisting adverse chemical interactions and withstanding deformation. POM, PBT and LFRT are used in a broad range of performance-demanding applications, including fuel system components, automotive safety systems, consumer electronics, appliances, industrial products and medical applications. UHMW-PE is used in battery separators, industrial products, filtration equipment, coatings and medical applications. Primary end uses for LCP are electrical applications or products and consumer electronics. Thermoplastic elastomers offer unique attributes for use in automotive, appliances, consumer goods, electrical, electronic and industrial applications. Nylon compounds are used in a range of applications including automotive, consumer, electrical, electronic and industrial. These value-added applications in diverse end uses support the business' global growth objectives.

We also have several differentiated polymer technologies designed for the utility industry, the oil and gas industry, original equipment manufacturers and companies that enhance supply chain efficiency. These include composite technologies for the utility industry that deliver greater reliability, capacity and performance for utility transmission lines.

Our differentiated capabilities are highlighted in our intimate and unique customer engagement which allows us to work across the entirety of our customers' value chain. For example, in the automotive industry we work with original equipment manufacturers as well as system and tier suppliers and injection molders in numerous areas, including polymer formulation and functionality, part and structural design, mold design, color development, part testing and part processing. This broad access allows us to create a demand pull for our solutions. This business segment also includes four strategic affiliates that complement our global reach, improve our ability to capture growth opportunities in emerging economies and positions us as a leading participant in the global specialty polymers industry.

On February 1, 2018, we completed the acquisition of 100% of the ownership interests of Omni Plastics, L.L.C. and its subsidiaries ("Omni Plastics"). Omni Plastics specializes in custom compounding of various engineered thermoplastic materials. The acquisition further strengthens our global asset base by adding compounding capacity in the Americas. See Note 29 - Subsequent Events in the accompanying consolidated financial statements for further information.

On October 16, 2017, we announced plans to expand the capacity of our global compounding assets and certain product-specific manufacturing production sites to support the significant growth in our Advanced Engineered Materials segment. We expect these new production lines and expansions to add approximately 50-60kt per year in compounding capacity. We also expect the debottlenecking of existing global production lines to provide an additional 10-15kt per year capacity of compounded material production capability and an additional 10-15kt per year of capacity to LFRT production lines. We expect a new production line to add approximately 15kt of GUR<sup>®</sup> UHMW-PE product capacity. These projects are expected to be completed in the 2018 - 2019 time frame.

On May 3, 2017, we acquired the nylon compounding division of Nilit Group, an independent producer of high performance nylon, resins, fibers and compounds. We acquired the nylon compounding product portfolio, customer agreements and manufacturing, technology and commercial facilities. See Note 4 - Acquisitions, Dispositions and Plant Closures in the accompanying consolidated financial statements for further information.

### **Key Products**

**POM.** Commonly known as polyacetal in the chemical industry, POM is sold by our engineered materials business under the trademarks Celcon<sup>®</sup> and Hostaform<sup>®</sup>. POM is used for diverse end-use applications in the automotive, industrial, consumer and medical industries. These applications include mechanical parts in automotive fuel system components and window lift systems, water handling, conveyor belts, sprinkler systems, drug delivery systems and gears in large and small home appliances.



We continue to innovate and broaden the portfolio of Celcon® and Hostaform® in order to support the industry needs for higher performing polyacetal. We have expanded our portfolio to include products with higher impact resistance and stiffness, low emissions, improved wear resistance and enhanced appearance such as laser marking and metallic effects.

Table of Contents

Polyplastics Co., Ltd., our 45%-owned strategic affiliate ("Polyplastics"), and Korea Engineering Plastics Co., Ltd., our 50%-owned strategic affiliate ("KEPCO"), also manufacture POM and other engineering resins in the Asia-Pacific region.

The primary raw material for POM is formaldehyde, which is manufactured from methanol. Raw materials are sourced from internal production and from third parties, generally through long-term contracts.

UHMW-PE. Celanese is a global leader in UHMW-PE products which are sold under the trademark GUR®. They are highly engineered thermoplastics designed for a variety of industrial, consumer and medical applications. Primary applications for the material include lead acid battery separators, heavy machine components, lithium ion separator membranes, and noise and vibration dampening tapes. Several specialty grades are also produced for applications in high performance filtration equipment, ballistic fibers, thermoplastic and elastomeric additives, as well as medical implants.

Polyesters. Our products include a series of thermoplastic polyesters including Celanex® PBT, Impet® PET (polyethylene terephthalate) and Thermx® PCT (polycyclohexylene-dimethylene terephthalate), as well as Riteflex®, a thermoplastic polyester elastomer. These products are used in a wide variety of automotive, electrical and consumer applications, including ignition system parts, radiator grilles, electrical switches, appliance and sensor housings, light emitting diodes and technical fibers.

LFRT. Celstran® and Factor®, our LFRT products, impart extra strength and stiffness, making them more suitable for larger parts than conventional thermoplastics. These products are used in automotive, transportation and industrial applications, such as instrument panels, consoles and front end modules. LFRTs meet a wide range of end-user requirements and are excellent candidates for metal replacement where they provide the required structural integrity with significant weight reduction, corrosion resistance and the potential to lower manufacturing costs.

LCP. Vectra® and Zenite®, our LCP brands, are primarily used in electrical and electronics applications for precision parts with thin walls and complex shapes and applications requiring heat dissipation. They are also used in high heat cookware applications.

TPE. Forprene®, Sofprene® T, Pibiflex® and Laprene®, our TPE brands, are primarily used in automotive, construction, appliances and consumer applications due to their ability to combine the advantages of both flexible and plastic materials. These materials are selected for their ability to stretch and return to their near original shape creating a longer life and better physical range than other materials.

Nylon. Our nylon products include Nylfor® A (PA 6.6), Nylfor® B (PA 6), Nilamid® (PA 6, PA 66, PPA), Frianyl® (flame retardant PA 6, PA 66, PPA compounds) and Ecomid® (recycled polyamide) and are used in automotive, appliances, industrial and consumer applications due to their mechanical properties, high impact resistance, resistance to organic solvents, high wear and fatigue resistance even at high temperatures, and easy processing and molding.

Polypropylene. Our polypropylene products include Polifor®, Litepol® and Tecnoprene® and are primarily used in automotive, appliances, electrical and consumer applications due to their high impact and fatigue resistance, exceptional rigidity at high temperatures and an ability to withstand chemical agents.

**Geographic Regions**

Net sales by destination for the Advanced Engineered Materials segment by geographic region are as follows:

	Year Ended December 31,					
	2017		2016		2015	
	(In \$ millions, except percentages)					
North America	575	28 %	511	35 %	496	37 %
Europe and Africa	1,007	48 %	564	39 %	526	40 %
Asia-Pacific	447	21 %	332	23 %	266	20 %
South America	67	3 %	37	3 %	38	3 %
Total	2,096	100%	1,444	100%	1,326	100%

Table of Contents

## Customers

Advanced Engineered Materials' principal customers are original equipment manufacturers and their suppliers serving the automotive, medical, industrial and consumer industries. We utilize our customer options mapping process to collaborate with our customers to identify customized solutions that leverage our broad range of polymers and technical expertise. Our engineered materials business has long-standing relationships and multi-year arrangements with many of its major customers and utilizes distribution partners to expand its customer base.

As Advanced Engineered Materials is a project-based business focused on solutions, the pricing of products in this segment is primarily based on the value-in-use and is largely independent of changes in the cost of raw materials. Therefore, in general, margins may expand or contract in response to changes in raw material costs in the short-term.

## Consumer Specialties

Products	Major End-Use Applications	Principal Competitors	Key Raw Materials
Cellulose derivatives	<ul style="list-style-type: none"> <li>• Filtration</li> <li>• Films</li> <li>• Flexible packaging</li> </ul>	<ul style="list-style-type: none"> <li>• Daicel Corporation</li> <li>• Eastman Chemical Company</li> <li>• Mitsubishi Rayon Co., Ltd</li> <li>• Blackstone Rhodia</li> </ul>	<ul style="list-style-type: none"> <li>• Wood pulp</li> <li>• Acetic acid</li> <li>• Acetic anhydride</li> </ul>
Food ingredients	<ul style="list-style-type: none"> <li>• Beverages</li> <li>• Confections</li> <li>• Baked goods</li> </ul>	<ul style="list-style-type: none"> <li>• Anhui Jinhe Industry Co., Ltd.</li> <li>• Suzhou Hope Technology Co., Ltd.</li> <li>• Ajinomoto Co. Inc.</li> <li>• The NutraSweet Company</li> <li>• Tate &amp; Lyle plc</li> <li>• Daicel Corporation</li> <li>• Nantong Acetic Acid Chemical Co., Ltd.</li> </ul>	<ul style="list-style-type: none"> <li>• Diketene (for Ace-K) For potassium sorbate and sorbic acid:</li> <li>• Acetic acid</li> <li>• Crotonaldehyde</li> <li>• Ethylene</li> <li>• Potassium hydroxide</li> </ul>

## Overview

The Consumer Specialties segment includes our cellulose derivatives and food ingredients businesses, which serve consumer-driven applications.

Our cellulose derivatives business is a leading global producer and supplier of acetate tow and acetate flake, primarily used in filter products applications. We hold an approximately 30% ownership interest in three separate ventures in China that produce acetate flake and acetate tow. China National Tobacco Corporation, a Chinese state-owned tobacco entity, has been our venture partner for over three decades. Our cellulose derivatives business has production sites in Belgium, Mexico and the US, along with sites at our three cellulose derivatives strategic affiliates in China. On June 18, 2017, Celanese, through various subsidiaries, entered into an agreement with affiliates of the Blackstone Entities to form a joint venture which combines substantially all of the operations of our cellulose derivatives business and the operations of the Rhodia Acetow cellulose acetate business formerly operated by Solvay S.A. and acquired by the Blackstone Entities on June 1, 2017. The combined business will operate under a common governance structure through two separate joint ventures, each of which will be owned ultimately 70% and 30% by Celanese and the Blackstone Entities, respectively. See Note 4 - Acquisitions, Dispositions and Plant Closures in the accompanying consolidated financial statements for further information. We have received regulatory approval in four out of six jurisdictions requiring approval, and the European Commission ("EC") has moved into its Phase II investigation of the ongoing merger review process. Under the standard review process of a Phase II investigation, we received a statement of objections from the EC. This statement of objections sets out the provisional position of the EC and does not prejudice the final outcome of the case.



Table of Contents

Our food ingredients business is a leading global supplier of Ace-K for the food and beverage industry and is a leading producer of food protection ingredients, such as potassium sorbate and sorbic acid. Similar to engineered materials, we leverage our leading project pipeline process in our food ingredients business. We have over fifty years of experience in developing and marketing specialty ingredients for the food and beverage industry and are the only western producer of Ace-K. Our food ingredients business has a production facility in Germany, with sales and distribution facilities in all major regions of the world.

**Key Products**

Acetate tow and acetate flake. Acetate tow is a fiber used primarily in cigarette filters. In order to produce acetate tow, we first produce acetate flake by processing wood pulp with acetic acid and acetic anhydride. Wood pulp generally comes from reforested trees and is purchased externally from a variety of sources, and acetic anhydride is an intermediate chemical that we produce from acetic acid in our Acetyl Intermediates segment. Acetate flake is then further processed into acetate tow.

Sales of acetate tow amounted to 10%, 14% and 14% of our consolidated net sales for the years ended December 31, 2017, 2016 and 2015, respectively.

Sunett<sup>®</sup> sweetener. Ace-K, a non-nutritive high intensity sweetener sold under the trademark Sunett<sup>®</sup>, is used in a variety of beverages, confections and dairy products throughout the world. Sunett<sup>®</sup> sweetener is the ideal blending partner for caloric and non-caloric sweeteners as it balances the sweetness profile. It is recognized in the food industry for its consistent product quality and reliable supply. The primary raw material for Sunett is diketene.

Food protection ingredients. Our food protection ingredients, potassium sorbate and sorbic acid, are mainly used in foods, beverages and personal care products.

**Geographic Regions**

Net sales by destination for the Consumer Specialties segment by geographic region are as follows:

	Year Ended December 31,					
	2017		2016		2015	
	(In \$ millions, except percentages)					
North America	168	22 %	175	19 %	183	19 %
Europe and Africa	340	43 %	457	49 %	476	49 %
Asia-Pacific	228	29 %	248	27 %	255	26 %
South America	47	6 %	49	5 %	55	6 %
Total <sup>(1)</sup>	783	100%	929	100%	969	100%

(1) Excludes intersegment sales of \$2 million, \$0 million and \$0 million for the years ended December 31, 2017, 2016 and 2015, respectively.

**Customers**

Acetate tow is sold principally to the major tobacco companies that account for a majority of worldwide cigarette production. Contracts with most of our customers are generally entered into on an annual or multi-year basis. Our food ingredients business primarily sells Sunett<sup>®</sup> sweetener to a limited number of large multinational and regional customers in the food and beverage industry under long-term and annual contracts. Food protection ingredients are primarily sold through regional distributors to small and medium sized customers and directly to large multinational customers in the food industry.

The pricing of products within the cellulose derivatives and food ingredients businesses is sensitive to demand and is primarily based on the value-in-use. Many sales in these businesses are conducted under contracts with pricing for one or more years. As a result, margins may expand or contract in response to changes in raw material costs over these similar periods, and we may be unable to adjust pricing in the short to medium term due to other factors, such as the intense level of competition in the industry.

Table of Contents**Competition**

On November 13, 2017, we obtained a preliminary injunction against a European distributor of Ace-K, preventing the distributor from continuing to sell infringing Ace-K sweetener.

**Industrial Specialties**

Products	Major End-Use Applications	Principal Competitors	Key Raw Materials
Emulsion polymers	<ul style="list-style-type: none"> <li>• Paints</li> <li>• Coatings</li> <li>• Adhesives</li> <li>• Textiles</li> <li>• Paper finishing</li> </ul>	<ul style="list-style-type: none"> <li>• BASF SE</li> <li>• Dairen Chemical Corporation</li> <li>• The Dow Chemical Company</li> <li>• Wacker Chemie AG</li> </ul>	<ul style="list-style-type: none"> <li>• Vinyl acetate monomer ("VAM")</li> <li>• Ethylene</li> <li>• Acrylate esters</li> <li>• Styrene</li> </ul>
EVA polymers	<ul style="list-style-type: none"> <li>• Flexible packaging</li> <li>• Lamination products</li> <li>• Automotive parts</li> <li>• Hot melt adhesives</li> </ul>	<ul style="list-style-type: none"> <li>• Arkema</li> <li>• E. I. du Pont de Nemours and Company</li> <li>• ExxonMobil Chemical</li> </ul>	<ul style="list-style-type: none"> <li>• VAM</li> <li>• Ethylene</li> </ul>
<ul style="list-style-type: none"> <li>• Conventional emulsions</li> <li>• Vinyl acetate ethylene ("VAE") emulsions</li> </ul>			
<ul style="list-style-type: none"> <li>• Ethylene vinyl acetate ("EVA") resins and compounds</li> <li>• Low-density polyethylene resins ("LDPE")</li> </ul>			

**Overview**

The Industrial Specialties segment, which includes our emulsion polymers and EVA polymers businesses, is active in every major global industrial sector and serves diverse consumer end-use applications. These include traditional vinyl-based end uses, such as paints and coatings and adhesives, as well as other unique, high-value end uses including flexible packaging, thermal laminations, wire and cable, and compounds.

Our emulsion polymers business is a leading global producer of vinyl acetate-based emulsions and develops products and application technologies to improve performance, create value and drive innovation in applications such as paints and coatings, adhesives, construction, glass fiber, textiles and paper. Our emulsion polymers products are sold under globally and regionally recognized brands including EcoVAE<sup>®</sup>, Mowilith<sup>®</sup>, Vinamul<sup>®</sup>, Celvolit<sup>®</sup>, Duroset<sup>®</sup>, TufCOR<sup>®</sup> and Avicor<sup>®</sup>. The emulsion polymers business has production facilities in Canada, China, Germany, the Netherlands, Singapore, Sweden and the US and is supported by expert technical service regionally.

Our EVA polymers business is a leading North American manufacturer of a full range of specialty EVA resins and compounds as well as select grades of LDPE. Sold under the Ateva<sup>®</sup> and VitalDose<sup>®</sup> brands, these products are used in many applications, including flexible packaging films, lamination film products, hot melt adhesives, automotive parts and carpeting. Our EVA polymers business has a production facility in Edmonton, Alberta, Canada.

The Industrial Specialties segment builds on our leading acetyl technology. We operate the Industrial Specialties segment as an extension of the acetyl products under the Acetyl Chain core. Our Acetyl Intermediates segment produces VAM, a primary raw material for our emulsion polymers and EVA polymers businesses. Ethylene, another key raw material, is purchased externally from a variety of sources through annual or multi-year contracts.

Our emulsion polymers business has experienced significant growth in Asia, and we have made investments to support continued growth in the region including production at our new VAE emulsions unit in Singapore, which will support growing demand for ecologically friendly materials in Southeast Asia. In addition to geographic growth, the Industrial Specialties businesses are focused on supporting our overall manufacturing footprint strategy to increase value, such as integrating our production sites to provide critical economies of scale.

Table of Contents**Key Products**

Our emulsion polymers business produces conventional vinyl- and acrylate-based emulsions and VAE emulsions. VAE emulsions are a key component of water-based architectural coatings, adhesives, non-wovens, textiles, glass fiber and other applications. VAE emulsions are in high demand in Europe and Asia as they enable low VOC paints, specifically in interior paints.

Our EVA polymers business produces low-density polyethylene, EVA resins and compounds. Low-density polyethylene is produced in high-pressure reactors from ethylene, while EVA resins and compounds are produced in high-pressure reactors from ethylene and VAM.

**Geographic Regions**

Net sales by destination for the Industrial Specialties segment by geographic region are as follows:

	Year Ended December 31,							
	2017		2016		2015			
	(In \$ millions, except percentages)							
North America	337	33 %	337	35 %	401	37 %		
Europe and Africa	478	47 %	460	47 %	485	45 %		
Asia-Pacific	188	18 %	165	17 %	180	17 %		
South America	16	2 %	14	1 %	16	1 %		
Total <sup>(1)</sup>	1,019	100 %	976	100 %	1,082	100 %		

(1) Excludes intersegment sales of \$4 million, \$3 million and \$0 million for the years ended December 31, 2017, 2016 and 2015, respectively.

**Customers**

Industrial Specialties' products are sold to a diverse group of regional and multinational customers. Customers of our emulsion polymers business are manufacturers of water-based paints and coatings, adhesives, paper, building and construction products, glass fiber, non-wovens and textiles. Customers of our EVA polymers business are engaged in the manufacture of a variety of products, including hot melt adhesives, automotive components, thermal laminations, and flexible and food packaging materials.

Pricing of our products within Industrial Specialties is influenced by changes in the cost of raw materials. Therefore, in general, there is a direct correlation between the cost of raw materials and our net sales for most Industrial Specialties products. This impact to pricing typically lags changes in raw material costs over months or quarters and impacts profit margins over those periods.

Table of Contents

## Acetyl Intermediates

Products	Major End-Use Applications	Principal Competitors	Key Raw Materials
<ul style="list-style-type: none"> <li>• Acetic acid</li> <li>• VAM</li> <li>• Acetic anhydride</li> <li>• Acetaldehyde</li> <li>• Ethyl acetate</li> <li>• Formaldehyde</li> <li>• Butyl acetate</li> </ul>	<ul style="list-style-type: none"> <li>• Paints</li> <li>• Coatings</li> <li>• Adhesives</li> <li>• Lubricants</li> <li>• Pharmaceuticals</li> <li>• Films</li> <li>• Textiles</li> <li>• Inks</li> <li>• Plasticizers</li> <li>• Solvents</li> </ul>	<ul style="list-style-type: none"> <li>• BASF SE</li> <li>• BP PLC</li> <li>• Chang Chun Petrochemical Co., Ltd.</li> <li>• Daicel Corporation</li> <li>• The Dow Chemical Company</li> <li>• Eastman Chemical Company</li> <li>• E. I. du Pont de Nemours and Company</li> <li>• Jiangsu Sopo (Group) Co., Ltd.</li> <li>• Kuraray Co., Ltd.</li> <li>• LyondellBasell Industries N.V.</li> <li>• Nippon Gohsei</li> <li>• Perstorp Inc.</li> <li>• Showa Denko K.K.</li> </ul>	<p>For acetic acid and VAM:</p> <ul style="list-style-type: none"> <li>• Carbon monoxide</li> <li>• Methanol</li> <li>• Ethylene</li> </ul> <p>For solvents and derivatives:</p> <ul style="list-style-type: none"> <li>• Methanol</li> <li>• Acetic acid</li> </ul>

## Overview

Our Acetyl Intermediates segment includes our intermediate chemistry business, which produces and supplies acetyl products, including acetic acid, VAM, acetic anhydride and acetate esters, and operates under the Acetyl Chain core. These products are generally used as starting materials for colorants, paints, adhesives, coatings and pharmaceuticals. Our intermediate chemistry business also produces organic solvents and intermediates for pharmaceutical, agricultural and chemical products.

We have focused in recent years on enhancing our ability to drive incremental value through our global production network and productivity initiatives as well as proactively managing the intermediate chemistry business in response to trade flows and prevailing industry trends. Our intermediate chemistry business has production sites in China, Germany, Mexico, Singapore and the US. Our Acetyl Intermediates segment is a global industry leader, with a broad acetyls product portfolio, leading technology, low cost production footprint and a global supply chain. With decades of experience, advanced proprietary process technology and favorable capital and production costs, we are a leading global producer of acetic acid and VAM. AOPlus<sup>®3</sup> technology extends our historical technology advantage and enables us to construct a greenfield acetic acid facility with a capacity of 1.8 million metric tons at a lower capital cost than our competitors. Our VAntage<sup>®2</sup> technology could increase VAM capacity by up to 50% to meet growing customer demand globally with minimal investment. We believe our production technology is among the lowest cost in the industry and provides us with global growth opportunities through low cost expansions and a cost advantage over our competitors.

## Key Products

**Acetyl Products.** Acetyl products include acetic acid, VAM, acetic anhydride and acetaldehyde. Acetic acid is primarily used to manufacture VAM, purified terephthalic acid and other acetyl derivatives. VAM is used in a variety of adhesives, paints, films, coatings and textiles. Acetic anhydride is a raw material used in the production of cellulose acetate, detergents and pharmaceuticals. Acetaldehyde is a major feedstock for the production of a variety of derivatives, such as pyridines, which are used in agricultural products. We manufacture acetic acid, VAM and acetic anhydride for our own use in producing downstream, value-added products, as well as for sale to third parties. Acetic acid and VAM, our basic acetyl intermediates products, leverage global supply and demand fundamentals. The principal raw materials in these products are carbon monoxide, which we generally purchase under long-term contracts, and methanol and ethylene, which we generally purchase under both annual and multi-year contracts. Generally, methanol and ethylene are commodity products available from a wide variety of sources, while carbon monoxide is typically purpose-made in close proximity.



Table of Contents

We have a joint venture, Fairway Methanol LLC ("Fairway"), with Mitsui & Co., Ltd., of Tokyo, Japan ("Mitsui"), in which we own a 50% interest, for the production of methanol at our integrated chemical plant in Clear Lake, Texas. The methanol unit utilizes natural gas in the US Gulf Coast region as a feedstock. Almost all of our North American methanol needs are met from our share of the production, as well as the long-term contract we have with our joint venture partner, Mitsui.

In 2015, we announced capacity expansions for our acetic acid and VAM facilities in Clear Lake, Texas. The expansions will provide an additional 150kt of product for both facilities. The expansion at our VAM facility will make it the largest and most efficient VAM plant in the world and is expected to be commissioned at the end of 2018. Sales from acetyl products amounted to 27%, 29% and 31% of our consolidated net sales for the years ended December 31, 2017, 2016 and 2015, respectively.

**Solvents and Derivatives.** We manufacture a variety of solvents, formaldehyde and other chemicals, which in turn are used in the manufacture of paints, coatings, adhesives and other products. Many solvents and derivatives products are derived from our production of acetic acid. Primary products are:

• Ethyl acetate, an acetate ester that is a solvent used in coatings, inks and adhesives and in the manufacture of photographic films and coated papers;

• Butyl acetate, an acetate ester that is a solvent used in inks, pharmaceuticals and perfume;

• Formaldehyde and paraformaldehyde, which are primarily used to produce adhesive resins for plywood, particle board, coatings, POM engineering resins and a compound used in making polyurethane; and

• Other chemicals, such as crotonaldehyde, which are used by our food ingredients business for the production of sorbic acid and potassium sorbates, as well as raw materials for the fragrance and food ingredients industry.

Sales from solvents and derivatives products amounted to 9%, 9% and 10% of our consolidated net sales for the years ended December 31, 2017, 2016 and 2015, respectively.

**Geographic Regions**

Net sales by destination for the Acetyl Intermediates segment by geographic region are as follows:

	Year Ended December 31,					
	2017		2016		2015	
	(In \$ millions, except percentages)					
North America	727	32 %	645	32 %	588	26 %
Europe and Africa	532	24 %	493	24 %	711	31 %
Asia-Pacific	911	41 %	833	41 %	932	40 %
South America	72	3 %	69	3 %	66	3 %
Total <sup>(1)</sup>	2,242	100%	2,040	100%	2,297	100%

<sup>(1)</sup> Excludes intersegment sales of \$427 million, \$401 million and \$447 million for the years ended December 31, 2017, 2016 and 2015, respectively.

**Customers**

Our intermediate chemistry business sells its products both directly to customers and through distributors. Acetic acid, VAM and acetic anhydride are global businesses, and we generally supply our customers under a mix of short- and long-term agreements. Acetic acid, VAM and acetic anhydride customers produce polymers used in water-based paints, adhesives, paper coatings, polyesters, film modifiers, pharmaceuticals, cellulose acetate and textiles. We have long-standing relationships with most of these customers.

Table of Contents

Solvents and derivatives are sold to a diverse group of regional and multinational customers under multi-year contracts and on the basis of long-standing relationships. Solvents and derivatives customers are primarily engaged in the production of paints, coatings and adhesives. We manufacture formaldehyde for our own use as well as for sale to a few regional customers that include manufacturers in the wood products and chemical derivatives industries. Specialty solvents are sold globally to a wide variety of customers, primarily in the coatings and resins and the specialty products industries. These products serve global regions in the synthetic lubricant, agrochemical, rubber processing and other specialty chemical areas.

Pricing of acetic acid, VAM and other acetyl products reflects changes in the cost of raw materials. Therefore, in general, there is a direct correlation between the cost of raw materials and our net sales for most intermediate chemistry products. This impact to pricing typically lags changes in raw material costs over months or quarters.

**Other Activities**

Other Activities primarily consists of corporate center costs, including administrative activities such as finance, information technology and human resource functions, interest income and expense associated with our financing activities and results of our captive insurance companies. Our two wholly-owned captive insurance companies are a key component of our global risk management program, as well as a form of self-insurance for our liability and workers compensation risks. The captive insurance companies retain risk at levels approved by management and obtain reinsurance coverage from third parties to limit the net risk retained. One of the captive insurance companies also insures certain third-party risks. Other Activities also includes the interest cost, expected return on assets and net actuarial gains and losses components of our net periodic benefit cost for our defined benefit pension plans and other postretirement plans, which are not allocated to our business segments. Ongoing merger, acquisition and integration related costs are also included in Other Activities.

**Strategic Affiliates**

Our strategic affiliates represent an important component of our strategy for accelerated growth and global expansion. We have a substantial portfolio of affiliates in various regions, including Asia-Pacific, North America and the Middle East. These affiliates, some of which date back as far as the 1960s, have sizeable operations and are significant within their industries.

With shared characteristics such as products, applications and manufacturing technology, these strategic affiliates complement and extend our technology and specialty materials portfolio. We have historically entered into these investments to gain access to local demand, minimize costs and accelerate growth in areas we believe have significant future business potential. Depending on the level of investment and other factors, we account for our strategic affiliates using either the equity method or cost method of accounting.

Our strategic affiliates contribute substantial earnings and cash flows to us. During the year ended December 31, 2017, our equity method strategic affiliates generated combined sales of \$2.3 billion, resulting in our recording \$157 million of equity in net earnings of affiliates and \$96 million of dividends.

Table of Contents

Our strategic affiliates as of December 31, 2017 are as follows:

	Location of Headquarters	Ownership	Partner(s)	Year Entered
Equity Method Investments				
Advanced Engineered Materials				
National Methanol Company	Saudi Arabia	25 %	Saudi Basic Industries Corporation (50%); Texas Eastern Arabian Corporation Ltd. (25%)	1981
KEPCO	South Korea	50 %	Mitsubishi Gas Chemical Company, Inc. (40%); Mitsubishi Corporation (10%)	1999
Polyplastics	Japan	45 %	Daicel Corporation (55%)	1964
Fortron Industries LLC	US	50 %	Kureha America Inc. (50%)	1992
Cost Method Investments				
Consumer Specialties				
Kunming Cellulose Fibers Co. Ltd.	China	30 %	China National Tobacco Corporation (70%)	1993
Nantong Cellulose Fibers Co. Ltd.	China	31 %	China National Tobacco Corporation (69%)	1986
Zhuhai Cellulose Fibers Co. Ltd.	China	30 %	China National Tobacco Corporation (70%)	1993

National Methanol Company (Ibn Sina). National Methanol Company represents approximately 1% of the world's methanol production capacity and is one of the world's largest producers of methyl tertiary-butyl ether, a gasoline additive. Its production facilities are located in Saudi Arabia. Saudi Basic Industries Corporation ("SABIC") is responsible for all product marketing. Methanol is a key feedstock for POM production and is produced by our Ibn Sina affiliate which provides an economic hedge against raw material costs in our engineered materials business. Ibn Sina has constructed a 50,000 metric ton POM production facility in Saudi Arabia. The new facility will supply POM to support Advanced Engineered Materials' future growth plans as well as our venture partners' regional business development and was declared commercially operational in the fourth quarter of 2017. Upon successful startup of the POM facility, our indirect economic interest in Ibn Sina increased from 25% to 32.5%. SABIC's economic interest will remain unchanged.

KEPCO. KEPCO is the leading producer of POM in South Korea. KEPCO has polyacetal production facilities in Ulsan, South Korea, compounding facilities for PBT and nylon in Pyongtaek, South Korea, and participates with Polyplastics and Mitsubishi Gas Chemical Company, Inc. in a world-scale POM facility in Nantong, China.

Polyplastics. Polyplastics is a leading supplier of engineered plastics. Polyplastics is a manufacturer and/or marketer of POM, LCP and PPS, with principal production facilities located in Japan and Malaysia.

Fortron Industries LLC. Fortron Industries LLC ("Fortron") is a leading global producer of PPS, sold under the Fortron® brand, which is used in a wide variety of automotive and other applications, especially those requiring heat and/or chemical resistance. Fortron's facility is located in Wilmington, North Carolina. This venture combines our sales, marketing, distribution, compounding and manufacturing expertise with the PPS polymer technology expertise of Kureha America Inc.

Cellulose derivatives strategic ventures. Our cellulose derivatives ventures within our Consumer Specialties segment generally fund their operations using operating cash flow and pay dividends based on each ventures' performance in the preceding year. In 2017, 2016 and 2015, we received cash dividends of \$107 million, \$107 million and \$106 million, respectively.

Although our ownership interest in each of our cellulose derivatives ventures exceeds 20%, we account for these investments using the cost method of accounting because we determined that we cannot exercise significant influence over these entities due to local government investment in and influence over these entities, limitations on our involvement in the day-to-day operations and the present inability of the entities to provide timely financial information prepared in accordance with generally accepted accounting principles in the United States of America ("US GAAP").



Table of Contents

## Other Equity Method Investments

InfraServ. We hold indirect ownership interests in several German InfraServ Groups that own and develop industrial parks and provide on-site general and administrative support to tenants. Our ownership interest in the equity investments in InfraServ affiliates are as follows:

As of December 31, 2017

(In percentages)

InfraServ GmbH & Co. Gendorf KG <sup>(1)</sup>	39
InfraServ GmbH & Co. Hoechst KG	32
InfraServ GmbH & Co. Knapsack KG <sup>(1)</sup>	27

<sup>(1)</sup> See Note 29 - Subsequent Events in the accompanying consolidated financial statements for further information.

## Research and Development

Our business models leverage innovation and conduct research and development activities to develop new, and optimize existing, production technologies, as well as to develop commercially viable new products and applications. Research and development expense was \$72 million, \$78 million and \$119 million for the years ended December 31, 2017, 2016 and 2015, respectively. We consider the amounts spent during each of the last three fiscal years on research and development activities to be sufficient to execute our current strategic initiatives.

## Intellectual Property

We attach importance to protecting our intellectual property, including safeguarding our confidential information and through our patents, trademarks and copyrights, in order to preserve our investment in research and development, manufacturing and marketing. Patents may cover processes, equipment, products, intermediate products and product uses. We also seek to register trademarks as a means of protecting the brand names of our Company and products. Patents. In most industrial countries, patent protection exists for new substances and formulations, as well as for certain unique applications and production processes. However, we do business in regions of the world where intellectual property protection may be limited and difficult to enforce.

Confidential Information. We maintain stringent information security policies and procedures wherever we do business. Such information security policies and procedures include data encryption, controls over the disclosure and safekeeping of confidential information and trade secrets, as well as employee awareness training.

Trademarks. Amcel<sup>®</sup>, AOPlus<sup>®</sup>, Ateva<sup>®</sup>, Avicor<sup>®</sup>, Celanese<sup>®</sup>, Celanex<sup>®</sup>, Celcon<sup>®</sup>, CelFX<sup>®</sup>, Celstran<sup>®</sup>, Celvolut<sup>®</sup>, Clarifoil<sup>®</sup>, Dur-O-Set<sup>®</sup>, Ecomid<sup>®</sup>, EcoVAE<sup>®</sup>, Forflex<sup>®</sup>, Forprene<sup>®</sup>, FRIANYL<sup>®</sup>, Fortron<sup>®</sup>, GHR<sup>®</sup>, Gumfit<sup>®</sup>, GUR<sup>®</sup>, Hostaform<sup>®</sup>, Laprene<sup>®</sup>, MetaLX<sup>®</sup>, Mowilith<sup>®</sup>, MT<sup>®</sup>, NILAMID<sup>®</sup>, Nivionplast<sup>®</sup>, Nutrinova<sup>®</sup>, Nylfor<sup>®</sup>, Pibiflex<sup>®</sup>, Pibifor<sup>®</sup>, Pibiter<sup>®</sup>, Polifor<sup>®</sup>, Resyn<sup>®</sup>, Riteflex<sup>®</sup>, SlideX<sup>®</sup>, Sofprene<sup>®</sup>, Sofpur<sup>®</sup>, Sunett<sup>®</sup>, Talcoprene<sup>®</sup>, Tecnoprene<sup>®</sup>, Thermx<sup>®</sup>, TufCOR<sup>®</sup>, VAntage<sup>®</sup>, Vectra<sup>®</sup>, Vinac<sup>®</sup>, Vinamul<sup>®</sup>, VitalDose<sup>®</sup>, Zenite<sup>®</sup> and certain other branded products and services named in this document are registered or reserved trademarks or service marks owned or licensed by Celanese. The foregoing is not intended to be an exhaustive or comprehensive list of all registered or reserved trademarks and service marks owned or licensed by Celanese. Fortron<sup>®</sup> is a registered trademark of Fortron Industries LLC. Hostaform<sup>®</sup> is a registered trademark of Hoechst GmbH. Mowilith<sup>®</sup> and NILAMID<sup>®</sup> are registered trademarks of Celanese in most European countries.

We monitor competitive developments and defend against infringements on our intellectual property rights. Neither Celanese nor any particular business segment is materially dependent upon any one patent, trademark, copyright or trade secret.

## Environmental and Other Regulation

Matters pertaining to environmental and other regulations are discussed in Item 1A. Risk Factors, as well as Note 2 - Summary of Accounting Policies, Note 16 - Environmental and Note 24 - Commitments and Contingencies in the accompanying consolidated financial statements.

Table of Contents

## Employees

Our employees employed on a continuing basis throughout the world are as follows:

	Employees as of December 31, 2017
North America	
US	2,608
Canada	242
Mexico	683
Total	3,533
Europe	
Germany	1,556
Other Europe	1,293
Total	2,849
Asia	1,072
Rest of World	138
Total	7,592

## Backlog

We do not consider backlog to be a significant indicator of the level of future sales activity. In general, we do not manufacture our products against a backlog of orders. Production and inventory levels are based on the level of incoming orders as well as projections of future demand. Therefore, we believe that backlog information is not material to understanding our overall business and should not be considered a reliable indicator of our ability to achieve any particular level of net sales or financial performance.

Available Information — Securities and Exchange Commission ("SEC") Filings and Corporate Governance Materials  
We make available free of charge, through our internet website (<http://www.celanese.com>), our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as well as ownership reports on Form 3 and Form 4, as soon as reasonably practicable after electronically filing such material with, or furnishing it to, the SEC. References to our website in this report are provided as a convenience, and the information on our website is not, and shall not be deemed to be a part of this report or incorporated into any other filings we make with the SEC. The SEC maintains a website that contains reports, proxy and information statements, and other information regarding issuers, including Celanese Corporation, that electronically file with the SEC at <http://www.sec.gov>.

We also make available free of charge, through our website, our Corporate Governance Guidelines of our Board of Directors and the charters of each of the standing committees of our Board of Directors.

Table of Contents

Item 1A. Risk Factors

Many factors could have an effect on our financial condition, cash flows and results of operations. We are subject to various risks resulting from changing economic, environmental, political, industry, business, financial and regulatory conditions. The factors described below represent our principal risks.

Risks Related to Our Business

We are exposed to general economic, political and regulatory conditions and risks in the countries in which we have operations and customers.

We operate globally and have customers in many countries. Our major facilities are primarily located in North America, Europe and Asia, and we hold interests in affiliates that operate in the United States ("US"), Germany, China, Japan, Malaysia, South Korea and Saudi Arabia. Our principal customers are similarly global in scope and the prices of our most significant products are typically regional or world market prices. Consequently, our business and financial results are affected, directly and indirectly, by world economic conditions, including instability in credit markets, declining consumer and business confidence, fluctuating commodity prices and interest rates, volatile exchange rates and other challenges such as the changing regulatory environment.

Our operations are also subject to global political conditions. For example, any future withdrawal or renegotiation of trade agreements or the more aggressive prosecution of trade disputes with countries like China, may adversely affect our ability to operate our business and execute our growth strategy. In addition, it may be more difficult for us to enforce agreements, collect receivables, receive dividends and repatriate earnings through foreign legal systems. In certain foreign jurisdictions our operations are subject to nationalization and expropriation risk and some of our contractual relationships within these jurisdictions are subject to cancellation without full compensation for loss. Furthermore, in certain cases where we benefit from local government subsidies or other undertakings, such benefits are subject to the solvency of local government entities and are subject to termination without meaningful recourse or remedies.

We have invested significant resources in China and other Asian countries. This region's growth may slow, and we may fail to realize the anticipated benefits associated with our investment there and, consequently, our financial results may be adversely impacted.

In addition, we have significant operations and financial relationships based in Europe. Historically sales originating in Europe have accounted for over one-third of our net sales. For example, in 2017, sales originating in Europe accounted for approximately 40% of our net sales. Adverse conditions in the European economy related to the United Kingdom's exit from the European Union ("EU") membership or otherwise may negatively impact our overall financial results due to reduced economic growth and resulting in decreased end-use customer demand.

We are subject to risks associated with the increased volatility in the prices and availability of key raw materials and energy, which could have a significant adverse effect on the margins of our products and our financial results.

We purchase significant amounts of ethylene, methanol, carbon monoxide and natural gas from third parties primarily for use in our production of basic chemicals in the Acetyl Intermediates segment, principally acetic acid, vinyl acetate monomer ("VAM") and formaldehyde. We use a portion of our output of these chemicals, in turn, as inputs in the production of downstream products in all of our business segments. We also purchase some of these raw materials for use in our Industrial Specialties segment, primarily for vinyl acetate ethylene emulsions and ethylene vinyl acetate production, as well as significant amounts of wood pulp for use in our production of cellulose derivatives in our Consumer Specialties segment. The price of many of these items is dependent on the available supply of that item and may increase significantly as a result of uncertainties associated with war, terrorist activities, civil unrest, epidemics, pandemics, weather, natural disasters, the effects of climate change or political instability, plant or production disruptions, strikes or other labor unrest, breakdown or degradation of transportation infrastructure used in the delivery of strategic raw materials and energy commodities, or changes in laws or regulations in any of the countries in which we have significant suppliers. In particular, to the extent of our vertical integration in the production of chemicals, shortages in the availability of raw material chemicals, such as natural gas, ethylene and methanol, or the loss of our dedicated supplies of carbon monoxide, may have an increased adverse impact on us as it can cause a shortage in intermediate and finished products. Such shortages would adversely impact our ability to produce certain products and increase our costs resulting in reduced margins and adverse financial results.

We are exposed to volatility in the prices of our raw materials and energy. Although we have long-term supply agreements, multi-year purchasing and sales agreements and forward purchase contracts providing for the supply of ethylene, methanol,

18

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## Table of Contents

carbon monoxide, wood pulp, natural gas and electricity, the contractual prices for these raw materials and energy can vary with economic conditions and may be highly volatile. In addition to the factors noted above that may impact supply or price, factors that have caused volatility in our raw material prices in the past and which may do so in the future include:

- Shortages of raw materials due to increasing demand, e.g., from growing uses or new uses;
- Capacity constraints, e.g., due to construction delays, labor disruption, involuntary shutdowns or turnarounds;
- The inability of a supplier to meet our delivery orders or a supplier's choice not to fulfill orders or to terminate a supply contract or our inability to obtain or renew supply contracts on favorable terms;
- The general level of business and economic activity; and
- The direct or indirect effect of governmental regulation (including the impact of government regulation relating to climate change).

If we are not able to fully offset the effects of higher energy and raw material costs through price increases, productivity improvements or cost reduction programs, or if such commodities become unavailable, it could have a significant adverse effect on our ability to timely and profitably manufacture and deliver our products resulting in reduced margins and adverse financial results.

We have a practice of maintaining, when available, multiple sources of supply for raw materials and services. However, some of our individual plants may have single sources of supply for some of their raw materials, such as carbon monoxide, steam and ethylene, or services. Although we have been able to obtain sufficient supplies of raw materials and services, there can be no assurance that unforeseen developments will not affect our ability to source raw materials or services in the future. Even if we have multiple sources of supply for a raw material or a service, there can be no assurance that these sources can make up for the loss of a major supplier. Furthermore, if any sole source or major supplier were unable or unwilling to deliver a raw material or a service for an extended period of time, we may not be able to find an acceptable alternative or any such alternative could result in increased costs. It is also possible profitability will be adversely affected if we are required to qualify additional sources of supply for a raw material or a service to our specifications in the event of the loss of a sole source or major supplier.

A portion of our supply of methanol in North America is currently obtained from our joint venture, Fairway Methanol LLC ("Fairway"), with Mitsui & Co., Ltd., of Tokyo, Japan, in which we own a 50% interest, for the production of methanol at our integrated chemical plant in Clear Lake, Texas.

Production at our manufacturing facilities, or at our suppliers', could be disrupted for a variety of reasons, which could prevent us from producing enough of our products to maintain our sales and satisfy our customers' demands.

A disruption in production at one or more of our manufacturing facilities, or our suppliers, could have a material adverse effect on our business. Disruptions could occur for many reasons, including fire, natural disasters, weather, unplanned maintenance or other manufacturing problems, disease, strikes or other labor unrest, transportation interruption, government regulation, political unrest or terrorism. Alternative facilities with sufficient capacity or capabilities may not be available, may cost substantially more or may take a significant time to start production, each of which could negatively affect our business and financial performance. If one of our key manufacturing facilities is unable to produce our products for an extended period of time, our sales may be reduced by the shortfall caused by the disruption and we may not be able to meet our customers' needs, which could cause them to seek other suppliers. In particular, production disruptions at our manufacturing facilities that produce chemicals used as inputs in the production of chemicals in other business segments, such as acetic acid, VAM and formaldehyde, could have a more significant adverse effect on our business and financial performance and results of operations to the extent of such vertical integration. Furthermore, to the extent a production disruption occurs at a manufacturing facility that has been operating at or near full capacity, the resulting shortage of our product could be particularly harmful because production at such manufacturing facility may not be able to reach levels achieved prior to the disruption.

Failure to develop new products and production technologies or to implement productivity and cost reduction initiatives successfully, may harm our competitive position.

Our operating results depend significantly on the development of commercially viable new products, product grades and applications, as well as process technologies, free of any legal restrictions. If we are unsuccessful in developing new products, applications and production processes in the future, including failing to leverage our opportunity

pipeline in our Advanced Engineered Materials segment, our competitive position and operating results may be negatively affected. However, as we invest in new technology, we face the risk of unanticipated operational or commercialization difficulties, including an inability

Table of Contents

to obtain necessary permits or governmental approvals, the development of competing technologies, failure of facilities or processes to operate in accordance with specifications or expectations, construction delays, cost over-runs, the unavailability of financing, required materials or equipment and various other factors. Likewise, we have undertaken and are continuing to undertake initiatives in all of our business segments to improve productivity and performance and to generate cost savings. These initiatives may not be completed or beneficial or the estimated cost savings from such activities may not be realized.

Our business exposes us to potential product liability claims and recalls, which could adversely affect our financial condition and performance.

The development, manufacture and sale of specialty chemical products by us, including products produced for the food and beverage, cigarette, automobile, construction, aerospace, medical device and pharmaceutical industries, involves a risk of exposure to product liability claims, product recalls, product seizures and related adverse publicity. A product liability claim or judgment against us could also result in substantial and unexpected expenditures, affect consumer or customer confidence in our products, and divert management's attention from other responsibilities. Although we maintain product liability insurance, there can be no assurance that this type or the level of coverage is adequate or that we will be able to continue to maintain our existing insurance or obtain comparable insurance at a reasonable cost, if at all. A product recall or a partially or completely uninsured judgment against us could have a material adverse effect on our results of operations or financial condition. Although we have standard contracting policies and controls, we may not always be able to contractually limit our exposure to third party claims should our failure to perform result in downstream supply disruptions or product recalls.

We could be subject to damages based on claims brought against us by our customers or lose customers as a result of the failure of our products to meet certain quality specifications.

Our products provide important performance attributes to our customers' products. If one of our products fails to perform in a manner consistent with quality specifications, a customer could seek replacement of the product or damages for costs incurred as a result of the product failing to perform as guaranteed. A successful claim or series of claims against us could have a material adverse effect on our financial condition and results of operations and could result in a loss of one or more key customers.

Our future success depends in part on our ability to protect our intellectual property rights and our rights to use our intellectual property. Our inability to protect and enforce these rights could reduce our ability to maintain our industry position and our profit margins.

We rely on our patents, trademarks, copyrights, know-how and trade secrets and patents and other technology licensed from third parties to protect our investment in research and development and our competitive commercial positions in manufacturing and marketing our products. We have adopted internal policies for protecting our know-how and trade secrets. In addition, our practice is to seek patent or trade secret protection for significant developments that provide us competitive advantages and freedom to practice for our businesses. Patents may cover catalysts, processes, products, intermediate products and product uses. These patents are usually filed in strategic countries throughout the world and provide varying periods and scopes of protection based on the filing date and the type of patent application. The legal life and scope of protection provided by a patent may vary among those countries in which we seek protection. As patents expire, the catalysts, processes, products, intermediate products and product uses described and claimed in those patents generally may become available for use by the public subject to our continued protection for associated know-how and trade secrets. We also monitor intellectual property of others, especially patents that could impact our rights to commercially implement research and development, our rights to manufacture and market our products, and our rights to use know-how and trade secrets. We will not intentionally infringe upon the valid intellectual property rights of others, and we will continue to assess and take actions as necessary to protect our positions. We also seek to register trademarks as a means of protecting the brand names of our products, which brand names become more important once the corresponding product or process patents have expired. We operate in regions of the world where intellectual property protection may be limited and difficult to enforce and our continued growth strategy may result in us seeking intellectual property protection in additional regions with similar challenges. We also monitor the trademarks of others and take action when our trademark rights are being infringed upon. If we are not successful in protecting or maintaining our patent, license, trademark or other intellectual property rights, or

protecting our rights to commercially make, market and sell our products, our net sales, results of operations and cash flows may be adversely affected.

Table of Contents

Our business is exposed to risks associated with the creditworthiness of our suppliers, customers and business partners and the industries in which our suppliers, customers and business partners participate are cyclical in nature, both of which may adversely affect our business and results of operations.

Our business is exposed to risks associated with the creditworthiness of our key suppliers, customers and business partners and reductions in demand for our customers' products. These risks include the interruption of production at the facilities of our customers, the reduction, delay or cancellation of customer orders, delays in or the inability of customers to obtain financing to purchase our products, delays in or interruptions of the supply of raw materials we purchase and bankruptcy of customers, suppliers or other creditors. Furthermore, some of the industries in which our end-use customers participate, such as the automotive, electrical, construction and textile industries, are highly competitive, to a large extent driven by end-use applications, and may experience overcapacity, all of which may affect demand for and the pricing of our products. In addition, many of these industries are cyclical in nature, thus posing risks to us that vary throughout the year. The occurrence of any of these events may adversely affect our cash flow, profitability and financial condition.

Failure to comply with applicable laws or regulations and/or changes in applicable laws or regulations may adversely affect our business and financial results as a whole.

We are subject to extensive international, national, state, local and other laws and regulations. Failure to comply with these laws, including antitrust and anticorruption laws, rules, regulations or court decisions, could expose us to fines, penalties and other costs. Although we have implemented policies and procedures designed to ensure compliance with these laws, rules, regulations and court decisions, there can be no assurance that our employees and business partners and other third parties acting on our behalf will comply with these laws, rules, regulations and court decisions, which could result in fines, penalties and costs and damage to our business reputation.

Moreover, changes in laws or regulations, including the more aggressive enforcement of such laws and regulations, such as unexpected changes in regulatory requirements (including import or export licensing requirements), or changes in reporting requirements of the US, Canadian, Mexican, German, EU or Asian governmental agencies, could increase the cost of doing business in these regions. Any of these conditions, including the failure to obtain or maintain operating permits for our business, may have an effect on our business and financial results as a whole and may result in volatile current and future prices for our securities, including our stock.

Environmental regulations and other obligations relating to environmental matters could subject us to liability for fines, clean-ups and other damages, require us to incur significant costs to modify our operations and increase our manufacturing and delivery costs.

Costs related to our compliance with environmental laws and regulations, and potential obligations with respect to sites currently or formerly owned or operated by us, may have a significant negative impact on our operating results. We also have obligations related to the indemnity agreement contained in the demerger and transfer agreement between Celanese GmbH and Hoechst AG for environmental matters arising out of certain divestitures that took place prior to the demerger.

Our operations are subject to extensive international, national, state, local and other laws and regulations that govern environmental and health and safety matters. We incur substantial capital and other costs to comply with these requirements. If we violate any one of those laws or regulations, we can be held liable for substantial fines and other sanctions, including limitations on our operations as a result of changes to or revocations of environmental permits involved. Stricter environmental, safety and health laws and regulations could result in substantial costs and liabilities to us or limitations on our operations. Consequently, compliance with these laws and regulations may negatively affect our earnings and cash flows in a particular reporting period. See Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations - Liquidity and Capital Resources for further information.

Changes in environmental, health and safety regulations in the jurisdictions where we manufacture or sell our products could lead to a decrease in demand for our products.

New or revised governmental regulations and independent studies relating to the effect of our products on health, safety or the environment may affect demand for our products and the cost of producing our products. In addition, products we produce, including VAM, formaldehyde and plastics derived from formaldehyde, may be classified in a manner that would adversely affect demand for such products. For example, the International Agency for Research on

Cancer ("IARC"), a private research agency, classified formaldehyde as carcinogenic to humans (Group 1) based on studies linking formaldehyde exposure to nasopharyngeal cancer, a rare cancer in humans. In addition, several studies have investigated possible links between formaldehyde exposure and various end points, including leukemia. In October 2009, IARC concluded that there is sufficient

## Table of Contents

evidence of a causal association between formaldehyde and the development of leukemia. In 2011, the National Toxicology Program ("NTP") released the 12th report on carcinogens, which changed the classification of formaldehyde from "reasonably anticipated to be a human carcinogen" to "known to be a human carcinogen". Similar to the IARC modification in 2009, the NTP report also implicates formaldehyde as a leukemogen. We anticipate that the results of the IARC's and the NTP's reviews will be examined and considered by government agencies with responsibility for setting worker and environmental exposure standards and labeling requirements.

Other pending initiatives potentially will require toxicological testing and risk assessments of a wide variety of chemicals, including chemicals used or produced by us. These initiatives include the Voluntary Children's Chemical Evaluation Program, High Production Volume Chemical Initiative and expected modifications to the Toxic Substances Control Act in the US, as well as various European Commission programs, such as the Registration, Evaluation, Authorization and Restriction of Chemicals, and new initiatives in Asia and other regions. These assessments may result in heightened concerns about the chemicals involved and additional requirements being placed on the production, handling, labeling or use of the subject chemicals. Such concerns and additional requirements could also increase the cost incurred by our customers to use our chemical products and otherwise limit the use of these products, which could lead to a decrease in demand for these products. Such a decrease in demand would likely have an adverse impact on our business and results of operations.

Our production facilities, including facilities we own and/or operate and operations at our facilities owned and/or operated by third parties, handle the processing of some volatile and hazardous materials that subject us to operating and other risks that could have a negative effect on our operating results.

Although we take precautions to enhance the safety of, and minimize the disruption to, our operations and operations at our facilities owned and/or operated by third parties, we are subject to operating and other risks associated with chemical manufacturing, including the storage and transportation of raw materials, finished products and waste. These risks include, among other things, pipeline and storage tank leaks and ruptures, explosions and fires and discharges or releases of toxic or hazardous substances. In addition, we may have limited control over operations at our facilities owned and/or operated by third parties or such operations may not be fully integrated into our safety programs.

These operating and other risks can cause personal injury, property damage, third-party damages and environmental contamination, and may result in the shutdown of affected facilities and the imposition of civil or criminal penalties.

The occurrence of any of these events may disrupt production and have a negative effect on the productivity and profitability of a particular manufacturing facility, our operating results and cash flows.

US federal regulations aimed at increasing security at certain chemical production plants and similar legislation that may be proposed in the future, if passed into law, may increase our operating costs and cause an adverse effect on our results of operations.

The Chemical Facility Anti-Terrorism Standards program ("CFATS Program"), which is administered by the Department of Homeland Security ("DHS"), identifies and regulates chemical facilities to ensure that they have security measures in place to reduce the risks associated with potential terrorist attacks on chemical plants located in the US. In December 2014, the Protecting and Securing Chemical Facilities from Terrorist Attacks Act of 2014 ("CFATS Act") was enacted. The CFATS Act reauthorizes the CFATS Program for four years. DHS has released an interim final rule under the CFATS Program that imposes comprehensive federal security regulations for high-risk chemical facilities in possession of specified quantities of chemicals of interest. This rule establishes risk-based performance standards for the security of our nation's chemical facilities. It requires covered chemical facilities to prepare Security Vulnerability Assessments, which identify facility security vulnerabilities, and to develop and implement Site Security Plans, which include measures that satisfy the identified risk-based performance standards. We cannot determine with certainty the costs associated with any security measures that DHS may require. We are subject to risks associated with possible climate change legislation, regulation and international accords. Greenhouse gas emissions have become the subject of a large amount of international, national, regional, state and local attention. For example, the Environmental Protection Agency has promulgated rules concerning greenhouse gas emissions and cap and trade initiatives to limit greenhouse gas emissions have been introduced in the EU. In addition, regulation of greenhouse gas also could occur pursuant to future treaty obligations, statutory or regulatory changes or

new climate change legislation. As such, future environmental legislative and regulatory developments related to climate change are possible, which could materially increase operating costs in the chemical industry and thereby increase our manufacturing and delivery costs.



Table of Contents

Our business and financial results may be adversely affected by various legal and regulatory proceedings. We are involved in legal and regulatory proceedings, lawsuits, claims and investigations in the normal course of business and could become subject to additional claims in the future, some of which could be material. The outcome of existing proceedings, lawsuits, claims and investigations may differ from our expectations because the outcomes of such proceedings, including regulatory matters, are often difficult to reliably predict. Various factors or developments can lead us to change current estimates of liabilities and related insurance receivables where applicable, or permit us to make such estimates for matters previously not susceptible to reasonable estimates, such as a significant judicial ruling or judgment, a significant settlement, significant regulatory developments, or changes in applicable law. A future adverse ruling, settlement, or unfavorable development could result in charges that could have a material adverse effect on our business, results of operations or financial condition in any particular period. See Note 16 - Environmental and Note 24 - Commitments and Contingencies in the accompanying consolidated financial statements for further information.

Changes in, or the interpretation of, tax legislation or rates throughout the world could materially impact our results. Our future effective tax rate and related tax balance sheet attributes could be impacted by changes in tax legislation throughout the world. The overall tax environment has made it increasingly challenging for multinational corporations to operate with certainty about taxation in many jurisdictions. For example, the European Commission has been conducting investigations focusing on whether local country tax rulings or tax legislation provide preferential tax treatment that violates EU state aid rules. In addition, the Organization of Economic Cooperation and Development, which represents a coalition of member countries, is supporting changes to numerous long-standing tax principles through its base erosion and profit shifting project, which is focused on a number of issues, including the shifting of profits among affiliated entities located in different tax jurisdictions. Furthermore, a number of countries where we do business, including the US and many countries in the EU, are considering changes in relevant tax, accounting and other laws, regulations and interpretations, including changes to tax laws applicable to multinational corporations. The increasingly complex global tax environment could have a material adverse effect on our effective tax rate, results of operations, cash flows and financial condition.

On December 22, 2017, the Tax Cuts and Jobs Act (the "TCJA") was enacted and is effective January 1, 2018. Accounting Standards Codification 740, Accounting for Income Taxes, requires companies to recognize the effects of tax law changes in the period of enactment. This overhaul of the US tax law made a number of substantial changes, including the reduction of the corporate tax rate from 35% to 21%, establishing a dividends received deduction for dividends paid by foreign subsidiaries to the US, elimination or limitation of certain deductions (interest, domestic production activities and executive compensation), imposing a mandatory tax on previously unrepatriated earnings accumulated offshore since 1986 and establishing global minimum income tax and base erosion tax provisions related to offshore activities and affiliated party payments. Due to the timing of the new tax law and the substantial changes it brings, the Staff of the Securities and Exchange Commission (the "SEC") issued Staff Accounting Bulletin No. 118 ("SAB 118"), which provides registrants a measurement period to report the impact of the new US tax law. As a result, the recorded and estimated impacts of TCJA may change in future periods. See Note 19 - Income Taxes in the accompanying consolidated financial statements for further information.

Our future effective tax rates could be affected by changes in the mix of earnings in countries with differing statutory tax rates, expirations of tax holidays or rulings, changes in the assessment regarding the realization of deferred tax assets, or changes in tax laws and regulations or their interpretation. We are subject to the regular examination of our income tax returns by various tax authorities. Examinations in material jurisdictions or changes in laws, rules, regulations or interpretations by local taxing authorities could result in impacts to tax years open under statute or to foreign operating structures currently in place. We regularly assess the likelihood of adverse outcomes resulting from these examinations or changes in laws, rules, regulations or interpretations to determine the adequacy of our provision for taxes. It is possible the outcomes from these examinations will have a material adverse effect on our financial condition and operating results.

Our significant non-US operations expose us to global exchange rate fluctuations that could adversely impact our profitability.

We conduct a significant portion of our operations outside the US. Consequently, fluctuations in currencies of other countries, especially the Euro, may materially affect our operating results. Because our consolidated financial statements are presented in US dollars, we must translate revenues, income and expenses, as well as assets and liabilities, into US dollars based on average exchange rates prevailing during the reporting period or the exchange rate at the end of that period. Therefore, increases or decreases in the value of the US dollar against other major currencies will affect our net operating revenues, operating income and the cost of balance sheet items denominated in foreign currencies. Foreign exchange rates can also impact the competitiveness of products produced in certain jurisdictions and exported for sale into other jurisdictions. These changes may impact the value received for the sale of our goods versus those of our competitors.

## Table of Contents

In addition to currency translation risks, we incur a currency transaction risk whenever one of our operating subsidiaries enters into a purchase or sales transaction using a currency different from the operating subsidiary's functional currency. Given the volatility of exchange rates, particularly the strengthening of the US dollar against major currencies or the currencies of large developing countries, we may not be able to manage our currency transaction and translation risks effectively.

We use financial instruments to hedge certain exposure to foreign currency fluctuations, but those hedges in most cases cover existing balance sheet exposures and not future transactional exposures. We cannot guarantee that our hedging strategies will be effective. In addition, the use of financial instruments creates counterparty settlement risk. Failure to effectively manage these risks could have an adverse impact on our financial position, results of operations and cash flows.

We are subject to information technology security threats that could materially affect our business.

We have been and will continue to be subject to advanced persistent information technology security threats. While some unauthorized access to our information technology systems occurs, we believe to date these threats have not had a material impact on our business. We seek to detect and investigate these security incidents and to prevent their recurrence but in some cases we might be unaware of an incident or its magnitude and effects. The theft, mis-use or publication of our intellectual property and/or confidential business information or the compromising of our systems or networks could harm our competitive position, cause operational disruption, reduce the value of our investment in research and development of new products and other strategic initiatives or otherwise adversely affect our business or results of operations. To the extent that any security breach results in inappropriate disclosure of our employees', customers' or vendors' confidential information, we may incur liability as a result. Although we attempt to mitigate these risks by employing a number of measures, including monitoring of our systems and networks, and maintenance of backup and protective systems, our systems, networks, products and services remain potentially vulnerable to increasingly sophisticated advanced persistent threats that may have a material effect on our business. In addition, the devotion of additional resources to the security of our information technology systems in the future could significantly increase the cost of doing business or otherwise adversely impact our financial results.

Our success depends upon our ability to attract and retain key employees and the identification and development of talent to succeed senior management.

We rely heavily on our management team. Accordingly, our success depends on our ability to attract and retain key personnel. The inability to recruit and retain key personnel or the unexpected loss of key personnel may adversely affect our operations. In addition, because of our reliance on our management team, our future success depends in part on our ability to identify and develop talent to succeed senior management. The retention of key personnel and appropriate senior management succession planning will continue to be important to the successful implementation of our strategies.

Significant changes in pension fund investment performance or assumptions relating to pension costs may have a material effect on the valuation of pension obligations, the funded status of pension plans and our pension cost. The cost of our pension plans is incurred over long periods of time and involves many uncertainties during those periods of time. Our funding policy for pension plans is to accumulate plan assets that, over the long run, will approximate the present value of projected benefit obligations. Our pension cost is materially affected by the discount rate used to measure pension obligations, the level and value of plan assets available to fund those obligations at the measurement date and the expected long-term rate of return on plan assets. Significant changes in investment performance or a change in the portfolio mix of invested assets will likely result in corresponding increases and decreases in the valuation of plan assets and a change in the discount rate or mortality assumptions, which will likely result in an increase or decrease in the valuation of pension obligations. The combined impact of these changes will affect the reported funded status of our pension plans as well as the net periodic pension cost in the following fiscal years. In recent years, an extended duration strategy in the asset portfolio has been implemented in some plans to reduce the influence of liability volatility due to changes in interest rates. If the funded status of a pension plan declines, we may be required to make unscheduled contributions in addition to those contributions for which we have already planned.

Some of our employees are unionized, represented by workers councils or are subject to local laws that are less favorable to employers than the laws of the US.

As of December 31, 2017, we had 7,592 employees globally. Approximately 16% of our 2,608 US-based employees are unionized. In addition, a large number of our employees are employed in countries in which employment laws provide greater bargaining or other employment rights than the laws of the US. Such employment rights require us to work collaboratively with the legal representatives of the employees to effect any changes to labor agreements. Most of our employees in Europe are represented by workers councils and/or unions that must approve any changes in terms and conditions of employment,

## Table of Contents

including potentially salaries and benefits. They may also impede efforts to restructure our workforce. Although we believe we have a good working relationship with our employees and their legal representatives, a strike, work stoppage, or slowdown by our employees could occur, resulting in a disruption of our operations or higher ongoing labor costs.

Provisions in our certificate of incorporation and bylaws, as well as any stockholders' rights plan, may discourage a takeover attempt.

Provisions contained in our certificate of incorporation and bylaws could make it more difficult for a third party to acquire us, even if doing so might be beneficial to our stockholders. Provisions of our certificate of incorporation and bylaws impose various procedural and other requirements, which could make it more difficult for stockholders to effect certain corporate actions. For example, our certificate of incorporation authorizes our Board of Directors to determine the rights, preferences, privileges and restrictions of unissued series of preferred stock, without any vote or action by our stockholders. Thus, our Board of Directors can authorize and issue shares of preferred stock with voting or conversion rights that could adversely affect the voting or other rights of holders of our Series A common stock, par value \$0.0001 per share ("Common Stock"). These rights may have the effect of delaying or deterring a change of control of our Company. In addition, a change of control of our Company may be delayed or deterred as a result of any stockholders' rights plan that our Board of Directors may adopt. These provisions could limit the price that certain investors might be willing to pay in the future for shares of our Common Stock.

We may incur significant charges in the event we close or divest all or part of a manufacturing plant or facility.

We periodically assess our manufacturing operations in order to manufacture and distribute our products in the most efficient manner. Based on our assessments, we may make capital improvements to modernize certain units, move manufacturing or distribution capabilities from one plant or facility to another plant or facility, discontinue manufacturing or distributing certain products or close or divest all or part of a manufacturing plant or facility. We also have shared services agreements at several of our plants and if such agreements are terminated or revised, we would assess and potentially adjust our manufacturing operations. The closure or divestiture of all or part of a manufacturing plant or facility could result in future charges that could be significant. See Note 4 - Acquisitions, Dispositions and Plant Closures in the accompanying consolidated financial statements for further information.

We may not be able to complete future acquisitions or joint venture transactions or successfully integrate them into our business, which could adversely affect our business or results of operations.

As part of our growth strategy, we intend to pursue acquisitions and joint venture opportunities. Successful accomplishment of this objective may be limited by the availability and suitability of acquisition candidates, the ability to obtain regulatory approvals necessary to consummate a planned transaction, and by our financial resources, including available cash and borrowing capacity. Acquisitions and joint venture transactions involve numerous risks, including difficulty determining appropriate valuation, integrating operations, technologies, services and products of the acquired lines or businesses, personnel turnover and the diversion of management's attention from other business matters. In addition, we may be unable to achieve anticipated benefits from these transactions in the time frame that we anticipate, or at all, which could adversely affect our business or results of operations.

In addition, if in connection with the tow joint venture we are unable to receive third-party financing on the terms previously contemplated and committed, we may not achieve all of the benefits planned for the joint venture transaction.

The insurance coverage that we maintain may not fully cover all operational risks.

We maintain property, business interruption and casualty insurance but such insurance may not cover all of the risks associated with the hazards of our business and is subject to limitations, including deductibles and maximum liabilities covered. We may incur losses beyond the limits, or outside the coverage, of our insurance policies, including liabilities for environmental remediation. In the future, the types of insurance we obtain and the level of coverage we maintain may be inadequate or we may be unable to continue to maintain our existing insurance or obtain comparable insurance at a reasonable cost.

Differences in views with our joint venture participants may cause our joint ventures not to operate according to their business plans, which may adversely affect our results of operations.

We currently participate in a number of joint ventures and may enter into additional joint ventures in the future. The nature of a joint venture requires us to work cooperatively with unaffiliated third parties. Differences in views among joint venture participants may result in delayed decisions or failure to agree on major decisions. If these differences cause the joint ventures to deviate from their business plans or to fail to achieve their desired operating performance, our results of operations could be adversely affected.

## Table of Contents

### Risks Related to Our Indebtedness

Our level of indebtedness and other liabilities could diminish our ability to raise additional capital to fund our operations or refinance our existing indebtedness when it matures, limit our ability to react to changes in the economy or the chemicals industry and prevent us from meeting obligations under our indebtedness.

See Note 14 - Debt in the accompanying consolidated financial statements for further information about our indebtedness. See Note 13 - Noncurrent Other Liabilities, Note 15 - Benefit Obligations and Note 16 - Environmental in the accompanying consolidated financial statements for further information about our other obligations.

Our level of indebtedness and other liabilities could have important consequences, including:

Increasing our vulnerability to general economic and industry conditions, including exacerbating the impact of any adverse business effects that are determined to be material adverse events under our existing senior credit agreement (the "Credit Agreement") or our indentures (the "Indentures") governing our €300 million in aggregate principal amount of 3.250% senior unsecured notes due 2019, \$400 million in aggregate principal amount of 5.875% senior unsecured notes due 2021, \$500 million in aggregate principal amount of 4.625% senior unsecured notes due 2022, €750 million in aggregate principal amount of 1.125% senior unsecured notes due 2023 and €300 million in aggregate principal amount of 1.250% senior unsecured notes due 2025 (collectively, the "Senior Notes");

Requiring a substantial portion of cash flow from operations to be dedicated to the payment of principal and interest on indebtedness and amounts payable in connection with the satisfaction of our other liabilities, therefore reducing our ability to use our cash flow to fund operations, capital expenditures and future business opportunities or pay dividends on our Common Stock;

Exposing us to the risk of increased interest rates as certain of our borrowings are at variable rates of interest;

Exposing us to the risk of changes in currency exchange rates as certain of our borrowings are denominated in foreign currencies;

Limiting our ability to obtain additional financing for working capital, capital expenditures, product development, debt service requirements, acquisitions and general corporate or other purposes;

Limiting our ability to enter into certain commercial arrangements because of concerns of counterparty risks; and

Limiting our ability to adjust to changing market conditions and placing us at a competitive disadvantage compared to our competitors who have less debt.

We may incur additional indebtedness in the future, which could increase the risks described above.

Although covenants under the Credit Agreement and the Indentures limit our ability to incur certain additional indebtedness, these restrictions are subject to a number of qualifications and exceptions, and the indebtedness we could incur in compliance with these restrictions could be significant. To the extent that we incur additional indebtedness, the risks associated with our debt described above, including our possible inability to service our debt, including the Senior Notes, would increase.

Our variable rate and euro denominated indebtedness subjects us to interest rate risk and foreign currency exchange rate risk, which could cause our debt service obligations to increase significantly and affect our operating results.

Certain of our borrowings are at variable rates of interest or are euro denominated, which exposes us to interest rate risk and currency exchange rate risk, respectively. See Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations - Liquidity and Capital Resources, Item 7A. Quantitative and Qualitative Disclosures About Market Risk below and Note 22 - Derivative Financial Instruments in the accompanying consolidated financial statements for further information.

We may not be able to generate sufficient cash to service our indebtedness and may be forced to take other actions to satisfy obligations under our indebtedness, which may not be successful.

Our ability to make scheduled payments on or to refinance our debt obligations depends on the financial condition and operating performance of our subsidiaries, which are subject to prevailing economic and competitive conditions and to certain

Table of Contents

financial, business and other factors beyond our control. We may not be able to maintain a level of cash flows from operating activities sufficient to permit us to pay the principal, premium, if any, and interest on our indebtedness. If our cash flows and capital resources are insufficient to fund our debt service obligations, we may be forced to reduce or delay capital expenditures, sell assets, seek additional capital or restructure or refinance our indebtedness. These alternative measures may not be successful and may not permit us to meet our scheduled debt service obligations. In the absence of such operating results and resources, we could face substantial liquidity problems and might be required to dispose of material assets or operations to meet our debt service and other obligations. We may not be able to consummate those dispositions or to obtain the proceeds that we could realize from them, and these proceeds may not be adequate to meet any debt service obligations then due.

Restrictive covenants in our debt agreements may limit our ability to engage in certain transactions and may diminish our ability to make payments on our indebtedness or pay dividends.

The Credit Agreement, the Indentures and the Receivables Purchase Agreement (the "Purchase Agreement") governing our receivables securitization facility each contain various covenants that limit our ability to engage in specified types of transactions. The Credit Agreement contains covenants including, but not limited to, restrictions on our ability to incur additional debt; incur liens securing debt; enter into sale-leaseback transactions; merge or consolidate with any other person; and sell, assign, transfer, lease, convey or otherwise dispose of all or substantially all of the Issuer's assets or the assets of its subsidiaries.

In addition, the Indentures limit Celanese US Holdings LLC ("Celanese US") and certain of its subsidiaries' ability to, among other things, incur liens securing debt; enter into sale-leaseback transactions; merge or consolidate with any other person; and sell, assign, transfer, lease, convey or otherwise dispose of all or substantially all of Celanese US's assets or the assets of its restricted subsidiaries.

The Purchase Agreement also contains covenants including, but not limited to, restrictions on CE Receivables LLC, a wholly-owned, "bankruptcy remote" special purpose subsidiary of the Company, and certain other Company subsidiaries' ability to incur indebtedness; grant liens on assets; merge, consolidate, or sell certain assets; prepay or modify certain indebtedness; and engage in other businesses.

Such restrictions in our debt obligations could result in us having to obtain the consent of our lenders and holders of the Senior Notes in order to take certain actions. Disruptions in credit markets may prevent us from obtaining or make it more difficult or more costly for us to obtain such consents. Our ability to expand our business or to address declines in our business may be limited if we are unable to obtain such consents.

A breach of any of these covenants could result in a default, which, if not cured or waived, could have a material adverse effect on our business, financial condition and results of operations. Furthermore, a default under the Credit Agreement could permit lenders to accelerate the maturity of our indebtedness under the Credit Agreement and to terminate any commitments to lend. If the lenders under the Credit Agreement accelerate the repayment of such indebtedness, we may not have sufficient liquidity to repay such amounts or our other indebtedness, including the Senior Notes. In such event, we could be forced into bankruptcy or liquidation.

Celanese and Celanese US are holding companies and depend on subsidiaries to satisfy their obligations under the Senior Notes and the guarantee of Celanese US's obligations under the Senior Notes and the Credit Agreement by Celanese.

As holding companies, Celanese and Celanese US conduct substantially all of their operations through their subsidiaries, which own substantially all of our consolidated assets. Consequently, the principal source of cash to pay Celanese and Celanese US's obligations, including obligations under the Senior Notes and the guarantee of Celanese US's obligations under the Credit Agreement and the Indentures by Celanese, is the cash that our subsidiaries generate from their operations. We cannot assure that our subsidiaries will be able to, or be permitted to, make distributions to enable Celanese US and/or Celanese to make payments in respect of their obligations. Each of our subsidiaries is a distinct legal entity and, under certain circumstances, applicable country or state laws, regulatory limitations and terms of our debt instruments may limit our subsidiaries' ability to distribute cash to Celanese US and Celanese. While the Credit Agreement and the Indentures limit the ability of our subsidiaries to put restrictions on paying dividends or making other intercompany payments to us, these limitations are subject to certain qualifications and exceptions, which may have the effect of significantly restricting the applicability of those limits. In the event Celanese US and/or



Celanese do not receive distributions from our subsidiaries, Celanese US and/or Celanese may be unable to make required payments on the indebtedness under the Credit Agreement, the Indentures, the guarantee of Celanese US's obligations under the Credit Agreement and the Indentures by Celanese, or our other indebtedness.

Table of Contents

## Item 1B. Unresolved Staff Comments

None.

## Item 2. Properties

## Description of Property

We and our affiliates own or lease numerous production and manufacturing facilities throughout the world. We also own or lease other properties, including office buildings, warehouses, pipelines, research and development facilities and sales offices. We continuously review and evaluate our facilities as a part of our strategy to optimize our business portfolio. The following table sets forth a list of our principal offices, production and other facilities throughout the world as of December 31, 2017.

Site	Leased/Owned	Products/Functions
Corporate Offices		
Amsterdam, Netherlands	Leased	Administrative offices
Budapest, Hungary	Leased	Administrative offices
Irving, Texas, US	Leased	Corporate headquarters
Nanjing, China	Leased	Administrative offices
Shanghai, China	Leased	Administrative offices
Sulzbach, Germany	Leased	Administrative offices
Advanced Engineered Materials		
Auburn Hills, Michigan, US	Leased	Automotive Development Center
Bishop, Texas, US	Owned	Polyoxymethylene ("POM"), Ultra-high molecular weight polyethylene ("UHMW-PE"), Compounding
Campo Bom, Brazil	Leased	Compounding
Ferrara, Italy	Leased	Compounding
Florence, Kentucky, US	Owned	Compounding
Forli, Italy	Leased	Compounding
Frankfurt am Main, Germany <sup>(1)(3)</sup>	Owned by InfraServ GmbH & Co. Hoechst KG <sup>(5)</sup>	POM, Compounding
Fuji City, Japan	Owned by Polyplastics Co., Ltd. <sup>(5)</sup>	POM, Polybutylene terephthalate, Liquid crystal polymers ("LCP"), Compounding
Jubail, Saudi Arabia	Owned by National Methanol Company <sup>(5)</sup>	Methyl tertiary-butyl ether, Methanol, POM
Kaiserslautern, Germany <sup>(1)</sup>	Leased	Long-fiber reinforced thermoplastics ("LFRT")
Kuantan, Malaysia	Owned by Polyplastics Co., Ltd. <sup>(5)</sup>	POM, Compounding
Lebanon, Tennessee, US	Owned	Compounding
Mantova, Italy	Leased	Compounding
Nanjing, China <sup>(2)</sup>	Owned	LFRT, UHMW-PE, Compounding
Oberhausen, Germany <sup>(1)</sup>	Leased	UHMW-PE
Shelby, North Carolina, US	Owned	LCP, Compounding
Silao, Mexico	Leased	Compounding
Spondon, Derby, United Kingdom	Owned	Acetate film
Suzano, Brazil <sup>(1)</sup>	Leased	Compounding

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Suzhou, China <sup>(8)</sup>	Owned	Compounding
Ulsan, South Korea	Owned by Korea Engineering Plastics Co., Ltd. <sup>(5)</sup>	POM
Utzenfeld, Germany	Owned	Compounding

28

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Table of Contents

Site	Leased/Owned	Products/Functions
Advanced Engineered Materials		
Wehr, Germany	Owned	Compounding
Wilmington, North Carolina, US	Owned by Fortron Industries LLC <sup>(5)</sup>	Polyphenylene sulfide
Winona, Minnesota, US	Owned	LFRT
Consumer Specialties		
Frankfurt am Main, Germany <sup>(3)</sup>	Owned by InfraServ GmbH & Co. Hoechst KG <sup>(5)</sup>	Sorbates, Sunett® sweetener
Kunming, China	Leased by Kunming Cellulose Fibers Co. Ltd. <sup>(6)</sup>	Acetate tow
Lanaken, Belgium	Owned	Acetate tow
Nantong, China	Owned by Nantong Cellulose Fibers Co. Ltd. <sup>(7)</sup>	Acetate tow, Acetate flake
Narrows, Virginia, US	Owned	Acetate tow, Acetate flake
Ocotlán, Mexico	Owned	Acetate tow, Acetate flake
Zhuhai, China	Leased by Zhuhai Cellulose Fibers Co. Ltd. <sup>(6)</sup>	Acetate tow
Industrial Specialties		
Boucherville, Quebec, Canada	Owned	Conventional emulsions
Edmonton, Alberta, Canada	Owned	Low-density polyethylene resins, Ethylene vinyl acetate
Enoree, South Carolina, US	Owned	Conventional emulsions, Vinyl acetate ethylene ("VAE") emulsions
Frankfurt am Main, Germany <sup>(3)</sup>	Owned by InfraServ GmbH & Co. Hoechst KG <sup>(5)</sup>	Conventional emulsions, VAE emulsions
Geleen, Netherlands	Owned	VAE emulsions
Jurong Island, Singapore <sup>(1)</sup>	Leased	VAE emulsions
Nanjing, China <sup>(2)</sup>	Owned	Conventional emulsions, VAE emulsions
Perstorp, Sweden	Owned	Conventional emulsions, VAE emulsions
Acetyl Intermediates		
Bay City, Texas, US <sup>(1)</sup>	Leased	Vinyl acetate monomer ("VAM")
Bishop, Texas, US	Owned	Formaldehyde, Paraformaldehyde
Cangrejera, Mexico	Owned	Acetic anhydride, Ethyl acetate, Acetone derivatives
Clear Lake, Texas, US <sup>(4)</sup>	Owned	Acetic acid, VAM, Methanol
Frankfurt am Main, Germany <sup>(3)</sup>	Owned by InfraServ GmbH & Co. Hoechst KG <sup>(5)</sup>	Acetaldehyde, VAM
Jurong Island, Singapore <sup>(1)</sup>	Leased	Acetic acid, Butyl acetate, Ethyl acetate, VAM
Nanjing, China <sup>(2)</sup>	Owned	Acetic acid, Acetic anhydride, VAM

(1) Celanese owns the assets on this site and leases the land through the terms of a long-term land lease.

Multiple Celanese business segments conduct operations at the Nanjing facility. Celanese owns the assets on this

(2) site. Celanese also owns the land through "land use right grants" for 46 to 50 years with the right to transfer, mortgage or lease such land during the term of the respective land use right grant.

- (3) Multiple Celanese business segments conduct operations at the Frankfurt Hoechst Industrial Park located in Frankfurt am Main, Germany.
- (4) Methanol is produced by our joint venture, Fairway Methanol LLC, in which Celanese owns a 50% interest.
- (5) A Celanese equity method investment.

Table of Contents

- (6) A Celanese cost method investment. The investment owns the assets on this site and leases the land from China National Tobacco Corporation.
- (7) A Celanese cost method investment. Nantong Cellulose Fibers Co. Ltd. owns the assets on this site and the land through "land use right grants" with the right to transfer, mortgage or lease such land during the term of the respective land use right grant.
- (8) Celanese owns the assets on this site. Celanese also owns the land through "land use right grants" for 41 years with the right to transfer, mortgage or lease such land during the term of the respective land use right grant.

Item 3. Legal Proceedings

The Company is involved in legal and regulatory proceedings, lawsuits, claims and investigations incidental to the normal conduct of its business, relating to such matters as product liability, land disputes, contracts, employment, antitrust and competition, intellectual property, personal injury and other actions in tort, workers' compensation, chemical exposure, asbestos exposure, taxes, trade compliance, acquisitions and divestitures, claims of legacy stockholders, past waste disposal practices and release of chemicals into the environment. The Company is actively defending those matters where it is named as a defendant. Due to the inherent subjectivity of assessments and unpredictability of outcomes of legal proceedings, the Company's litigation accruals and estimates of possible loss or range of possible loss may not represent the ultimate loss to the Company from legal proceedings. See Note 16 - Environmental and Note 24 - Commitments and Contingencies in the accompanying consolidated financial statements for a discussion of material environmental matters and material commitments and contingencies related to legal and regulatory proceedings. See Part I - Item 1A. Risk Factors for certain risk factors relating to these legal proceedings.

Item 4. Mine Safety Disclosures

None.

Executive Officers of the Registrant

The names, ages and biographies of our executive officers as of February 9, 2018 are as follows:

Name	Age	Position
Mark C. Rohr	66	Chairman of the Board of Directors and Chief Executive Officer, President
Scott M. Sutton	53	Chief Operating Officer
Peter G. Edwards	56	Executive Vice President and General Counsel
Christopher W. Jensen	51	Executive Vice President and Chief Financial Officer
Kevin S. Oliver	46	Chief Accounting Officer and Acting Chief Financial Officer
Shannon L. Jurecka	48	Senior Vice President and Chief Human Resources Officer

Mark C. Rohr was named our Chairman of the Board of Directors, President and Chief Executive Officer in April 2012 after being a member of our Board of Directors since April 2007. Prior to joining the Company, Mr. Rohr was Executive Chairman and director of Albemarle Corporation, a global developer, manufacturer and marketer of highly-engineered specialty chemicals. During his 11 years with Albemarle, he held various executive positions, including Chairman and Chief Executive Officer. Earlier in his career, Mr. Rohr held executive leadership roles with various companies, including Occidental Chemical Corporation and The Dow Chemical Company. Mr. Rohr has served on the board of directors of Ashland Global Holdings Inc. (f/k/a Ashland Inc.) since 2008, and currently serves as a member of its audit committee and its environmental, health & safety committee. In 2016, he also served as Chairman of the American Chemistry Council's Executive Committee and as Chairman of the International Association of Chemical Associations. Mr. Rohr received a bachelor's degree in chemistry and chemical engineering from Mississippi State University.

Scott M. Sutton has served as our Chief Operating Officer since March 2017 and as our Executive Vice President and President, Materials Solutions since June 2015. From January 2015 to June 2015, Mr. Sutton served as our Vice President and General Manager of the Engineered Materials business. Prior to January 2015, Mr. Sutton served as our Vice President of Supply Chain from March 2014 to January 2015 and as our Vice President of Acetic Acid and Anhydride from August 2013 to March 2014. Mr. Sutton had 28 years of industry experience prior to joining the Company, including serving as President and General Manager of Chemtura Corporation's AgroSolutions business, business manager for Landmark Structures and Vice President of a division of Albemarle Corporation. Mr. Sutton earned a civil engineering degree from Louisiana State University and is a registered professional engineer in Texas.



Table of Contents

Peter G. Edwards has served as our Executive Vice President and General Counsel since January 2017. Mr. Edwards previously was Executive Vice President and General Counsel of Baxalta Incorporated, the biopharmaceutical spin-off from Baxter, from June 2015 until its merger with Shire plc in July 2016. Before that, he was Senior Vice President and General Counsel of the global specialty pharmaceuticals company Mallinckrodt plc from June 2013 to June 2015, and served as its Vice President and General Counsel from May 2010 to its spin-off from Covidien plc in June 2013. He previously served as Executive Vice President and General Counsel for Solvay Pharmaceuticals in Brussels, Belgium from June 2007 until April 2010 and as its Senior Vice President and General Counsel in the US from October 2005 to June 2007. Before that, he held in-house positions of increasing responsibility within Mettler-Toledo, Inc. and Eli Lilly and Company. Mr. Edwards began his career in 1990 as an associate in the Kansas City, Missouri office of Shook, Hardy & Bacon L.L.P. Mr. Edwards received his J.D., cum laude, from Brigham Young University.

Christopher W. Jensen has served as our Chief Financial Officer since July 2015 and as our Executive Vice President since February 2017. Mr. Jensen has been on a medical leave of absence since October 2017. Prior to February 2017, Mr. Jensen served as our Senior Vice President, Finance since April 2011. He served as our Interim Chief Financial Officer from May 2014 to July 2015. From August 2010 to April 2011, Mr. Jensen served as our Senior Vice President, Finance and Treasurer. Prior to August 2010, Mr. Jensen served as our Vice President and Corporate Controller from March 2009 to July 2010. From May 2008 to February 2009, he served as Vice President of Finance and Treasurer. In his current capacity, Mr. Jensen has global responsibility for corporate finance, treasury operations, insurance risk management, pensions, global business services, information technology, corporate accounting, tax and general ledger accounting. Mr. Jensen was previously the Assistant Corporate Controller from March 2007 through April 2008, where he was responsible for SEC reporting, internal reporting, and technical accounting. In his initial role at the Company from October 2005 through March 2007, he built and directed our technical accounting function. From August 2004 to October 2005, Mr. Jensen worked in the inspections and registration division of the Public Company Accounting Oversight Board. He spent 13 years of his career at PricewaterhouseCoopers LLP, an assurance, tax and advisory services firm, in various positions in both the auditing and mergers & acquisitions groups. Mr. Jensen earned bachelor's and master's degrees in accounting from Brigham Young University and is a Certified Public Accountant.

Kevin S. Oliver has served as our Chief Accounting Officer since July 2016 and served as our Controller from July 2010 until January 2018. Mr. Oliver has also been functioning as our acting Chief Financial Officer while the current Chief Financial Officer has been on medical leave of absence. Prior to his current roles, Mr. Oliver held various executive positions at the Company, including serving as our Assistant Controller and our Director of Technical Accounting. Prior to joining the Company, Mr. Oliver served as an Associate Director of Inspections for the Public Company Accounting Oversight Board from December 2003 to February 2008. He spent 11 years of his career at public accounting firms, including as senior manager at Ernst & Young and Arthur Andersen, each an assurance, tax and advisory services firm, and in various positions in the auditing practice. Mr. Oliver holds a bachelor's degree in accounting from Southern Nazarene University and is a Certified Public Accountant.

Shannon L. Jurecka has served as our Senior Vice President and Chief Human Resources Officer since July 2017. Prior to her current role, Ms. Jurecka served as Vice President of Human Resources for Materials Solutions and the Human Resource leader for Mergers and Acquisitions. Immediately prior to joining the Company in 2016, Ms. Jurecka served as a Human Resources Executive with Bank of America Merrill Lynch for 10 years where she supported multiple businesses during her tenure, including her most recent role supporting over 20,000 operations employees in more than 25 locations across seven states. She also served as the Dallas and Fort Worth Market Human Resource Executive responsible for market strategic talent objectives. Prior to Bank of America, she worked at Dell as a Mechanical Engineering Project Manager prior to moving into Learning and Leadership Development. Ms. Jurecka holds a bachelor's degree in speech communication from Sam Houston State University and a master's degree in organizational leadership and ethics from St. Edwards University. She holds a secondary education teaching certificate in the State of Texas.





Table of Contents

## PART II

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

## Market Information

Our Series A common stock, par value \$0.0001 per share ("Common Stock") has traded on the New York Stock Exchange ("NYSE") under the symbol "CE" since January 21, 2005. The closing sale price of our Common Stock, as reported by the NYSE, on February 2, 2018 was \$105.09. The following table sets forth the high and low intraday sales prices per share of our Common Stock, as reported by the NYSE, and the dividends declared per share on our Common Stock for the periods indicated.

	Price Range		Dividends
	High	Low	Declared
	(In \$ per share)		
2017			
Quarter ended March 31, 2017	93.05	78.38	0.36
Quarter ended June 30, 2017	96.97	83.34	0.46
Quarter ended September 30, 2017	104.75	91.15	0.46
Quarter ended December 31, 2017	109.70	101.88	0.46
2016			
Quarter ended March 31, 2016	67.99	55.07	0.30
Quarter ended June 30, 2016	74.55	61.11	0.36
Quarter ended September 30, 2016	71.18	60.59	0.36
Quarter ended December 31, 2016	84.97	63.02	0.36

## Holders

No shares of Celanese's Series B common stock and no shares of Celanese's 4.25% convertible perpetual preferred stock are issued and outstanding. As of February 2, 2018, there were 26 holders of record of our Common Stock. By including persons holding shares in broker accounts under street names, however, we estimate we have approximately 80,030 beneficial holders.

## Dividend Policy

Our Board of Directors has a policy of declaring, subject to legally available funds, a quarterly cash dividend on each share of our Common Stock as determined in its sole discretion. Our Board of Directors may, at any time, modify or revoke our dividend policy on our Common Stock.

On February 8, 2018, we declared a cash dividend of \$0.46 per share on our Common Stock amounting to \$62 million. The cash dividend will be paid on March 2, 2018 to holders of record as of February 20, 2018.

The amount available to us to pay cash dividends is not currently restricted by our existing senior credit facility and our indentures governing our senior unsecured notes. See Note 14 - Debt in the accompanying consolidated financial statements for further information. Any decision to declare and pay dividends in the future will be made at the discretion of our Board of Directors and will depend on, among other things, our results of operations, cash requirements, financial condition, contractual restrictions and other factors that our Board of Directors may deem relevant.

Table of Contents

## Celanese Purchases of its Equity Securities

Information regarding repurchases of our Common Stock during the three months ended December 31, 2017 is as follows:

Period	Total Number of Shares Purchased <sup>(1)</sup>	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Program	Approximate Dollar Value of Shares Remaining that may be Purchased Under the Program <sup>(2)</sup>
October 1 - 31, 2017	10,676	\$ 104.10	—	\$ 1,531,000,000
November 1 - 30, 2017	924	\$ 104.02	—	\$ 1,531,000,000
December 1 - 31, 2017	38,605	\$ 106.36	—	\$ 1,531,000,000
Total	50,205		—	

(1) Represents shares withheld from employees to cover their statutory minimum withholding requirements for personal income taxes related to the vesting of restricted stock units.

(2) Our Board of Directors has authorized the aggregate repurchase of \$3.9 billion of our Common Stock since February 2008, including an increase of \$1.5 billion on July 17, 2017.

See Note 17 - Stockholders' Equity in the accompanying consolidated financial statements for further information.

Table of Contents

Performance Graph

The following performance graph compares the cumulative total return on Celanese Corporation common stock from December 31, 2012 through December 31, 2017 to that of the Standard & Poor's ("S&P") 500 Stock Index and the Dow Jones US Chemicals Index. Cumulative total return represents the change in stock price and the amount of dividends received during the indicated period, assuming reinvestment of all dividends. The performance graph assumes an investment of \$100 on December 31, 2012. The stock performance shown in the graph is included in response to SEC requirements and is not intended to forecast or to be indicative of future performance.

Comparison of Cumulative Total Return

The above performance graph and related information shall not be deemed "soliciting material" or to be "filed" with the Securities and Exchange Commission, nor shall such information be incorporated by reference into any future filing under the Securities Act of 1933 or Securities Exchange Act of 1934, each as amended, except to the extent that we specifically incorporate it by reference into such filing.

Recent Sales of Unregistered Securities

Our deferred compensation plan offers certain of our senior employees and directors the opportunity to defer a portion of their compensation in exchange for a future payment amount equal to their deferrals plus or minus certain amounts based upon the market-performance of specified measurement funds selected by the participant. These deferred compensation obligations may be considered securities of Celanese. Participants were required to make deferral elections under the plan prior to January 1 of the year such deferrals will be withheld from their compensation. We relied on the exemption from registration provided by Section 4(2) of the Securities Act in making this offer to a select group of employees, fewer than 35 of which were non-accredited investors under the rules promulgated by the Securities and Exchange Commission.

Table of Contents

## Item 6. Selected Financial Data

The balance sheet data as of December 31, 2017, 2016 and 2015 and the statements of operations data for the years ended December 31, 2017, 2016, 2015, 2014 and 2013, all of which are set forth below, are derived from the consolidated financial statements included elsewhere in this Annual Report and should be read in conjunction with those financial statements and the notes thereto. The balance sheet data as of December 31, 2014 and 2013 set forth below was derived from previously issued financial statements, adjusted for a change in accounting policy for debt issuance costs.

	Year Ended December 31,				
	2017	2016	2015	2014	2013
	(In \$ millions, except per share data)				
Statement of Operations Data					
Net sales	6,140	5,389	5,674	6,802	6,510
Other (charges) gains, net	(60 )	(11 )	(351 )	15	(158 )
Operating profit (loss)	901	893	326	758	1,508
Earnings (loss) from continuing operations before tax	1,075	1,030	488	941	1,609
Earnings (loss) from continuing operations	862	908	287	627	1,101
Earnings (loss) from discontinued operations	(13 )	(2 )	(2 )	(7 )	—
Net earnings (loss) attributable to Celanese Corporation	843	900	304	624	1,101
Earnings (loss) per common share					
Continuing operations — basic	6.21	6.22	2.03	4.07	6.93
Continuing operations — diluted	6.19	6.19	2.01	4.04	6.91
Balance Sheet Data (as of the end of period)					
Total assets	9,538	8,357	8,586	8,796	8,994
Total debt	3,641	3,008	2,981	2,723	3,040
Total Celanese Corporation stockholders' equity	2,887	2,588	2,378	2,818	2,699
Other Financial Data					
Depreciation and amortization	305	290	357	292	305
Capital expenditures <sup>(1)</sup>	281	247	483	681	408
Dividends paid per common share <sup>(2)</sup>	1.74	1.38	1.15	0.93	0.53

(1) Amounts include accrued capital expenditures. Amounts do not include capital expenditures related to capital lease obligations.

Annual dividends for the year ended December 31, 2017 consist of one quarterly dividend payment of \$0.36 per share and three quarterly dividend payments of \$0.46 per share. Annual dividends for the year ended December 31,

(2) 2016 consist of one quarterly dividend payment of \$0.30 per share and three quarterly dividend payments of \$0.36 per share. See Note 17 - Stockholders' Equity in the accompanying consolidated financial statements for further information.

Table of Contents

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

In this Annual Report on Form 10-K ("Annual Report"), the term "Celanese" refers to Celanese Corporation, a Delaware corporation, and not its subsidiaries. The terms the "Company," "we," "our" and "us," refer to Celanese and its subsidiaries on a consolidated basis. The term "Celanese US" refers to the Company's subsidiary, Celanese US Holdings LLC, a Delaware limited liability company, and not its subsidiaries.

The following discussion should be read in conjunction with the accompanying consolidated financial statements and notes to the consolidated financial statements, which are prepared in accordance with accounting principles generally accepted in the United States of America ("US GAAP").

Investors are cautioned that the forward-looking statements contained in this section and other parts of this Annual Report involve both risk and uncertainty. Several important factors could cause actual results to differ materially from those anticipated by these statements. Many of these statements are macroeconomic in nature and are, therefore, beyond the control of management. See "Forward-Looking Statements" below.

Forward-Looking Statements

Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A") and other parts of this Annual Report contain certain forward-looking statements and information relating to us that are based on the beliefs of our management as well as assumptions made by, and information currently available to, us. Generally, words such as "believe," "expect," "intend," "estimate," "anticipate," "project," "plan," "may," "can," "could," "might," and "will," and similar expressions, as they relate to us are intended to identify forward-looking statements. These statements reflect our current views and beliefs with respect to future events at the time that the statements are made, are not historical facts or guarantees of future performance and involve risks and uncertainties that are difficult to predict and many of which are outside of our control. Further, certain forward-looking statements are based upon assumptions as to future events that may not prove to be accurate. See "Special Note Regarding Forward-Looking Statements" at the beginning of this Annual Report for further discussion.

Risk Factors

Item 1A. Risk Factors of this Annual Report also contains a description of certain risk factors that you should consider which could significantly affect our financial results. In addition, the following factors could cause our actual results to differ materially from those results, performance or achievements that may be expressed or implied by such forward-looking statements. These factors include, among other things:

- changes in general economic, business, political and regulatory conditions in the countries or regions in which we operate;
- the length and depth of product and industry business cycles particularly in the automotive, electrical, textiles, electronics and construction industries;
- changes in the price and availability of raw materials, particularly changes in the demand for, supply of, and market prices of ethylene, methanol, natural gas, wood pulp and fuel oil and the prices for electricity and other energy sources;
- the ability to pass increases in raw material prices on to customers or otherwise improve margins through price increases;
- the ability to maintain plant utilization rates and to implement planned capacity additions, expansions and maintenance;
- the ability to reduce or maintain current levels of production costs and to improve productivity by implementing technological improvements to existing plants;
- increased price competition and the introduction of competing products by other companies;
- the ability to identify desirable potential acquisition targets and to consummate acquisition or investment transactions, including obtaining regulatory approvals, consistent with our strategy;
- market acceptance of our technology;
- the ability to obtain governmental approvals and to construct facilities on terms and schedules acceptable to us;

Table of Contents

changes in tax rates or legislation throughout the world including, but not limited to, adjustments, changes in estimates or interpretations that may impact recorded or future tax impacts associated with the Tax Cuts and Jobs Act (the "TCJA") enacted on December 22, 2017;

changes in the degree of intellectual property and other legal protection afforded to our products or technologies, or the theft of such intellectual property;

compliance and other costs and potential disruption or interruption of production or operations due to accidents, interruptions in sources of raw materials, cyber security incidents, terrorism or political unrest, or other unforeseen events or delays in construction or operation of facilities, including as a result of geopolitical conditions, the occurrence of acts of war or terrorist incidents or as a result of weather or natural disasters;

potential liability for remedial actions and increased costs under existing or future environmental regulations, including those relating to climate change;

potential liability resulting from pending or future claims or litigation, including investigations or enforcement actions, or from changes in the laws, regulations or policies of governments or other governmental activities, in the countries in which we operate;

changes in currency exchange rates and interest rates;

our level of indebtedness, which could diminish our ability to raise additional capital to fund operations or limit our ability to react to changes in the economy or the chemicals industry; and

various other factors, both referenced and not referenced in this Annual Report.

Many of these factors are macroeconomic in nature and are, therefore, beyond our control. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, our actual results, performance or achievements may vary materially from those described in this Annual Report as anticipated, believed, estimated, expected, intended, planned or projected. We neither intend nor assume any obligation to update these forward-looking statements, which speak only as of their dates.

Table of Contents

## Results of Operations

## Financial Highlights

	Year Ended			Year Ended		
	December 31, 2017	2016	Change	December 31, 2016	2015	Change
(In \$ millions, except percentages)						
<b>Statement of Operations Data</b>						
Net sales	6,140	5,389	751	5,389	5,674	(285 )
Gross profit	1,515	1,405	110	1,405	1,318	87
Selling, general and administrative ("SG&A") expenses	(456 )	(416 )	(40 )	(416 )	(506 )	90
Other (charges) gains, net	(60 )	(11 )	(49 )	(11 )	(351 )	340
Operating profit (loss)	901	893	8	893	326	567
Equity in net earnings (loss) of affiliates	183	155	28	155	181	(26 )
Interest expense	(122 )	(120 )	(2 )	(120 )	(119 )	(1 )
Refinancing expense	—	(6 )	6	(6 )	—	(6 )
Dividend income - cost investments	108	108	—	108	107	1
Earnings (loss) from continuing operations before tax	1,075	1,030	45	1,030	488	542
Earnings (loss) from continuing operations	862	908	(46 )	908	287	621
Earnings (loss) from discontinued operations	(13 )	(2 )	(11 )	(2 )	(2 )	—
Net earnings (loss)	849	906	(57 )	906	285	621
Net earnings (loss) attributable to Celanese Corporation	843	900	(57 )	900	304	596
<b>Other Data</b>						
Depreciation and amortization	305	290	15	290	357	(67 )
SG&A expenses as a percentage of Net sales	7.4 %	7.7 %		7.7 %	8.9 %	
Operating margin <sup>(1)</sup>	14.7 %	16.6 %		16.6 %	5.7 %	
Other (charges) gains, net						
Employee termination benefits	(4 )	(11 )	7	(11 )	(53 )	42
InfraServ ownership change	(4 )	—	(4 )	—	—	—
Asset impairments	—	(2 )	2	(2 )	(126 )	124
Other plant/office closures	(52 )	—	(52 )	—	—	—
Singapore contract termination	—	—	—	—	(174 )	174
Commercial disputes	—	2	(2 )	2	2	—
Total Other (charges) gains, net	(60 )	(11 )	(49 )	(11 )	(351 )	340

<sup>(1)</sup> Defined as Operating profit (loss) divided by Net sales.

	As of	
	December 31, 2017	2016
	(In \$ millions)	
<b>Balance Sheet Data</b>		
Cash and cash equivalents	576	638
Short-term borrowings and current installments of long-term debt - third party and affiliates	326	118
Long-term debt, net of unamortized deferred financing costs	3,315	2,890
Total debt	3,641	3,008





Table of Contents

## Factors Affecting Business Segment Net Sales

The percentage increase (decrease) in Net sales attributable to each of the factors indicated for each of our business segments is as follows:

Year Ended December 31, 2017 Compared to Year Ended December 31, 2016

	Volume	Price	Currency	Other	Total
	(In percentages)				
Advanced Engineered Materials	46	(2 )	1	—	45
Consumer Specialties	(8 )	(8 )	—	—	(16 )
Industrial Specialties	1	3	—	—	4
Acetyl Intermediates	(5 )	14	—	—	9
Total Company	9	5	—	—	14

Year Ended December 31, 2016 Compared to Year Ended December 31, 2015

	Volume	Price	Currency	Other	Total
	(In percentages)				
Advanced Engineered Materials	11	(2 )	—	—	9
Consumer Specialties	4	(8 )	—	—	(4 )
Industrial Specialties	(1 )	(8 )	(1 )	—	(10 )
Acetyl Intermediates	(2 )	(10 )	(1 )	2	(11 )
Total Company	2	(8 )	(1 )	2	(5 )

## Pension and Postretirement Benefit Plan Costs

The increase (decrease) in pension and other postretirement plan net periodic benefit cost for each of our business segments is as follows:

Year Ended December 31, 2017 Compared to Year Ended December 31, 2016

	Advanced Engineered Materials	Consumer Specialties	Industrial Specialties	Acetyl Intermediates	Other Activities	Total
	(In \$ millions)					
Service cost	1	—	1	—	—	2
Interest cost and expected return on plan assets	—	—	—	—	(28 )	(28 )
Amortization of prior service credit	—	—	2	—	—	2
Special termination benefit	(1)	—	(1 )	—	—	(2 )
Recognized actuarial (gain) loss <sup>(1)</sup>	—	—	—	—	(57 )	(57 )
Curtailment / settlement (gain) loss	—	—	—	—	—	—
Total	—	—	2	—	(85 )	(83 )

(1) The decrease in recognized actuarial loss primarily relates to higher asset returns, partially offset by a decrease in the weighted average discount rate used to determine benefit obligations from 3.7% to 3.3%.

Table of Contents

	Advanced Engineered Materials	Consumer Specialties	Industrial Specialties	Acetyl Intermediates	Other Activities	Total
	(In \$ millions)					
Cost of sales	—	—	—	—	(3 )	(3 )
SG&A expenses	1	—	3	—	(81 )	(77 )
Research and development expenses	—	—	—	—	(1 )	(1 )
Other charges (gains), net	(1)	—	(1 )	—	—	(2 )
Total	—	—	2	—	(85 )	(83 )

Year Ended December 31, 2016 Compared to Year Ended December 31, 2015

	Advanced Engineered Materials	Consumer Specialties	Industrial Specialties	Acetyl Intermediates	Other Activities	Total
	(In \$ millions)					
Service cost	—	(1 )	(3 )	—	(1 )	(5 )
Interest cost and expected return on plan assets	—	—	—	—	5	5
Amortization of prior service credit	—	—	(3 )	—	—	(3 )
Special termination benefit	1	—	—	—	—	1
Recognized actuarial (gain) loss <sup>(1)</sup>	—	—	—	—	(24 )	(24 )
Curtailment / settlement (gain) loss	—	—	3	—	—	3
Total	1	(1 )	(3 )	—	(20 )	(23 )

The decrease in recognized actuarial loss primarily relates to higher asset returns and a gain of \$48 million reflecting the incorporation of the RP-2016 mortality tables into the actuarial assumptions for the US pension plans as of December 31, 2016, partially offset by a decrease in the weighted average discount rate used to determine benefit obligations from 4.0% to 3.7%.

	Advanced Engineered Materials	Consumer Specialties	Industrial Specialties	Acetyl Intermediates	Other Activities	Total
	(In \$ millions)					
Cost of sales	—	(1 )	1	—	(3 )	(3 )
SG&A expenses	—	—	(4 )	—	(17 )	(21 )
Research and development expenses	—	—	—	—	(1 )	(1 )
Other charges (gains), net	1	—	—	—	1	2
Total	1	(1 )	(3 )	—	(20 )	(23 )

See Note 15 - Benefit Obligations in the accompanying consolidated financial statements for further information.

Table of Contents

Consolidated Results

Year Ended December 31, 2017 Compared to Year Ended December 31, 2016

Net sales increased \$751 million, or 13.9%, for the year ended December 31, 2017 compared to the same period in 2016 primarily due to:

higher volume in our Advanced Engineered Materials segment, primarily related to Net sales generated from SO.F.TER. S.r.l. ("SOFTER") and from the nylon compounding division of Nilit Group ("Nilit"), as well as within our base business, which was driven by new project launches and pipeline growth globally; and higher pricing for most of our products in our Acetyl Intermediates segment; partially offset by:

lower acetate tow pricing and volume in our Consumer Specialties segment; and lower volume for ethanol in our Acetyl Intermediates segment.

Selling, general and administrative expenses increased \$40 million, or 9.6% for the year ended December 31, 2017 compared to the same period in 2016 primarily due to:

an increase in spending of approximately \$100 million in our Advanced Engineered Materials segment and Other Activities primarily related to ongoing merger, acquisition and integration related costs; partially offset by:

a decrease in pension and other postretirement plan net periodic benefit cost of \$77 million.

Operating profit increased \$8 million, or 0.9%, for the year ended December 31, 2017 compared to the same period in 2016 primarily due to:

an increase in Net sales; and

cost savings in our Acetyl Intermediates and Consumer Specialties segments, primarily due to productivity initiatives; partially offset by:

higher raw material costs, primarily in our Acetyl Intermediates segment;

higher plant spending of \$138 million in our Advanced Engineered Materials segment, primarily related to our acquisitions of SOFTER and Nilit, as these acquired businesses incur ongoing plant spending;

an unfavorable impact of \$49 million to Other (charges) gains, net in our Acetyl Intermediates segment. During the year ended December 31, 2017, we provided notice of termination of a contract with a key raw materials supplier at our ethanol production unit in Nanjing, China. As a result, we recorded an estimated \$51 million of plant/office closure costs primarily consisting of a \$22 million contract termination charge and a \$21 million reduction to our non-income tax receivable. See Note 18 - Other (Charges) Gains, Net in the accompanying consolidated financial statements for further information; and

an increase in SG&A expenses.

Equity in net earnings (loss) of affiliates increased \$28 million for the year ended December 31, 2017 compared to the same period in 2016 primarily due to:

an increase in equity in net earnings (loss) of affiliates of \$20 million from our Ibn Sina strategic affiliate as a result of higher pricing and timing of turnaround activity.

Table of Contents

Our effective income tax rate for the year ended December 31, 2017 was 20% compared to 12% for the year ended 2016. The 2017 effective tax rate was impacted by the enactment of the TCJA on December 22, 2017. We recognized net tax expense of \$197 million in the fourth quarter of 2017 to reflect the deemed repatriation of foreign earnings accumulated offshore since 1986. This expense of \$197 million was partially offset by a \$107 million reduction of our deferred tax liabilities as a result of lowering the US tax rate from 35% to 21% and other technical provisions in the TCJA. We also recognized a net tax benefit of \$76 million related to foreign tax credits generated as a result of various internal reorganizations undertaken in preparation for our previously announced joint venture with the Blackstone Group L.P. (the "Blackstone Entities"). No material cash impact is expected from the deemed repatriation due to existing foreign tax credit carryforwards. The 2016 effective income tax rate was favorably impacted primarily due to settlement of uncertain tax positions and technical clarifications in Germany and the US of \$55 million. The global minimum income tax and base erosion provisions of the TCJA are effective for taxable years beginning after December 31, 2017. We do not currently expect the provisions of the TCJA to have a material impact on our future tax rate.

Due to the timing of the new tax law and the substantial changes it brings, the Staff of the Securities and Exchange Commission issued Staff Accounting Bulletin No. 118, which provides registrants a measurement period to report the impact of the new US tax law. During the measurement period, provisional amounts for the effects of the law are recorded to the extent a reasonable estimate can be made. To the extent that all information necessary is not available, prepared or analyzed, companies may recognize provisional estimated amounts for a period of up to one year following enactment of the TCJA.

We have recorded provisional amounts for several of the impacts of the new tax law including: the deemed repatriation tax on post-1986 accumulated earnings and profits, the deferred tax rate change effect of the new law, gross foreign tax credit carryforwards and related valuation allowances to offset foreign tax credit carryforwards. Certain items or estimates that result in impacts of the TCJA being provisional include: detailed foreign earnings calculations for the most recent period, projected foreign cash balances for certain foreign subsidiaries and finalized computations of foreign tax credit availability. In addition, our 2017 US federal income tax return will not be finalized until later in 2018, and while historically this process has resulted in offsetting changes in estimates in current and deferred taxes for items which are timing related, the reduction of the US tax rate will result in adjustments to our income tax (provision) benefit when recorded. Finally, we consider it likely that further technical guidance regarding certain of the new provisions included in the TCJA, as well as clarity regarding state income tax conformity to current federal tax code, may be issued.

See Note 4 - Acquisitions, Dispositions and Plant Closures and Note 19 - Income Taxes in the accompanying consolidated financial statements for further information.

Year Ended December 31, 2016 Compared to Year Ended December 31, 2015

Net sales decreased \$285 million, or 5.0%, for the year ended December 31, 2016 compared to the same period in 2015 primarily due to:

- lower pricing, primarily for acetic acid and VAM in our Acetyl Intermediates segment and acetate tow in our Consumer Specialties segment; and

- lower pricing in our Industrial Specialties segment;

partially offset by:

- higher volume, primarily for POM, in our Advanced Engineered Materials segment; and

- higher acetate tow volume in our Consumer Specialties segment.

Selling, general and administrative expenses decreased \$90 million, or 17.8%, for the year ended December 31, 2016 compared to the same period in 2015 primarily due to:

- lower functional spending and incentive compensation costs of \$31 million;

- productivity initiatives across all of our business segments; and

- a decrease in pension and other postretirement plan net periodic benefit cost of \$21 million.

Table of Contents

Operating profit increased \$567 million, or 173.9%, for the year ended December 31, 2016 compared to the same period in 2015 primarily due to:

• lower raw material costs across all of our business segments;  
• a favorable impact from Other (charges) gains, net of \$340 million. In December 2015, we terminated our existing agreement with a raw materials supplier in Singapore. In connection with the contract termination, we recorded \$174 million to Other (charges) gains, net, which did not recur in 2016. We also recorded long-lived asset impairment losses of \$123 million to fully write-off certain ethanol related assets at our acetyl facility in Nanjing, China during the three months ended December 31, 2015, which did not recur in 2016. See Note 18 - Other (Charges) Gains, Net in the accompanying consolidated financial statements for further information; and

• a decrease in SG&A expenses;

partially offset by:

• lower Net sales.

Equity in net earnings (loss) of affiliates decreased \$26 million for the year ended December 31, 2016 compared to the same period in 2015 primarily due to:

• a decrease in equity in net earnings (loss) of affiliates of \$50 million from our Ibn Sina strategic affiliate as a result of lower pricing for methyl tertiary-butyl ether ("MTBE") and methanol.

Our effective income tax rate for the year ended December 31, 2016 was 12% compared to 41% for the year ended 2015. The lower effective income tax rate is primarily due to settlement of uncertain tax positions and technical clarifications in Germany and the US of \$55 million. See Note 19 - Income Taxes in the accompanying consolidated financial statements for further information.

Table of Contents

## Business Segments

## Advanced Engineered Materials

	Year Ended				Year Ended			
	December 31,		%		December 31,		%	
	2017	2016	Change	Change	2016	2015	Change	Change
(In \$ millions, except percentages)								
Net sales	2,096	1,444	652	45.2 %	1,444	1,326	118	8.9 %
Net Sales Variance								
Volume	46	%			11	%		
Price	(2)	%			(2)	%		
Currency	1	%			—	%		
Other	—	%			—	%		
Other (charges) gains, net	(2 )	(2 )	—	— %	(2 )	(7 )	5	(71.4)%
Operating profit (loss)	383	350	33	9.4 %	350	235	115	48.9 %
Operating margin	18.3 %	24.2 %			24.2 %	17.7 %		
Equity in net earnings (loss) of affiliates	168	122	46	37.7 %	122	150	(28 )	(18.7)%
Depreciation and amortization	108	92	16	17.4 %	92	99	(7 )	(7.1) %

## Year Ended December 31, 2017 Compared to Year Ended December 31, 2016

Net sales increased for the year ended December 31, 2017 compared to the same period in 2016 primarily due to: higher volume primarily due to Net sales generated from SOFTER and from Nilit, which represents approximately three-fourths of the increase in volume; and

- higher volume within our base business driven by new project launches and pipeline growth globally, which represents the remainder of the volume growth;

slightly offset by:

• lower pricing for most of our products due to customer and regional mix.

Operating profit increased for the year ended December 31, 2017 compared to the same period in 2016 primarily due to:

• higher Net sales;

partially offset by:

• higher plant spending of \$138 million, primarily related to our acquisitions of SOFTER and Nilit, as these acquired businesses incur ongoing plant spending;

• higher energy and raw material costs, primarily related to methanol; and

• higher depreciation and amortization expense, primarily related to our acquisitions of SOFTER and Nilit.

Equity in net earnings (loss) of affiliates increased for the year ended December 31, 2017 compared to the same period in 2016 primarily due to:

• an increase in equity investment in earnings of \$20 million from our Ibn Sina strategic affiliate as a result of higher pricing and timing of turnaround activity;

• an increase in equity investment in earnings of \$11 million from our InfraServ GmbH & Co. Hoechst KG affiliate as a result of an ownership change between our Advanced Engineered Materials and Other Activities segments. See Note 9 - Investment in Affiliates in the accompanying consolidated financial statements for further information; and

Table of Contents

an increase in equity investment in earnings of \$8 million and \$7 million from our Fortron Industries LLC ("Fortron") and Polyplastics Co., Ltd. ("Polyplastics") strategic affiliates, respectively, as a result of higher demand.

On February 1, 2018, we completed the acquisition of 100% of the ownership interests of Omni Plastics, L.L.C. and its subsidiaries ("Omni Plastics"). Omni Plastics specializes in custom compounding of various engineered thermoplastic materials. The acquisition further strengthens our global asset base by adding compounding capacity in the Americas. See Note 29 - Subsequent Events in the accompanying consolidated financial statements for further information.

On May 3, 2017, we acquired the nylon compounding division of Nilit, an independent producer of high performance nylon resins, fibers and compounds. We acquired the nylon compounding product portfolio, customer agreements and manufacturing, technology and commercial facilities. The acquisition of Nilit increases our global engineered materials product platforms, extends the operational model, technical and industry solutions capabilities and expands project pipelines. See Note 4 - Acquisitions, Dispositions and Plant Closures in the accompanying consolidated financial statements for further information.

Year Ended December 31, 2016 Compared to Year Ended December 31, 2015

Net sales increased for the year ended December 31, 2016 compared to the same period in 2015 primarily due to: higher volume, primarily for POM in Europe and Asia, driven by new project launches and base business growth; partially offset by:

lower pricing in POM due to regional and customer mix.

Operating profit increased for the year ended December 31, 2016 compared to the same period in 2015 primarily due to:

higher Net sales;

lower energy and raw material costs, primarily for methanol and polyester; and

cost savings of \$18 million primarily due to productivity initiatives.

Equity in net earnings (loss) of affiliates decreased for the year ended December 31, 2016 compared to the same period in 2015 primarily due to:

a decrease in equity in net earnings (loss) of affiliates of \$50 million from our Ibn Sina strategic affiliate as a result of lower pricing for MTBE and methanol;

partially offset by:

an increase in equity in net earnings (loss) of affiliates from our Polyplastics and Korea Engineering Plastics Co., Ltd. ("KEPCO") strategic affiliates of \$15 million and \$9 million, respectively, primarily as a result of higher demand.

In December 2016, we acquired 100% of the stock of the Forli, Italy based SOFTER, a leading thermoplastic compounder. The acquisition included its comprehensive product portfolio of engineering thermoplastics, including nylon and polypropylene polymers, and thermoplastic elastomers, as well as all of its manufacturing, technology and commercial facilities and customer agreements. The acquisition supports the strategic growth of the engineered materials business. See Note 4 - Acquisitions, Dispositions and Plant Closures in the accompanying consolidated financial statements for further information.



Table of Contents

## Consumer Specialties

	Year Ended				Year Ended			
	December 31,		%		December 31,		%	
	2017	2016	Change	Change	2016	2015	Change	Change
	(In \$ millions, except percentages)							
Net sales	785	929	(144 )	(15.5)%	929	969	(40 )	(4.1 )%
Net Sales Variance								
Volume	(8 )				4			%
Price	(8 )				(8 )			%
Currency	—				—			%
Other	—				—			%
Other (charges) gains, net	(2 )	(2 )	—	—	(2 )	(25 )	23	(92.0)%
Operating profit (loss)	218	302	(84 )	(27.8)%	302	262	40	15.3 %
Operating margin	27.8 %	32.5 %			32.5 %	27.0 %		
Equity in net earnings (loss) of affiliates	3	3	—	—	3	2	1	50.0 %
Dividend income - cost investments	107	107	—	—	107	106	1	0.9 %
Depreciation and amortization	44	45	(1 )	(2.2 )%	45	60	(15 )	(25.0)%

Year Ended December 31, 2017 Compared to Year Ended December 31, 2016

Net sales decreased for the year ended December 31, 2017 compared to the same period in 2016 primarily due to:

• lower acetate tow volume and pricing due to lower global industry utilization.

Operating profit decreased for the year ended December 31, 2017 compared to the same period in 2016 primarily due to:

• lower Net sales;

partially offset by:

• lower spending and raw material costs of \$37 million primarily related to productivity initiatives in our cellulose derivatives business.

On June 18, 2017, Celanese, through various subsidiaries, entered into an agreement with affiliates of the Blackstone Entities to form a joint venture which combines substantially all of the operations of our cellulose derivatives business and the operations of the Rhodia Acetow cellulose acetate business owned by the Blackstone Entities. See [Note 4 - Acquisitions, Dispositions and Plant Closures](#) in the accompanying consolidated financial statements for further information. We have received regulatory approval in four out of six jurisdictions requiring approval, and the European Commission ("EC") has moved into its Phase II investigation of the ongoing merger review process. Under the standard review process of a Phase II investigation, we received a statement of objections from the EC. This statement of objections sets out the provisional position of the EC and does not prejudice the final outcome of the case. Year Ended December 31, 2016 Compared to Year Ended December 31, 2015

Net sales decreased for the year ended December 31, 2016 compared to the same period in 2015 primarily due to:

• lower acetate tow pricing due to lower global industry utilization;

partially offset by:

• higher acetate tow volume, primarily in Europe, due to customer destocking in the first half of prior year, which did not recur in 2016.

Table of Contents

Operating profit increased for the year ended December 31, 2016 compared to the same period in 2015 primarily due to:

- lower raw material costs, including acetic acid and anhydride;
  - a favorable impact in Other (charges) gains, net due to employee termination costs of \$24 million, which was recorded as a result of a 50% capacity reduction at our acetate tow facility in Lanaken, Belgium in December 2015, which did not recur in 2016. See Note 4 - Acquisitions, Dispositions and Plant Closures in the accompanying consolidated financial statements for further information; and
  - cost savings of \$25 million primarily due to productivity initiatives in our cellulose derivatives business;
- partially offset by:
- lower Net sales.

Depreciation and amortization expense, which is included within Operating profit (loss), decreased during the year ended December 31, 2016 compared to the same period in 2015 as a result of accelerated depreciation expense of \$10 million related to a 50% capacity reduction at our acetate tow facility in Lanaken, Belgium in December 2015, which did not recur in 2016. See Note 4 - Acquisitions, Dispositions and Plant Closures in the accompanying consolidated financial statements for further information.

## Industrial Specialties

	Year Ended December 31,				%	Year Ended December 31,			
	2017	2016	Change	Change		2016	2015	Change	Change
	(In \$ millions, except percentages)								
Net sales	1,023	979	44	4.5	%	979	1,082	(103 )	(9.5 )%
Net Sales Variance									
Volume	1				%	(1)			%
Price	3				%	(8)			%
Currency	—				%	(1)			%
Other	—				%	—			%
Other (charges) gains, net	—	(3 )	3	(100.0)%		(3 )	(10 )	7	(70.0)%
Operating profit (loss)	87	105	(18 )	(17.1 )%		105	72	33	45.8 %
Operating margin	8.5 %	10.7%				10.7 %	6.7 %		
Depreciation and amortization	38	34	4	11.8 %		34	64	(30 )	(46.9)%

## Year Ended December 31, 2017 Compared to Year Ended December 31, 2016

Net sales increased for the year ended December 31, 2017 compared to the same period in 2016 primarily due to:

- higher pricing and volume in our emulsion polymers business due to higher raw material costs for VAM across all regions and stronger demand in China.

Operating profit decreased for the year ended December 31, 2017 compared to the same period in 2016 primarily due to:

- higher spending and raw material costs of \$41 million, primarily VAM;
- partially offset by:
- higher Net sales.

Table of Contents

## Year Ended December 31, 2016 Compared to Year Ended December 31, 2015

Net sales decreased for the year ended December 31, 2016 compared to the same period in 2015 primarily due to: lower pricing in our emulsion polymers and EVA polymers businesses due to lower raw material costs globally for VAM.

Operating profit increased for the year ended December 31, 2016 compared to the same period in 2015 primarily due to:

• lower energy and raw material costs, primarily VAM; and

• cost savings of \$28 million, primarily due to productivity initiatives in our emulsion polymers business; and a favorable impact from Other (charges) gains, net. During the year ended December 31, 2015, we recorded

\$6 million of employee termination benefits related to the closure of our vinyl acetate ethylene ("VAE") emulsions facility in Tarragona, Spain, which did not recur in 2016. See Note 4 - Acquisitions, Dispositions and Plant Closures in the accompanying consolidated financial statements for further information.

partially offset by:

• lower Net sales.

Depreciation and amortization expense, which is included within Operating profit (loss), decreased during the year ended December 31, 2016 compared to the same period in 2015 as a result of accelerated depreciation expense of \$19 million related to our VAE emulsions unit in Meredosia, Illinois and \$9 million related to our VAE and conventional emulsions units in Tarragona, Spain, which did not recur in 2016. See Note 4 - Acquisitions, Dispositions and Plant Closures in the accompanying consolidated financial statements for further information.

## Acetyl Intermediates

	Year Ended December 31, 2017		2016		%		Year Ended December 31, 2016		2015		%					
			Change		Change				Change		Change					
	(In \$ millions, except percentages)															
Net sales	2,669	2,441	228	9.3	%	2,441	2,744	(303)	(11.0)	%						
Net Sales Variance																
Volume	(5)	%				(2)	%									
Price	14	%				(10)	%									
Currency	—	%				(1)	%									
Other	—	%				2	%									
Other (charges) gains, net	(52)	)	(3)	)	(49)	)	1,633	%	(3)	)	(300)	)	297	(99.0)	%	
Operating profit (loss)	424		340		84		24.7	%	340		(3)		343	(11,433)	%	
Operating margin	15.9	%	13.9	%					13.9	%	(0.1)	%				
Equity in net earnings (loss) of affiliates	6		6		—		—	%	6		6		—		%	
Depreciation and amortization	105		107		(2)		(1.9)	%	107		123		(16)		(13.0)	%

## Year Ended December 31, 2017 Compared to Year Ended December 31, 2016

Net sales increased for the year ended December 31, 2017 compared to the same period in 2016 primarily due to: higher pricing due to higher feedstock costs, such as methanol, which positively impacted pricing for most of our products;

Table of Contents

partially offset by:

• lower volume for ethanol, which represents substantially all of the decrease in volume, due to the shutdown at our ethanol production unit in Nanjing, China.

Operating profit increased for the year ended December 31, 2017 compared to the same period in 2016 primarily due to:

• higher Net sales; and

• cost savings of \$22 million, primarily related to productivity initiatives and a duty exception in the free trade agreement between Europe and Mexico;

partially offset by:

• higher raw material costs, primarily for methanol, ethylene and carbon monoxide, with methanol making up

• approximately one-half of the increase and ethylene and carbon monoxide making up the remainder of the increase in raw material costs;

• an unfavorable impact of \$49 million to Other (charges) gains, net. During the year ended December 31, 2017, we provided notice of termination of a contract with a key raw materials supplier at our ethanol production unit in

• Nanjing, China. As a result, we recorded an estimated \$51 million of plant/office closure costs primarily consisting of a \$22 million contract termination charge and a \$21 million reduction to our non-income tax receivable. See Note 18 -

Other (Charges) Gains, Net in the accompanying consolidated financial statements for further information; and

• an unfavorable impact of \$19 million in direct costs associated with the planned turnaround at our Clear Lake, Texas site.

Year Ended December 31, 2016 Compared to Year Ended December 31, 2015

Net sales decreased for the year ended December 31, 2016 compared to the same period in 2015 primarily due to:

• lower pricing due to lower global industry utilization and a decline in global feedstock costs, such as

• methanol, which negatively impacted pricing for most of our products. The impact on acetic acid, VAM and acetate esters represents approximately three-fourths of the pricing decrease; and

• lower volume for VAM, which represents all of the decrease in volume, primarily due to the expiration of a significant VAM contract.

Operating profit increased for the year ended December 31, 2016 compared to the same period in 2015 primarily due to:

• a favorable impact from Other (charges) gains, net. In December 2015, we terminated our existing agreement with a raw materials supplier in Singapore. In connection with the contract termination, we recorded \$174 million to Other (charges) gains, net, which did not recur in 2016. We also recorded long-lived asset impairment losses of \$123 million to fully write-off certain ethanol related assets at our acetyl facility in Nanjing, China during the three months ended December 31, 2015, which did not recur in 2016. See Note 18 - Other (Charges) Gains, Net in the accompanying consolidated financial statements for further information;

• lower energy and raw material costs, primarily for carbon monoxide and methanol; and

• cost savings of \$29 million, primarily due to productivity initiatives;

partially offset by:

• lower Net sales.

Depreciation and amortization expense, which is included within Operating profit (loss), decreased during the year ended December 31, 2016 compared to the same period in 2015 as a result of \$39 million in accelerated depreciation expense recorded in the prior year related to property, plant and equipment no longer in use at our ethanol technology unit in Clear Lake, Texas, which did not recur in 2016, partially offset by the impact from the startup of production at the Fairway facility in

Table of Contents

October 2015. See Note 4 - Acquisitions, Dispositions and Plant Closures in the accompanying consolidated financial statements for further information.

## Other Activities

	Year Ended			%	Year Ended			%
	December	December	December		December	December	December	
	31,	31,	31,	Change	31,	31,	31,	Change
	2017	2016	2015	Change	2016	2015	2014	Change
	(In \$ millions)							
Other (charges) gains, net	(4 )	(1 )	(3 )	300.0 %	(1 )	(9 )	8	(88.9)%
Operating profit (loss)	(211)	(205)	(6 )	2.9 %	(205)	(240)	35	(14.6)%
Equity in net earnings (loss) of affiliates	6	24	(18 )	(75.0)%	24	23	1	4.3 %
Dividend income - cost investments	1	1	—	— %	1	1	—	— %
Depreciation and amortization	10	12	(2 )	(16.7)%	12	11	1	9.1 %

## Year Ended December 31, 2017 Compared to Year Ended December 31, 2016

Operating loss increased for the year ended December 31, 2017 compared to the same period in 2016 primarily due to: higher spending of approximately \$60 million, primarily related to ongoing merger, acquisition and integration related costs; and

- higher incentive compensation cost of \$26 million;

mostly offset by:

- a decrease in net periodic benefit cost of \$85 million, primarily recorded to SG&A expenses.

Equity in net earnings (loss) of affiliates decreased for the year ended December 31, 2017 compared to the same period in 2016 primarily due to:

a decrease in equity investment in earnings of \$11 million from our InfraServ GmbH & Co. Hoechst KG affiliate as a result of an ownership change between our Advanced Engineered Materials and Other Activities segments. See Note 9 - Investment in Affiliates in the accompanying consolidated financial statements for further information; and a decrease in equity investment in earnings of \$4 million for InfraServ GmbH & Co. Gendorf KG and InfraServ GmbH & Co. Knapsack KG associated with a reserve for dividends received from these investments since the exercise notification was received. See Note 29 - Subsequent Events in the accompanying consolidated financial statements for further information.

## Year Ended December 31, 2016 Compared to Year Ended December 31, 2015

Operating loss decreased for the year ended December 31, 2016 compared to the same period in 2015 primarily due to:

- lower functional and project spending of \$21 million; and
- a decrease in net periodic benefit cost of \$20 million, primarily recorded to SG&A expenses.

Table of Contents

## Liquidity and Capital Resources

Our primary source of liquidity is cash generated from operations, available cash and cash equivalents and dividends from our portfolio of strategic investments. In addition, as of December 31, 2017 we have \$903 million available for borrowing under our senior unsecured revolving credit facility and \$11 million available under our accounts receivable securitization facility to assist, if required, in meeting our working capital needs and other contractual obligations.

While our contractual obligations, commitments and debt service requirements over the next several years are significant, we continue to believe we will have available resources to meet our liquidity requirements, including debt service, for the next twelve months. If our cash flow from operations is insufficient to fund our debt service and other obligations, we may be required to use other means available to us such as increasing our borrowings, reducing or delaying capital expenditures, seeking additional capital or seeking to restructure or refinance our indebtedness. There can be no assurance, however, that we will continue to generate cash flows at or above current levels.

Total cash outflows for capital expenditures are expected to be in the range of \$300 million to \$350 million in 2018 primarily due to additional investments in growth opportunities in our Advanced Engineered Materials and Acetyl Intermediates segments.

On a stand-alone basis, Celanese and its immediate 100% owned subsidiary, Celanese US, have no material assets other than the stock of their subsidiaries and no independent external operations of their own. Accordingly, they generally depend on the cash flow of their subsidiaries and their ability to pay dividends and make other distributions to Celanese and Celanese US in order to meet their obligations, including their obligations under senior credit facilities and senior notes and to pay dividends on our Series A common stock, par value \$0.0001 per share ("Common Stock").

## Cash Flows

Cash and cash equivalents decreased \$62 million to \$576 million as of December 31, 2017 compared to December 31, 2016. As of December 31, 2017, \$311 million of the \$576 million of cash and cash equivalents was held by our foreign subsidiaries. Under the TCJA, we have incurred a charge associated with the repatriation of previously unremitted foreign earnings, including foreign held cash. These funds are largely accessible, if needed in the US to fund operations. See Note 19 - Income Taxes in the accompanying consolidated financial statements for further information.

## Net Cash Provided by (Used in) Operating Activities

Year Ended December 31, 2017 Compared to Year Ended December 31, 2016

Net cash provided by operating activities decreased \$90 million to \$803 million for the year ended December 31, 2017 compared to \$893 million for the same period in 2016. Net cash provided by operations for the year ended December 31, 2017 decreased primarily due to:

- a decrease in net earnings; and
- unfavorable trade working capital of \$37 million primarily due to an increase in accounts receivable and inventory related to SOFTER.

Year Ended December 31, 2016 Compared to Year Ended December 31, 2015

Net cash provided by operating activities increased \$31 million to \$893 million for the year ended December 31, 2016 compared to \$862 million for the same period in 2015. Net cash provided by operations for the year ended December 31, 2016 increased primarily due to:

- an increase in net earnings;
- largely offset by:
- an increase in pension plan and other postretirement benefit plan contributions of \$287 million;
  - unfavorable trade working capital of \$56 million primarily due to an increase in accounts receivable; and
  - lower dividends from our equity investments in affiliates of \$45 million.

Table of Contents

Net Cash Provided by (Used in) Investing Activities

Year Ended December 31, 2017 Compared to Year Ended December 31, 2016

Net cash used in investing activities increased \$110 million to \$549 million for the year ended December 31, 2017 compared to \$439 million for the same period in 2016, primarily due to:

- a net increase in cash outflows of \$91 million related to the acquisition of Nilit in May 2017.

Year Ended December 31, 2016 Compared to Year Ended December 31, 2015

Net cash used in investing activities decreased \$119 million to \$439 million for the year ended December 31, 2016 compared to \$558 million for the same period in 2015, primarily due to:

- a decrease in capital expenditures of \$288 million related to Fairway, which was completed in 2015; partially offset by:

- an increase in cash outflows of \$178 million related to the acquisition of SOFTER in December 2016.

Net Cash Provided by (Used in) Financing Activities

Year Ended December 31, 2017 Compared to Year Ended December 31, 2016

Net cash used in financing activities decreased \$408 million to \$351 million for the year ended December 31, 2017 compared to \$759 million for the year ended December 31, 2016. The decrease in cash used in financing activities is primarily due to:

- an increase in net borrowings on short-term debt of \$558 million, primarily as a result of borrowings under our senior unsecured revolving credit facility and accounts receivable securitization facility during the year ended December 31, 2017, as well as repayments of borrowings under our senior unsecured revolving credit facility during the year ended December 31, 2016, which did not recur in the current year;

partially offset by:

- a decrease in net proceeds from long-term debt of \$108 million, primarily due to the refinancing of our senior secured credit facilities during the year ended December 31, 2016, partially offset by the senior unsecured debt issuance during the year ended December 31, 2017, as discussed below; and

- an increase in Common Stock cash dividends of \$40 million. During the year ended December 31, 2017, we increased our Common Stock quarterly cash dividend rate from \$0.36 to \$0.46 per share.

Year Ended December 31, 2016 Compared to Year Ended December 31, 2015

Net cash used in financing activities increased \$693 million to \$759 million for the year ended December 31, 2016 compared to \$66 million for the year ended December 31, 2015. The increase in cash used in financing activities is primarily due to:

- an increase of \$350 million in net short-term borrowings under our previous senior secured revolving credit facility for the year ended December 31, 2015, which were repaid in full during the year ended December 31, 2016, as discussed below;

- a net decrease of \$238 million in contributions received from, and distributions to, Mitsui; and

- an increase of \$80 million in share repurchases of our Common Stock;

partially offset by:

- an increase in net proceeds from long-term debt of \$406 million primarily as a result of issuing €750 million in principal amount of 1.125% Notes, as discussed below.

Table of Contents

In addition, exchange rates had a favorable impact of \$35 million on cash and cash equivalents for the year ended December 31, 2017 and unfavorable impacts of \$24 million and \$51 million on cash and cash equivalents for the years ended December 31, 2016 and 2015, respectively.

**Debt and Other Obligations****Senior Credit Facilities**

In July 2016, Celanese, Celanese US and certain subsidiaries entered into a new senior credit agreement ("Credit Agreement") consisting of a \$500 million senior unsecured term loan and a \$1.0 billion senior unsecured revolving credit facility (with a letter of credit sublimit), each maturing in 2021. The margin for borrowings under the senior unsecured term loan and the senior unsecured revolving credit facility was 1.5% above LIBOR at our current credit ratings. The Credit Agreement is guaranteed by Celanese, Celanese US and substantially all of its domestic subsidiaries ("the Subsidiary Guarantors"). The proceeds from the new senior unsecured term loan and \$409 million of borrowings under the new senior unsecured revolving credit facility were used to repay our Term C-2 and C-3 loans under our previous senior secured credit facilities. We borrowed \$528 million and repaid \$431 million under our senior unsecured revolving credit facility during the year ended December 31, 2017.

**Senior Notes**

We have outstanding senior unsecured notes, issued in public offerings registered under the Securities Act of 1933 ("Securities Act"), as amended, as follows (collectively, the "Senior Notes"):

Senior Notes	Issue Date	Principal (In millions)	Interest Rate (In percentages)	Interest Pay Dates	Maturity Date
1.250% Notes	December 2017	€300	1.250	February 11	February 11, 2025
1.125% Notes	September 2016	€750	1.125	September 26	September 26, 2023
3.250% Notes	September 2014	€300	3.250	April 15    October 15	October 15, 2019
4.625% Notes	November 2012	\$500	4.625	March 15    September 15	November 15, 2022
5.875% Notes	May 2011	\$400	5.875	June 15    December 15	June 15, 2021

The Senior Notes were issued by Celanese US and are guaranteed on a senior unsecured basis by Celanese and the Subsidiary Guarantors. Celanese US may redeem some or all of each of the Senior Notes, prior to their respective maturity dates, at a redemption price of 100% of the principal amount, plus a "make-whole" premium as specified in the applicable indenture, plus accrued and unpaid interest, if any, to the redemption date.

On December 11, 2017, Celanese US completed the offering of the 1.250% Notes in a public offering registered under the Securities Act. The 1.250% Notes were issued under a base indenture dated May 6, 2011. The 1.250% Notes were issued at a discount to par at a price of 99.810%. Net proceeds from the issuance of the 1.250% Notes were used to make a discretionary contribution into our US pension plans of \$316 million and for general corporate purposes.

In September 2016, Celanese US completed the offering of the 1.125% Notes in a public offering registered under the Securities Act. The 1.125% Notes were issued at a discount to par at a price of 99.713%. Net proceeds from the sale of the 1.125% Notes were used to repay \$411 million of outstanding borrowings under the new senior unsecured revolving credit facility and for general corporate purposes.

- **Accounts Receivable Securitization Facility**

In July 2016, certain of our subsidiaries entered into an amendment of our accounts receivable securitization facility, extending its maturity to July 2019 and decreasing the available amount to \$120 million. We borrowed \$85 million and repaid \$5 million during the year ended December 31, 2017.

Our material financing arrangements contain customary covenants, including the maintenance of certain financial ratios, events of default and change of control provisions. Failure to comply with these covenants, or the occurrence of any other event of default, could result in acceleration of the borrowings and other financial obligations. We are in compliance with all of the covenants related to our debt agreements as of December 31, 2017.



## Table of Contents

### ▲Acetate Tow Joint Venture

On June 18, 2017, Celanese, through various subsidiaries, entered into an agreement with affiliates of the Blackstone Entities to form a joint venture which combines substantially all the operations of our cellulose derivatives business and the operations of the Rhodia Acetow cellulose acetate business owned by the Blackstone Entities. Closing of the transaction is subject to customary closing conditions. We have received regulatory approval in four out of six jurisdictions requiring approval, and the EC has moved into its Phase II investigation of the ongoing merger review process. Under the standard review process of a Phase II investigation, we received a statement of objections from the EC. This statement of objections sets out the provisional position of the EC and does not prejudice the final outcome of the case.

In connection with the agreement, the joint venture with the Blackstone Entities obtained commitments for credit facilities aggregating \$2.4 billion to be entered into by the joint venture entities at the closing consisting of (i) senior secured (\$135 million) and senior unsecured (\$65 million) revolving credit facilities in an aggregate principal amount of \$200 million, (ii) senior secured term loan facilities in an aggregate principal amount of \$1.0 billion, (iii) a senior unsecured bridge facility in an aggregate principal amount of \$800 million, which bridge facility will backstop the proposed issuance of \$800 million senior unsecured notes by a joint venture subsidiary, and (iv) a senior unsecured term loan facility in an aggregate principal amount of \$400 million. The credit facilities will be guaranteed by certain of the subsidiaries of the respective borrowers; however, only the \$65 million senior unsecured revolving credit facility and the \$400 million senior unsecured term loan credit facility will be guaranteed by Celanese. Approximately \$2.2 billion of the proceeds of the debt financing are expected to be used, in part, to repay certain of the parties' existing indebtedness and a \$1.6 billion dividend to Celanese. We plan to use the proceeds of the dividend for general corporate purposes. Additionally, we anticipate that we will incur costs of approximately \$50 million prior to the closing to carve out assets and entities in anticipation of contributing these to the joint venture. See Note 4 - Acquisitions, Dispositions and Plant Closures in the accompanying consolidated financial statements for further information.

See Note 14 - Debt in the accompanying consolidated financial statements for further information.

### Share Capital

Our Board of Directors follows a policy of declaring, subject to legally available funds, a quarterly cash dividend on each share of our Common Stock unless the Board of Directors, in its sole discretion, determines otherwise. The amount available to us to pay cash dividends is not currently restricted by our existing senior credit facility or our indentures governing our senior unsecured notes.

On February 8, 2018, we declared a quarterly cash dividend of \$0.46 per share on our Common Stock amounting to \$62 million. The cash dividend will be paid on March 2, 2018 to holders of record as of February 20, 2018.

Our Board of Directors has authorized the aggregate repurchase of \$3.9 billion of our Common Stock since February 2008, including a \$1.5 billion increase which was approved on July 17, 2017 by our Board of Directors. These authorizations give management discretion in determining the timing and conditions under which shares may be repurchased. This repurchase program does not have an expiration date. During the year ended December 31, 2017, we spent \$500 million on repurchased shares of our Common Stock. As of December 31, 2017, we had \$1.5 billion remaining under authorizations by our Board of Directors.

See Note 17 - Stockholders' Equity in the accompanying consolidated financial statements for further information.

Table of Contents

## Contractual Debt and Cash Obligations

The following table sets forth our fixed contractual debt and cash obligations as of December 31, 2017.

	Total	Payments due by period			
		Less Than 1 Year	Years 2 & 3	Years 4 & 5	After 5 Years
(In \$ millions)					
Fixed Contractual Debt Obligations					
Senior notes	2,516	—	360	900	1,256
Senior unsecured term loan	494	32	100	362	—
Interest payments on debt and other obligations	553 <sup>(1)</sup>	119	206	127	101
Capital lease obligations	208	31	54	55	68
Other debt	443 <sup>(2)</sup>	263	3	3	174
Total	4,214	445	723	1,447	1,599
Operating leases	343	54	84	50	155
Uncertain tax positions, including interest and penalties	156	—	—	—	156 <sup>(3)</sup>
Unconditional purchase obligations	1,793 <sup>(4)</sup>	382	474	523	414
Pension and other postretirement funding obligations	470	49	96	94	231
Environmental and asset retirement obligations	104	33	25	11	35
Total	7,080	963	1,402	2,125	2,590

<sup>(1)</sup> Future interest expense is calculated using the rate in effect on December 31, 2017.

Other debt is primarily made up of fixed rate pollution control and industrial revenue bonds, short-term borrowings

<sup>(2)</sup> from affiliated companies, our revolving credit facility, our accounts receivable securitization facility and other bank obligations.

Due to uncertainties in the timing of the effective settlement of tax positions with the respective taxing authorities,

<sup>(3)</sup> we are unable to determine the timing of payments related to our uncertain tax obligations, including interest and penalties. These amounts are therefore reflected in "After 5 Years".

Unconditional purchase obligations primarily represent the take-or-pay provisions included in certain long-term purchase agreements. We do not expect to incur material losses under these arrangements. These amounts also

<sup>(4)</sup> include other purchase obligations such as maintenance and service agreements, energy and utility agreements, consulting contracts, software agreements and other miscellaneous agreements and contracts, obtained via a survey of Celanese.

## Contractual Guarantees and Commitments

As of December 31, 2017, we have standby letters of credit of \$29 million and bank guarantees of \$12 million outstanding, which are irrevocable obligations of an issuing bank that ensure payment to third parties in the event that certain subsidiaries fail to perform in accordance with specified contractual obligations. The likelihood is remote that material payments will be required under these agreements.

See Note 14 - Debt in the accompanying consolidated financial statements for a description of the guarantees under our Senior Notes and Credit Agreement.

See Note 24 - Commitments and Contingencies in the accompanying consolidated financial statements for a discussion of commitments and contingencies related to legal and regulatory proceedings.

## Off-Balance Sheet Arrangements

We have not entered into any material off-balance sheet arrangements.

## Market Risks

See Item 7A. Quantitative and Qualitative Disclosure about Market Risk for further information.

Table of Contents

## Critical Accounting Policies and Estimates

Our consolidated financial statements are based on the selection and application of significant accounting policies. The preparation of consolidated financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of net sales, expenses and allocated charges during the reporting period. Actual results could differ from those estimates. However, we are not currently aware of any reasonably likely events or circumstances that would result in materially different results. We believe the following accounting policies and estimates are critical to understanding the financial reporting risks present in the current economic environment. These matters, and the judgments and uncertainties affecting them, are also essential to understanding our reported and future operating results. See Note 2 - Summary of Accounting Policies in the accompanying consolidated financial statements for further information.

## Recoverability of Long-Lived Assets

## Recoverability of Goodwill and Indefinite-Lived Assets

We assess goodwill for impairment at the reporting unit level. Our reporting units are either our operating business segments or one level below our operating business segments for which discrete financial information is available and for which operating results are regularly reviewed by business segment management and the chief operating decision maker. Our operating business segments have been designated as our reporting units and include our engineered materials, cellulose derivatives, food ingredients, emulsion polymers, EVA polymers and intermediate chemistry businesses. We assess the recoverability of the carrying amount of our goodwill and other indefinite-lived intangible assets annually during the third quarter of our fiscal year using June 30 balances or whenever events or changes in circumstances indicate that the carrying amount of the asset may not be fully recoverable.

When assessing the recoverability of goodwill and other indefinite-lived intangible assets, we may first assess qualitative factors in determining whether it is more likely than not that the fair value of a reporting unit or other indefinite-lived intangible asset is less than its carrying amount. After assessing qualitative factors, if we determine that it is not more likely than not that the fair value of a reporting unit or other indefinite-lived intangible asset is less than its carrying amount, then performing a quantitative assessment is not required. If an initial qualitative assessment indicates that it is more likely than not the carrying amount exceeds the fair value of a reporting unit or other indefinite-lived intangible asset, a quantitative analysis will be performed. We may also elect to bypass the qualitative assessment and proceed directly to a quantitative analysis depending on the facts and circumstances.

In performing a quantitative analysis, recoverability of goodwill for each reporting unit is measured using a discounted cash flow model incorporating discount rates commensurate with the risks involved. Use of a discounted cash flow model is common practice in assessing impairment in the absence of available transactional market evidence to determine the fair value. The key assumptions used in the discounted cash flow valuation model include discount rates, growth rates, tax rates, cash flow projections and terminal value rates. Discount rates, growth rates and cash flow projections are the most sensitive and susceptible to change as they require significant management judgment. We may engage third-party valuation consultants to assist with this process. The valuation consultants assess fair value by equally weighting a combination of two market approaches (market multiple analysis and comparable transaction analysis) and the discounted cash flow approach. Discount rates are determined by using a weighted average cost of capital ("WACC"). The WACC considers market and industry data as well as company-specific risk factors for each reporting unit in determining the appropriate discount rate to be used. The discount rate utilized for each reporting unit is indicative of the return an investor would expect to receive for investing in such a business. Operational management, considering industry and company-specific historical and projected data, develops growth rates and cash flow projections for each reporting unit. Terminal value rate determination follows common methodology of capturing the present value of perpetual cash flow estimates beyond the last projected period assuming a constant WACC and low long-term growth rates. If the calculated fair value is less than the current carrying amount, an impairment loss is recorded in the amount by which the carrying amount exceeds the reporting unit's fair value. An impairment loss cannot exceed the carrying amount of goodwill assigned to a reporting unit but may indicate certain long-lived and amortizable intangible assets associated with the reporting unit may require additional impairment testing.

Management tests other indefinite-lived intangible assets quantitatively utilizing the relief from royalty method under the income approach to determine the estimated fair value for each indefinite-lived intangible asset. The relief from royalty method estimates our theoretical royalty savings from ownership of the intangible asset. Key assumptions used in this model include discount rates, royalty rates, growth rates, tax rates, sales projections and terminal value rates. Discount rates, royalty rates,

## Table of Contents

growth rates and sales projections are the assumptions most sensitive and susceptible to change as they require significant management judgment. Discount rates used are similar to the rates estimated by the WACC considering any differences in company-specific risk factors. Royalty rates are established by management and are periodically substantiated by third-party valuation consultants. Operational management, considering industry and company-specific historical and projected data, develops growth rates and sales projections associated with each indefinite-lived intangible asset. Terminal value rate determination follows common methodology of capturing the present value of perpetual sales projections beyond the last projected period assuming a constant WACC and low long-term growth rates.

Valuation methodologies utilized to evaluate goodwill and indefinite-lived intangible assets for impairment were consistent with prior periods. We periodically engage third-party valuation consultants to assist us with this process. Specific assumptions discussed above are updated at the date of each test to consider current industry and company-specific risk factors from the perspective of a market participant. The current business environment is subject to evolving market conditions and requires significant management judgment to interpret the potential impact to our assumptions. To the extent that changes in the current business environment result in adjusted management projections, impairment losses may occur in future periods.

See Note 11 - Goodwill and Intangible Assets, Net in the accompanying consolidated financial statements for further information.

### **Environmental Liabilities**

We manufacture and sell a diverse line of chemical products throughout the world. Accordingly, our operations are subject to various hazards incidental to the production of industrial chemicals including the use, handling, processing, storage and transportation of hazardous materials. We recognize losses and accrue liabilities relating to environmental matters if available information indicates that it is probable that a liability has been incurred and the amount of loss can be reasonably estimated. Depending on the nature of the site, we accrue through 15 years, unless we have government orders or other agreements that extend beyond 15 years. We estimate environmental liabilities on a case-by-case basis using the most current status of available facts, existing technology, presently enacted laws and regulations and prior experience in remediation of contaminated sites. Recoveries of environmental costs from other parties are recorded as assets when their receipt is deemed probable.

An environmental reserve related to cleanup of a contaminated site might include, for example, a provision for one or more of the following types of costs: site investigation and testing costs, cleanup costs, costs related to soil and water contamination resulting from tank ruptures and post-remediation monitoring costs. These undiscounted reserves do not take into account any claims or recoveries from insurance. The measurement of environmental liabilities is based on our periodic estimate of what it will cost to perform each of the elements of the remediation effort. We utilize third parties to assist in the management and development of cost estimates for our sites. Changes to environmental regulations or other factors affecting environmental liabilities are reflected in the consolidated financial statements in the period in which they occur.

See Note 16 - Environmental in the accompanying consolidated financial statements for further information.

### **Benefit Obligations**

The amounts recognized in the consolidated financial statements related to pension and other postretirement benefits are determined on an actuarial basis. Various assumptions are used in the calculation of the actuarial valuation of the employee benefit plans. These assumptions include the discount rate, compensation levels, expected long-term rates of return on plan assets and trends in health care costs. In addition, actuarial consultants use factors such as withdrawal and mortality rates to estimate the projected benefit obligation. The actuarial assumptions used may differ materially from actual results due to changing market and economic conditions, higher or lower withdrawal rates or longer or shorter life spans of participants. These differences may result in a significant impact to the amount of net periodic benefit cost recorded in future periods.

Pension assumptions are reviewed annually in the fourth quarter of each fiscal year and whenever a plan is required to be remeasured. Assumptions are reviewed on a plan and country-specific basis by third-party actuaries and senior management. Such assumptions are adjusted as appropriate to reflect changes in market rates and outlook.

Beginning in 2016, we elected to change the method used to estimate the service and interest cost components of net periodic benefit cost for our significant defined benefit pension plans and other postretirement benefit plans. Previously, we estimated the service and interest cost components utilizing a single weighted average discount rate derived from the yield curve used to measure the benefit obligation at the beginning of the period. We elected to use a full yield curve approach in the estimation of these components of net periodic benefit cost by applying the specific spot rates along the yield curve used in the determination of the benefit obligation to the relevant projected cash flows. This change improves the correlation between projected benefit

Table of Contents

cash flows and the corresponding yield curve spot rates and provides a more precise measurement of service and interest costs. This change does not affect the measurement of our total benefit obligations as the change in service and interest cost will be completely offset in the annual actuarial (gain) loss reported. We accounted for this change as a change in estimate and, accordingly, accounted for it prospectively beginning in 2016.

See Note 15 - Benefit Obligations in the accompanying consolidated financial statements for further information.

The estimated change in pension and postretirement net periodic benefit cost that would occur in 2018 from a change in the indicated assumptions are as follows:

	Change in Rate	Impact on Net Periodic Benefit Cost (In \$ millions)
US Pension Benefits		
Decrease in the discount rate	0.50 %	(10 )
Decrease in the long-term expected rate of return on plan assets <sup>(1)</sup>	0.50 %	14
US Postretirement Benefits		
Decrease in the discount rate	0.50 %	—
Increase in the annual health care cost trend rates	1.00 %	—
Non-US Pension Benefits		
Decrease in the discount rate	0.50 %	(1 )
Decrease in the long-term expected rate of return on plan assets	0.50 %	2
Non-US Postretirement Benefits		
Decrease in the discount rate	0.50 %	—
Increase in the annual health care cost trend rates	1.00 %	—

<sup>(1)</sup> Excludes nonqualified pension plans.

#### Accounting for Commitments and Contingencies

We routinely assess the likelihood of any adverse judgments or outcomes to legal and regulatory proceedings, lawsuits, claims, and investigations, incidental to the normal conduct of our past and current business, as well as ranges of probable and reasonably estimable losses. Reasonable estimates involve judgments made by us after considering a broad range of information including: notifications, prior settlements, demands, which have been received from a regulatory authority or private party, estimates performed by independent consultants and outside counsel, available facts, identification of other potentially responsible parties and their ability to contribute, as well as prior experience. A determination of the amount of loss contingency required, if any, is recorded if probable and estimable after careful analysis of each individual matter. The required reserves may change in the future due to new developments in each matter and as additional information becomes available. Due to the inherent subjectivity of assessments and unpredictability of outcomes of legal proceedings, our litigation accruals and estimates of possible loss or range of possible loss may not represent the ultimate loss to us from legal proceedings.

See Note 24 - Commitments and Contingencies in the accompanying consolidated financial statements for further information.

#### Income Taxes

We regularly review our deferred tax assets for recoverability and establish a valuation allowance as needed. In forming our judgment regarding the recoverability of deferred tax assets related to deductible temporary differences and tax attribute carryforwards, we give weight to positive and negative evidence based on the extent to which the forms of evidence can be objectively verified. We attach the most weight to historical earnings due to its verifiable nature. Weight is attached to tax planning strategies if the strategies are prudent and feasible and implementable

without significant obstacles. Less weight is attached to forecasted future earnings due to its subjective nature, and expected timing of reversal of taxable temporary differences is given little weight unless the reversal of taxable and deductible temporary differences coincide. Valuation allowances are established primarily on net operating loss carryforwards and other deferred tax assets in the US, Luxembourg, Spain, China, Singapore, the United Kingdom, Canada and France. We have appropriately reflected increases and decreases in our valuation allowance based on the overall weight of positive versus negative evidence on a jurisdiction by jurisdiction basis.



Table of Contents

The recoverability of deferred tax assets and the recognition and measurement of uncertain tax positions are subject to various assumptions and management judgment. If actual results differ from the estimates made by management in establishing or maintaining valuation allowances against deferred tax assets, the resulting change in the valuation allowance would generally impact earnings or Other comprehensive income depending on the nature of the respective deferred tax asset. In addition, the positions taken with regard to tax contingencies may be subject to audit and review by tax authorities, which may result in future taxes, interest and penalties.

See Note 19 - Income Taxes in the accompanying consolidated financial statements for further information.

Recent Accounting Pronouncements

See Note 3 - Recent Accounting Pronouncements in the accompanying consolidated financial statements for information regarding recent accounting pronouncements.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Market Risks

Our financial market risk consists principally of exposure to currency exchange rates, interest rates and commodity prices. Exchange rate and interest rate risks are managed with a variety of techniques, including use of derivatives. We have in place policies of hedging against changes in currency exchange rates, interest rates and commodity prices as described below.

See Note 2 - Summary of Accounting Policies in the accompanying consolidated financial statements for further information regarding our derivative and hedging instruments accounting policies related to financial market risk.

See Note 22 - Derivative Financial Instruments in the accompanying consolidated financial statements for further information regarding our market risk management and the related impact on our financial position and results of operations.

Foreign Currency Forwards and Swaps

A portion of our assets, liabilities, net sales and expenses are denominated in currencies other than the US dollar. Fluctuations in the value of these currencies against the US dollar can have a direct and material impact on the business and financial results. For example, a decline in the value of the Euro versus the US dollar results in a decline in the US dollar value of our sales and earnings denominated in Euros due to translation effects. Likewise, an increase in the value of the Euro versus the US dollar would result in an opposite effect. We estimate that a one cent Euro/US dollar change in the exchange rate would impact our earnings by \$5 million annually.

Table of Contents

## Item 8. Financial Statements and Supplementary Data

Our consolidated financial statements and supplementary data are included in Item 15. Exhibits and Financial Statement Schedules of this Annual Report on Form 10-K.

## Quarterly Financial Information

For a discussion of material events affecting performance in each quarter, see Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

CELANESE CORPORATION AND SUBSIDIARIES  
CONSOLIDATED STATEMENTS OF OPERATIONS

	Three Months Ended			
	March 31, 2017	June 30, 2017	September 30, 2017	December 31, 2017
	(Unaudited)			
	(In \$ millions, except per share data)			
Net sales	1,471	1,510	1,566	1,593
Gross profit	352	367	385	411
Other (charges) gains, net	(55 )	(3 )	—	(2 )
Operating profit (loss)	192	240	252	217
Earnings (loss) from continuing operations before tax	240	281	289	265
Amounts attributable to Celanese Corporation				
Earnings (loss) from continuing operations	183	239	230	204
Earnings (loss) from discontinued operations	—	(8 )	(4 )	(1 )
Net earnings (loss)	183	231	226	203
Net earnings (loss) per share — basic	1.30	1.67	1.65	1.49
Net earnings (loss) per share — diluted	1.30	1.66	1.65	1.49
	Three Months Ended			
	March 31, 2016	June 30, 2016	September 30, 2016	December 31, 2016
	(Unaudited)			
	(In \$ millions, except per share data)			
Net sales	1,404	1,351	1,323	