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, 2019
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 W. Las Colinas Blvd., Suite 900N
Irving, TX 75039-5421
(Address of Principal Executive Offices and 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	Trading Symbol(s)	Name of Each Exchange on Which Registered
Common Stock, par value $0.0001 per share	**CE**	**New York Stock Exchange**
1.125% Senior Notes due 2023	**CE /23**	**New York Stock Exchange**
1.250% Senior Notes due 2025	**CE /25**	**New York Stock Exchange**
2.125% Senior Notes due 2027	**CE /27**	**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 every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☑ No ☐

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

Large accelerated Filer ☑ Accelerated filer ☐ Non-accelerated filer ☐ Smaller reporting company ☐ Emerging growth company ☐

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

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

The aggregate market value of the registrant's common stock held by non-affiliates as of June 30, 2019 (the last business day of the registrants' most recently completed second fiscal quarter) was $11,747,066,605.

The number of outstanding shares of the registrant's common stock, $0.0001 par value, as of January 30, 2020 was 119,555,928.

DOCUMENTS INCORPORATED BY REFERENCE

Certain portions of the registrant's Definitive Proxy Statement relating to the 2020 annual meeting of stockholders, to be filed with the Securities and Exchange Commission, are incorporated by reference into Part III.

CELANESE CORPORATION

Form 10-K
For the Fiscal Year Ended December 31, 2019

TABLE OF CONTENTS

		Page
Special Note Regarding Forward-Looking Statements		3
PART I		
Item 1.	Business	4
Item 1A.	Risk Factors	15
Item 1B.	Unresolved Staff Comments	25
Item 2.	Properties	25
Item 3.	Legal Proceedings	26
Item 4.	Mine Safety Disclosures	27
	Information about our Executive Officers	27
PART II		
Item 5.	Market for the Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities	29
Item 6.	Selected Financial Data	31
Item 7.	Management's Discussion and Analysis of Financial Condition and Results of Operations	32
Item 7A.	Quantitative and Qualitative Disclosures About Market Risk	48
Item 8.	Financial Statements and Supplementary Data	49
Item 9.	Changes in and Disagreements with Accountants on Accounting and Financial Disclosure	51
Item 9A.	Controls and Procedures	51
Item 9B.	Other Information	51
PART III		
Item 10.	Directors, Executive Officers and Corporate Governance	52
Item 11.	Executive Compensation	52
Item 12.	Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	53
Item 13.	Certain Relationships and Related Transactions, and Director Independence	53
Item 14.	Principal Accounting Fees and Services	53
PART IV		
Item 15.	Exhibits and Financial Statement Schedules	54
Signatures		60

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.

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 chemical 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. 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 30 global production facilities and an additional 9 strategic affiliate production facilities. As of December 31, 2019, we employed 7,714 people worldwide.

Business Segment Overview

We operate principally through three business segments: Engineered Materials, Acetate Tow and the Acetyl Chain. See *Business Segments* below and Note 26 - Segment Information and Note 27 - Revenue Recognition in the accompanying consolidated financial statements for further information.

Business Segments

Engineered Materials

Products	Major End-Use Applications	Principal Competitors	Key Raw Materials
• Polyoxymethylene ("POM") • Ultra-high molecular weight polyethylene ("UHMW-PE") • Polybutylene terephthalate ("PBT") • Long-fiber reinforced thermoplastics ("LFRT") • Liquid crystal polymers ("LCP") • Thermoplastic elastomers ("TPE") • Nylon compounds or formulations • Polypropylene compounds or formulations • Polyphenylene sulfide ("PPS") • Acesulfame potassium ("Ace-K") • Potassium sorbate • Sorbic acid	• Automotive • Medical • Industrial • Energy storage • Consumer electronics • Appliances • Filtration equipment • Telecommunications • Beverages • Confections • Baked goods	• Ajinomoto Co. Inc. • Anhui Jinhe Industry Co., Ltd. • BASF SE • Daicel Corporation • E. I. du Pont de Nemours and Company • Koninklijke DSM N.V. • Nantong Acetic Acid Chemical Co., Ltd. • The NutraSweet Company • SABIC Innovative Plastics • Solvay S.A. • Suzhou Hope Technology Co., Ltd. • Tate & Lyle plc Other regional competitors: • Asahi Kasei Corporation • Braskem S.A. • Lanxess AG • Mitsubishi Gas Chemical Company, Inc. • Sumitomo Corporation • Teijin Limited • Toray Industries, Inc.	• Formaldehyde (for POM) • Ethylene (for UHMW-PE and TPE) • Polypropylene (for LFRT) • Fibers (for LFRT) • Acetic anhydride (for LCP) • Propylene (for TPE) • Styrene (for TPE) • Butadiene (for TPE) • PA6 (for nylon) • PA66 (for nylon) • Para-dichlorobenzene (for PPS) • Diketene (for Ace-K) For potassium sorbate and sorbic acid: • Acetic acid • Crotonaldehyde • Ethylene • Potassium hydroxide

• ***Overview***

Our Engineered Materials segment includes our engineered materials business, our food ingredients 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.

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, India, 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.

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.

We are a leading global supplier of Ace-K for the food and beverage industry and a leading producer of food protection ingredients, such as potassium sorbate and sorbic acid. 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. We have a production facility in Germany, with sales and distribution facilities in all major regions of the world.

On March 5, 2019, we announced the expansion of the thermoplastic co-polyester production unit at the Donegani facility in Ferrara, Italy to support continued growth of our engineered materials business. We expect to expand the production capacity of the unit further by adding a polymerization line to be completed in 2020.

On January 2, 2019, we completed the acquisition of 100% of the ownership interests of Next Polymers Ltd., an India-based engineering thermoplastics ("ETP") compounder. The acquisition strengthens our position in the Indian ETP market and further expands our global manufacturing footprint.

- ***Key Products***

POM. Commonly known as polyacetal in the chemical industry, POM is sold by our engineered materials business under the trademarks Celcon® and Hostaform®. 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.

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.

Sales of POM amounted to 12%, 11% and 12% of our consolidated net sales for the years ended December 31, 2019, 2018 and 2017, respectively.

UHMW-PE. Celanese is a global leader in UHMW-PE products, which are sold under the GUR® and VitalDose® trademarks. 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 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.

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.

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.

Polypropylene. Our polypropylene products include Polifor® 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.

Sunett® sweetener. Ace-K, a non-nutritive high intensity sweetener sold under the trademark Sunett®, is used in a variety of beverages, confections and dairy products throughout the world. Sunett® 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.

- ***Customers***

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 through multi-year and annual arrangements with many of its major customers and utilizes distribution partners to expand its customer base. We primarily sell Sunett® sweetener to a limited number of large multinational and regional customers in the food and beverage industry under multi-year 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.

Because 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 generally 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.

See Note 27 - Revenue Recognition in the accompanying consolidated financial statements for further information.

Acetate Tow

Products	Major End-Use Applications	Principal Competitors	Key Raw Materials
• Acetate tow • Acetate flake	• Filtration • Films • Flexible packaging	• Cerdia • Daicel Corporation • Eastman Chemical Company • Mitsubishi Rayon Co., Ltd	• Wood pulp • Acetic acid • Acetic anhydride

• ***Overview***

Our Acetate Tow 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 Acetate Tow business has production sites in Belgium and the US, along with sites at our three Acetate Tow strategic affiliates in China.

On June 28, 2019, we announced the consolidation of our global acetate manufacturing operations with the closure of our acetate flake manufacturing operations at the Ocotlán, Mexico facility. The closure is intended to strengthen our competitive position and align future production capacities with anticipated industry demand trends. See Note 4 - Acquisitions, Dispositions and Plant Closures in the accompanying consolidated financial statements for further information.

• ***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 intermediate chemistry business. Acetate flake is then further processed into acetate tow.

Sales of acetate tow amounted to 9%, 8% and 10% of our consolidated net sales for the years ended December 31, 2019, 2018 and 2017, respectively.

• ***Customers***

Acetate tow is sold principally to the major tobacco companies that account for a majority of worldwide cigarette production.

The pricing of products within the Acetate Tow segment is sensitive to demand and is primarily based on the value-in-use. Many sales 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 due to other factors, such as the intense level of competition in the industry.

See Note 27 - Revenue Recognition in the accompanying consolidated financial statements for further information.

Acetyl Chain

Products	Major End-Use Applications	Principal Competitors	Key Raw Materials
Intermediate chemistry			
• Acetic acid • VAM • Acetic anhydride • Acetaldehyde • Ethyl acetate • Formaldehyde • Butyl acetate	• Paints • Coatings • Adhesives • Lubricants • Pharmaceuticals • Films • Textiles • Inks • Plasticizers • Solvents	• BASF SE • BP PLC • Chang Chun Petrochemical Co., Ltd. • Daicel Corporation • DowDupont Inc. • Eastman Chemical Company • E. I. du Pont de Nemours and Company • Jiangsu Sopo (Group) Co., Ltd. • Kuraray Co., Ltd. • LyondellBasell Industries N.V. • Nippon Gohsei • Perstorp Inc. • Showa Denko K.K.	For acetic acid and Vinyl acetate monomer ("VAM"): • Carbon monoxide • Methanol • Ethylene For solvents and derivatives: • Methanol • Acetic acid
Emulsion polymers			
• Conventional emulsions • Vinyl acetate ethylene ("VAE") emulsions	• Paints • Coatings • Adhesives • Textiles • Paper finishing	• BASF SE • Dairen Chemical Corporation • The Dow Chemical Company • Wacker Chemie AG	• VAM • Ethylene • Acrylate esters • Styrene
EVA polymers			
• Ethylene vinyl acetate ("EVA") resins and compounds • Low-density polyethylene resins ("LDPE")	• Flexible packaging • Lamination products • Automotive parts • Hot melt adhesives	• Arkema • E. I. du Pont de Nemours and Company • ExxonMobil Chemical	• VAM • Ethylene

• ***Overview***

The Acetyl Chain segment, which includes the integrated chain of intermediate chemistry, 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 intermediate chemistry business produces and supplies acetyl products, including acetic acid, VAM, acetic anhydride and acetate esters. 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. We are 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®3 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®2 technology could increase VAM capacity 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.

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®, Mowilith®, Vinamul®, Celvolit®, Dur-O-Set®, TufCOR® and Avicor®. 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® brand, 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 Canada.

Our intermediate chemistry business 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 VAE emulsions unit in Singapore, supporting growing demand for ecologically friendly materials in Southeast Asia. In addition to geographic growth, the 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.

- ***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, methanol and ethylene. We generally purchase carbon monoxide under long-term contracts, and we now have the ability to produce carbon monoxide internally with the purchase of the synthesis gas unit from Linde AG. We generally purchase methanol and ethylene under both annual and multi-year contracts. Methanol and ethylene are commodity products and generally available from a wide variety of sources, while carbon monoxide is typically purpose-made in close proximity.

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.

On September 21, 2019, a localized fire occurred at our Clear Lake, Texas facility, resulting in damage to the carbon monoxide production unit. See *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations* for further information.

On February 13, 2019, we completed the acquisition of a 365kt synthesis gas production unit from Linde AG, located at our Clear Lake, Texas facility. The acquisition further strengthens our capability of managing future productivity and growth in the production of acetic acid.

Sales from acetyl products amounted to 27%, 31% and 27% of our consolidated net sales for the years ended December 31, 2019, 2018 and 2017, 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;
- Butyl acetate, an acetate ester that is a solvent used in inks, pharmaceuticals and perfume; and
- 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.

Emulsion Polymers. 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 volatile organic compound paints, specifically in interior paints.

Sales from emulsion polymer products amounted to 14%, 13% and 13% of our consolidated net sales for the years ended December 31, 2019, 2018 and 2017, respectively.

EVA Polymers. 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.

- ***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. 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.

Emulsion and EVA polymers 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 the Acetyl Chain segment is influenced by industry utilization and changes in the cost of raw materials. Therefore, in general, there is a direct correlation between these factors and our Net sales for most products. This impact to pricing typically lags changes in raw material costs over months or quarters and impacts profit margins over those periods.

See Note 27 - Revenue Recognition in the accompanying consolidated financial statements for further information.

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.

Our strategic affiliates contribute substantial earnings and cash flows to us. During the year ended December 31, 2019, our equity method strategic affiliates generated combined sales of $2.4 billion, resulting in our recording $157 million of equity in net earnings of affiliates and $143 million of dividends.

Our strategic affiliates as of December 31, 2019 are as follows:

	Location of Headquarters	Ownership	Partner(s)	Year Entered
Equity Investments				
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
Equity Investments Without Readily Determinable Fair Value				
Acetate Tow				
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.

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.

Acetate Tow strategic ventures. Our Acetate Tow ventures generally fund their operations using operating cash flow and pay dividends based on each ventures' performance in the preceding year. In 2019, 2018 and 2017, we received cash dividends of $112 million, $112 million and $107 million, respectively.

Although our ownership interest in each of our Acetate Tow ventures exceeds 20%, we account for these investments at cost after considering observable price changes for similar instruments, minus impairment, if any, 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. Further, these investments were determined not to have a readily determinable fair value.

Other Equity Method Investments

InfraServs. We hold indirect ownership interests in several German InfraServ Groups that own and develop industrial parks and provide various technical and administrative services to tenants. Our ownership interest in the equity investments in InfraServ affiliates are as follows:

	As of December 31, 2019
	(In percentages)
InfraServ GmbH & Co. Gendorf KG	30
InfraServ GmbH & Co. Hoechst KG	32
YNCORIS GmbH & Co. KG[1]	22

[1] Formerly known as InfraServ GmbH & Co. Knapsack KG.

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®, AOPlus®, Ateva®, Avicor®, Celanese®, Celanex®, Celanyl®, Celcon®, Celstran®, Celvolit®, Clarifoil®, Dur-O-Set®, ECOMID®, EcoVAE®, Factor®, Forprene®, FRIANYL®, Fortron®, GHR®, GUR®, Hostaform®, Laprene®, MetaLX®, Mowilith®, MT®, NILAMID®, Nutrinova®, Nylfor®, OmniLon®, Pibiflex®, Pibifor®, Pibiter®, Polifor®, Resyn®, Riteflex®, SlideX®, Sofprene®, Sofpur®, Sunett®, Talcoprene®, Tecnoprene®, Thermx®, TufCOR®, VAntage®, Vectra®, Vinac®, Vinamul®, VitalDose®, Zenite® 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® is a registered trademark of Fortron Industries LLC. Hostaform® is a registered trademark of Hoechst GmbH. Mowilith® and NILAMID® 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.

Employees

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

	Employees as of December 31, 2019
North America	
US	2,764
Canada	184
Mexico	572
Total	**3,520**
Europe	
Germany	1,560
Other Europe	1,417
Total	**2,977**
Asia	**1,083**
Rest of World	**134**
Total	**7,714**

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.

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 failure to reach agreement over trade agreements, or the imposition of new or increased tariffs on our products or raw materials, or the more aggressive prosecution of trade disputes with countries like China, may increase costs or reduce profitability, or 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 2019, 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, decreased end-use customer demand or other factors.

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 our intermediate chemistry business, 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 emulsion polymers and EVA polymer businesses, 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 acetate tow. 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 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, 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 site 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.

Almost all 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. During 2019, production of acetic acid and VAM was disrupted due to a localized fire at our Clear Lake, Texas facility, which caused reduced sales and profits.

Disruptions or interruptions of production or operations could also occur due to accidents, interruptions in sources of raw materials, cyber security incidents, terrorism or political unrest, public health crises (including, but not limited to, the coronavirus outbreak), 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, natural disasters, or other crises including public health crises.

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 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 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, warranty, and tort 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, warranty, and tort claims, product recalls, product seizures and related adverse publicity. A product liability, warranty, or tort claim or judgment against us that is larger than those typically experienced in the regular course of business 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 significant 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 applicable 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.

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. In addition, enforcement of environmental or other governmental policy may result in plant shut downs or significantly decreased production, such as in China on high pollution days. 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 products and raw materials. See Note 24 - Commitments and Contingencies in the accompanying consolidated financial statements for further information.

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 and labeled in a manner that would adversely affect demand for such products. For example, in 2012 the International Agency for Research on Cancer ("IARC"), a research agency within the World Health Organization, classified formaldehyde as carcinogenic to humans (Group 1) based on epidemiological studies linking formaldehyde exposure to nasopharyngeal cancer, a rare cancer in humans, and leukemia. In 2011, a similar conclusion was reached by the National Toxicology Program ("NTP"), a U.S. inter-agency research program. We anticipate that the results of the IARC's and the NTP's reviews will continue to be examined and considered by government regulatory agencies with responsibility for setting worker and environmental exposure standards and labeling requirements.

Other 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 Frank R. Lautenberg Chemical Safety for the 21st Century Act which amended the Toxic Substances Control Act (TSCA), the United States primary chemicals management law, as well as various European Commission regulatory programs, such as REACH (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 regulatory requirements being placed on the production, handling, labeling and/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. The CFATS Extension Act of 2019 ("HR 251") was signed into law by the President on January 19, 2019. HR 251 extends CFATS for 15 months, until April 19, 2020. This extension does not make any changes to the program and is intended to provide lawmakers the needed time to discuss improvements to CFATS and provides for a longer term authorization. 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.

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, have changed or 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 31, 2017, the Tax Cuts and Jobs Act (the "TCJA") was enacted and was effective January 1, 2018. 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. The US Treasury issued several proposed and final regulations supplementing the TCJA in 2018 and 2019. The final foreign tax credit regulations and base erosion tax regulations issued in 2019 did not have a material impact to our 2019 tax rate, and we do not expect a material impact upon final adoption of the interest expense limitation regulations or the additional proposed foreign tax credit regulations, if adopted in current form. 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.

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, 2019, we had 7,714 employees globally. Approximately 16% of our 2,764 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, 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.

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.

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.

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, Note 16 - Environmental and Note 24 - Commitments and Contingencies 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 $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, $500 million in aggregate principal amount of 3.500% senior unsecured notes due 2024, €300 million in aggregate principal amount of 1.250% senior unsecured notes due 2025 and €500 million in aggregate principal amount of 2.125% senior unsecured notes due 2027 (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, par value $0.0001 per share ("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

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.

Item 1B. ***Unresolved Staff Comments***

None.

Item 2. ***Properties***

Description of Property

We 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, 2019.

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
Engineered Materials		
Auburn Hills, Michigan, US	Leased	Automotive Development Center
Bishop, Texas, US	Owned	Polyoxymethylene ("POM"), Ultra-high molecular weight polyethylene ("UHMW-PE"), Compounding
Evansville, Indiana, US	Owned	Compounding
Ferrara, Italy	Leased	Compounding
Florence, Kentucky, US	Owned	Compounding
Forli, Italy	Leased	Compounding
Kaiserslautern, Germany[1]	Leased	Long-fiber reinforced thermoplastics ("LFRT")
Nanjing, China[2]	Owned	LFRT, UHMW-PE, Compounding
Oberhausen, Germany[1]	Leased	UHMW-PE
Shelby, North Carolina, US	Owned	LCP
Silao, Mexico	Leased	Compounding
Silvassa, Gurjarat, India	Owned	Compounding
Suzano, Brazil[1]	Leased	Compounding
Utzenfeld, Germany	Owned	Compounding
Acetate Tow		
Lanaken, Belgium	Owned	Acetate tow
Narrows, Virginia, US	Owned	Acetate tow, Acetate flake

Site	Leased/Owned	Products/Functions
Acetyl Chain		
Bay City, Texas, US[1]	Leased	Vinyl acetate monomer ("VAM")
Bishop, Texas, US	Owned	Formaldehyde, Paraformaldehyde
Boucherville, Quebec, Canada	Owned	Conventional emulsions
Cangrejera, Mexico	Owned	Acetic anhydride, Ethyl acetate, Acetone derivatives
Clear Lake, Texas, US[3]	Owned	Acetic acid, VAM, Methanol
Edmonton, Alberta, Canada	Owned	Low-density polyethylene resins, Ethylene vinyl acetate
Enoree, South Carolina, US	Owned	Conventional emulsions, Vinyl acetate ethylene ("VAE") emulsions
Geleen, Netherlands	Owned	VAE emulsions
Jurong Island, Singapore[1]	Leased	Acetic acid, Butyl acetate, Ethyl acetate, VAE emulsions, VAM
Nanjing, China[2]	Owned	Acetic acid, Acetic anhydride, Conventional emulsions, VAE emulsions, VAM
Perstorp, Sweden	Owned	Conventional emulsions, VAE emulsions

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

(2) Multiple Celanese business segments conduct operations at the Nanjing facility. Celanese owns the assets on this 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) Methanol is produced by our joint venture, Fairway Methanol LLC, in which Celanese owns a 50% interest.

Celanese also has entered into strategic ventures with partners in various locations around the world. See *Item 1. Business* for a discussion of our investments in affiliates and their respective site locations.

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, insurance coverage 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 *Item 1A. Risk Factors* for certain risk factors relating to these legal proceedings.

Item 4. ***Mine Safety Disclosures***

None.

Information about our Executive Officers

The names, ages and biographies of our executive officers as of February 6, 2020 are as follows:

Name	Age	Position
Mark C. Rohr	68	Executive Chairman (Chairman of the Board of Directors)
Lori J. Ryerkerk	57	Chief Executive Officer, President and Director
Scott A. Richardson	43	Senior Vice President and Chief Financial Officer
Todd L. Elliott	54	Senior Vice President, Acetyls
A. Lynne Puckett	57	Senior Vice President and General Counsel
Shannon L. Jurecka	50	Senior Vice President and Chief Human Resources Officer

Mark C. Rohr was named our Chairman, President and Chief Executive Officer in April 2012 after being a member of our board of directors since April 2007. Effective May 2019, he was elected Executive Chairman, continuing to serve as Chairman of the Board and a director. Prior to joining the Company, Mr. Rohr was Executive Chairman and a 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 chair of its governance and nominating committee and a member of its compensation committee. In 2016, he also served as Chairman of the American Chemistry Council's Executive Committee and as Chairman of the International Council of Chemical Associations. Mr. Rohr received a bachelor's degree in chemistry and chemical engineering from Mississippi State University.

Lori J. Ryerkerk was named our Chief Executive Officer and President and a member of our board of directors effective May 2019. Previously, Ms. Ryerkerk was the Executive Vice President of Global Manufacturing, the largest business in Shell Downstream Inc., where she led a team of 30,000 employees and contractors at refineries and chemical sites worldwide. Ms. Ryerkerk joined Shell in May 2010 as the Regional Vice President of Manufacturing in Europe and Africa, and was responsible for the operation of five Shell manufacturing facilities and five joint ventures. In October 2013, she was named Executive Vice President of Global Manufacturing, Shell Downstream Inc. Before joining Shell, she was Senior Vice President, Refining, Supply and Terminals at Hess Corporation, where she was responsible for refineries, terminals and a distribution network, and supply and trading. Prior to that, Ms. Ryerkerk spent 24 years with ExxonMobil where she started her career as a process technologist at a refinery in Baton Rouge, Louisiana. Throughout her tenure at ExxonMobil, she took on a variety of operational and senior leadership roles in Refining and Chemicals Manufacturing, Power Generation, and various other groups including Supply, Economics and Planning, HSSE and Public Affairs/Government Relations. Ms. Ryerkerk received a Chemical Engineering degree from Iowa State University. She previously served on the board of directors of Axalta Coating Systems, a leading provider of liquid and powder coatings.

Scott A. Richardson was named Chief Financial Officer for Celanese Corporation in February 2018 after serving as Senior Vice President of the Engineered Materials business since December 2015, where he had global responsibility for strategy, product and business management, planning and portfolio development, and pipeline management. Previously, Mr. Richardson served as Vice President and General Manager of the Acetyl Chain since 2011. Mr. Richardson has progressed through several Celanese roles including global commercial director, Acetyls; manager of Investor Relations; business analysis manager, Acetyls; and business line controller, Polyols and Solvents. He joined Celanese in 2005. Prior to joining Celanese, Mr. Richardson held various finance, operational and leadership roles at American Airlines. He earned a Bachelor of Arts in Accounting from Westminster College and a Master of Business Administration from Texas Christian University.

Todd L. Elliott was named Senior Vice President, Acetyls in September 2017 after serving as Senior Vice President of Global Sales (since 2015) and also for the European region since 2016. He has global responsibility for the Celanese Acetyl Chain business. Prior to his current role, Elliott progressed through several roles of increasing responsibility at Celanese including Vice President and General Manager of Cellulose Derivatives, Vice President of Acetate Sales and director of Corporate Development. He joined Celanese in 1987. Mr. Elliot also serves as a director of Polyplastics Company Ltd., a joint venture of Daicel Corp. and Celanese. Mr. Elliott received a Bachelor of Arts in business administration from Westminster College and a Master of Business Administration from Fontbonne College.

A. Lynne Puckett joined Celanese Corporation in February 2019 as Senior Vice President and General Counsel. Prior to that, Ms. Puckett was Senior Vice President, General Counsel and Secretary of Colfax Corporation since 2010. Prior to Colfax, she was a Partner with the law firm of Hogan Lovells. Her experience includes a broad range of corporate and transactional matters, including mergers and acquisitions, venture capital financings, debt and equity offerings, and general corporate and securities law matters. Before entering the practice of law, Ms. Puckett worked for the U.S. Central Intelligence Agency and a major U.S. defense contractor. Ms. Puckett received a Juris Doctor degree from the University of Maryland School of Law and a Bachelor of Science degree from James Madison University.

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 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.

Holders

As of January 30, 2020, there were 47 holders of record of our Common Stock. By including persons holding shares in broker accounts under street names, however, we estimate we have approximately 134,124 beneficial holders.

Dividend Policy

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. Certain indentures for notes issued prior to 2016 have provisions that restrict the amount available to us to pay cash dividends in the event of a ratings downgrade below investment grade by two or more credit rating agencies. Also, the general corporation law of the State of Delaware imposes additional restrictions on the payment of dividends by all Delaware corporations that do not currently limit our ability to pay cash dividends. See Note 17 - Stockholders' Equity in the accompanying consolidated financial statements for further information.

Celanese Purchases of its Equity Securities

Information regarding repurchases of our Common Stock during the three months ended December 31, 2019 is as follows:

Period	Total Number of Shares Purchased[1]	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[2]
October 1 - 31, 2019	950,958	$ 120.93	950,958	$ 1,323,000,000
November 1 - 30, 2019	678,064	$ 125.36	678,064	$ 1,238,000,000
December 1 - 31, 2019	202,812	$ 123.27	202,812	$ 1,213,000,000
Total	1,831,834		1,831,834	

____

(1) May include shares withheld from employees to cover their withholding requirements for personal income taxes related to the vesting of restricted stock.

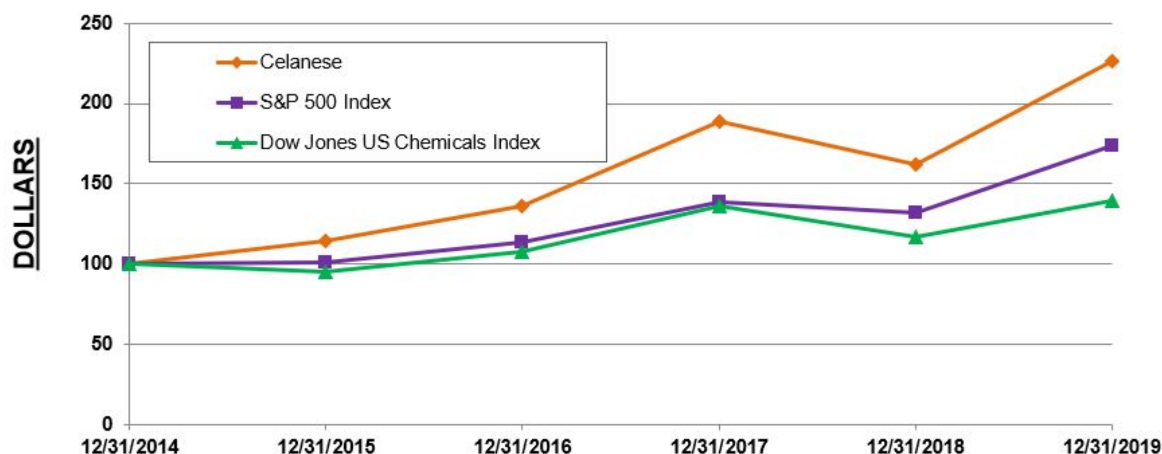
(2) Our Board of Directors has authorized the aggregate repurchase of $5.4 billion of our Common Stock since February 2008.

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

Performance Graph

The following performance graph compares the cumulative total return on Celanese Corporation common stock from December 31, 2014 through December 31, 2019 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, 2014. 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



Company Name / Index	12/31/2014	12/31/2015	12/31/2016	12/31/2017	12/31/2018	12/31/2019
Celanese	100	114.29	136.48	189.06	162.00	226.54
S&P 500 Index	100	101.37	113.49	138.26	132.19	173.80
Dow Jones US Chemicals Index	100	94.85	107.91	135.75	116.76	139.06

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 deferments 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.

Item 6. ***Selected Financial Data***

The balance sheet data as of December 31, 2019 and 2018 and the statements of operations data for the years ended December 31, 2019, 2018 and 2017, 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 statements of operations data for the years ended December 31, 2017, 2016 and 2015, set forth below were derived from previously issued financial statements, adjusted for a change in accounting principle for defined benefit pension plans and other postretirement benefit plans.

	Year Ended December 31,				
	2019	2018	2017	2016	2015
	(In $ millions, except per share data)				
Statement of Operations Data					
Net sales	6,297	7,155	6,140	5,389	5,674
Other (charges) gains, net	(203)	9	(59)	(8)	(349)
Operating profit (loss)	834	1,334	857	934	385
Earnings (loss) from continuing operations before tax	988	1,510	1,075	1,030	488
Earnings (loss) from continuing operations	864	1,218	862	908	287
Earnings (loss) from discontinued operations	(6)	(5)	(13)	(2)	(2)
Net earnings (loss) attributable to Celanese Corporation	852	1,207	843	900	304
Earnings (loss) per common share					
Continuing operations — basic	6.93	9.03	6.21	6.22	2.03
Continuing operations — diluted	6.89	8.95	6.19	6.19	2.01
Balance Sheet Data (as of the end of period)					
Total assets	9,476	9,313	9,538	8,357	8,586
Total debt	3,905	3,531	3,641	3,008	2,981
Total Celanese Corporation stockholders' equity	2,507	2,984	2,887	2,588	2,378
Other Financial Data					
Depreciation and amortization	352	343	305	290	357
Capital expenditures[(1)]	390	333	281	247	483
Dividends paid per common share[(2)]	2.40	2.08	1.74	1.38	1.15

---

(1) Amounts include accrued capital expenditures, but exclude capital expenditures related to finance lease obligations.

(2) Annual dividends for the year ended December 31, 2019 consist of one quarterly dividend payment of $0.54 per share and three quarterly dividend payments of $0.62 per share. Annual dividends for the year ended December 31, 2018 consist of one quarterly dividend payment of $0.46 per share and three quarterly dividend payments of $0.54 per share. See Note 17 - Stockholders' Equity in the accompanying consolidated financial statements for further information.

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;

- changes in applicable tariffs, duties and trade agreements, 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");
- 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, public health crises (including, but not limited to, the coronavirus outbreak), 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, natural disasters, or other crises including public health crises;
- 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.

Results of Operations

Financial Highlights

	Year Ended December 31,		
	2019	2018	Change
	(In $ millions, except percentages)		
Statement of Operations Data			
Net sales	6,297	7,155	(858)
Gross profit	1,606	1,972	(366)
Selling, general and administrative ("SG&A") expenses	(483)	(546)	63
Other (charges) gains, net	(203)	9	(212)
Operating profit (loss)	834	1,334	(500)
Equity in net earnings (loss) of affiliates	182	233	(51)
Non-operating pension and other postretirement employee benefit (expense) income	(20)	(62)	42
Interest expense	(115)	(125)	10
Refinancing expense	(4)	(1)	(3)
Dividend income - equity investments	113	117	(4)
Earnings (loss) from continuing operations before tax	988	1,510	(522)
Earnings (loss) from continuing operations	864	1,218	(354)
Earnings (loss) from discontinued operations	(6)	(5)	(1)
Net earnings (loss)	858	1,213	(355)
Net earnings (loss) attributable to Celanese Corporation	852	1,207	(355)
Other Data			
Depreciation and amortization	352	343	9
SG&A expenses as a percentage of Net sales	7.7%	7.6%	
Operating margin[1]	13.2%	18.6%	
Other (charges) gains, net			
Restructuring	(23)	(4)	(19)
Asset impairments	(83)	—	(83)
Plant/office closures	(4)	13	(17)
Commercial disputes	(4)	—	(4)
European Commission investigation	(89)	—	(89)
Total Other (charges) gains, net	(203)	9	(212)

____

[1] Defined as Operating profit (loss) divided by Net sales.

	As of December 31,	
	2019	2018
	(In $ millions)	
Balance Sheet Data		
Cash and cash equivalents	463	439
Short-term borrowings and current installments of long-term debt - third party and affiliates	496	561
Long-term debt, net of unamortized deferred financing costs	3,409	2,970
Total debt	3,905	3,531

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, 2019 Compared to Year Ended December 31, 2018

	Volume	Price	Currency	Other	Total
			(In percentages)		
Engineered Materials	(5)	—	(3)	—	(8)
Acetate Tow	(2)	—	—	—	(2)
Acetyl Chain	(1)	(13)	(2)	—	(16)
Total Company	(3)	(7)	(2)	—	(12)

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, 2019 Compared to Year Ended December 31, 2018

	Engineered Materials	Acetate Tow	Acetyl Chain	Other Activities	Total
			(In $ millions)		
Service cost	—	—	(1)	—	(1)
Interest cost and expected return on plan assets	—	—	—	36	36
Amortization of prior service credit	—	—	—	—	—
Special termination benefit	—	—	—	(1)	(1)
Recognized actuarial (gain) loss	—	—	—	(78)	(78)
Curtailment / settlement (gain) loss	—	—	1	—	1
Total	—	—	—	(43)	(43)

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

Consolidated Results

Year Ended December 31, 2019 Compared to Year Ended December 31, 2018

Net sales decreased $858 million, or 12.0%, for the year ended December 31, 2019 compared to the same period in 2018 primarily due to:

- lower pricing in our Acetyl Chain segment;
- an unfavorable currency impact in our Acetyl Chain and Engineered Materials segments; and
- lower volume in our Engineered Materials segment, primarily due to slower global economic conditions and customer destocking.

Selling, general and administrative expenses decreased $63 million, or 11.5% for the year ended December 31, 2019 compared to the same period in 2018 primarily due to:

- lower incentive compensation costs and project spending of $48 million in our Other Activities segment.

Operating profit decreased $500 million, or 37.5% for the year ended December 31, 2019 compared to the same period in 2018 primarily due to:

- lower Net sales across all of our segments; and

- an unfavorable impact to Other (charges) gains, net. During the year ended December 31, 2019, we recorded a reserve of $89 million in our Other Activities segment as a result of information learned from the European Commission's competition law investigation involving certain subsidiaries of Celanese with respect to certain past ethylene purchases. Additionally, during the year ended December 31, 2019, we recorded an $83 million long-lived asset impairment loss in our Acetate Tow segment related to the closure of our acetate flake manufacturing operations in Ocotlán, Mexico. See Note 4 - Acquisitions, Dispositions and Plant Closures and Note 18 - Other (Charges) Gains, Net in the accompanying consolidated financial statements for further information;

partially offset by:

- lower raw material costs within our Acetyl Chain segment; and

- lower SG&A expenses.

On September 21, 2019, a localized fire occurred at our Clear Lake, Texas facility, resulting in damage to the carbon monoxide production unit, for which we recorded accelerated depreciation expense, fixed overhead, clean-up and repair costs of approximately $39 million in our Acetyl Chain segment during the year ended December 31, 2019.

Equity in net earnings (loss) of affiliates decreased $51 million for the year ended December 31, 2019 compared to the same period in 2018 primarily due to:

- a decrease in equity investment in earnings of $28 million from our Ibn Sina strategic affiliate, primarily as a result of plant turnaround activity and lower pricing for methanol; and

- a decrease in equity investment in earnings of $20 million from our Polyplastics Co., Ltd. ("Polyplastics") strategic affiliate as a result of softer market conditions in China.

Non-operating pension and other postretirement employee benefit expense decreased $42 million during the year ended December 31, 2019 compared to the same period in 2018 primarily due to:

- a decrease in recognized actuarial loss of $78 million as a result of higher asset returns, partially offset by a decrease in the weighted average discount rate used to determine benefit obligations from 3.8% to 2.8%. See Note 15 - Benefit Obligations in the accompanying consolidated financial statements for further information.

Our effective income tax rate for the year ended December 31, 2019 was 13% compared to 19% for the year ended 2018. The lower effective income tax rate for the year ended December 31, 2019 compared to the same period in 2018 was primarily due to a valuation allowance provided against Luxembourg net operating loss carryforwards in 2018. In addition, the 2019 effective income tax rate benefited from the favorable impact of a 2019 release of valuation allowances due to higher projected utilization of foreign tax credit carryforwards. See Note 19 - Income Taxes in the accompanying consolidated financial statements for further information.

Discussion of our financial condition and results of operations for the year ended December 31, 2018 compared to the year ended December 31, 2017 can be found in *Part II - Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations* in our Annual Report on Form 10-K for the year ended December 31, 2018.

Business Segments

Engineered Materials

	Year Ended December 31,			%
	2019	2018	Change	Change
	(In $ millions, except percentages)			
Net sales	2,386	2,593	(207)	(8.0)%
Net Sales Variance				
Volume	(5) %			
Price	— %			
Currency	(3) %			
Other	— %			
Other (charges) gains, net	5	—	5	100.0 %
Operating profit (loss)	446	460	(14)	(3.0)%
Operating margin	18.7 %	17.7%		
Equity in net earnings (loss) of affiliates	168	218	(50)	(22.9)%
Depreciation and amortization	131	126	5	4.0 %

Year Ended December 31, 2019 Compared to Year Ended December 31, 2018

Net sales decreased for the year ended December 31, 2019 compared to the same period in 2018 primarily due to:

- lower volume within our base business driven by slower global economic conditions and customer destocking; and
- an unfavorable currency impact resulting from a weaker Euro relative to the US dollar.

Operating profit decreased for the year ended December 31, 2019 compared to the same period in 2018 primarily due to:

- lower Net sales;

partially offset by:

- lower energy costs of $19 million, primarily for steam;
- lower spending costs of $10 million, primarily related to productivity initiatives; and
- a favorable impact of $5 million to Other (charges) gains, net. During the year ended December 31, 2019, we recorded a $15 million gain related to a settlement of a commercial dispute from a previous acquisition, partially offset by $10 million in employee termination benefits, primarily related to business optimization projects. See Note 18 - Other (Charges) Gains, Net in the accompanying consolidated financial statements for further information.

Equity in net earnings (loss) of affiliates decreased for the year ended December 31, 2019 compared to the same period in 2018 primarily due to:

- a decrease in equity investment in earnings of $28 million from our Ibn Sina strategic affiliate, primarily as a result of plant turnaround activity and lower pricing for methanol; and
- a decrease in equity investment in earnings of $20 million from our Polyplastics strategic affiliate as a result of softer market conditions in China.

On January 2, 2019, we completed the acquisition of 100% of the ownership interests of Next Polymers Ltd., an India-based engineering thermoplastics ("ETP") compounder. The acquisition strengthens our position in the Indian ETP market and further expands our global manufacturing footprint.

Acetate Tow

	Year Ended December 31,			%
	2019	2018	Change	Change
	(In $ millions, except percentages)			
Net sales	636	649	(13)	(2.0)%
Net Sales Variance				
Volume	(2)%			
Price	— %			
Currency	— %			
Other	— %			
Other (charges) gains, net	(88)	(2)	(86)	(4,300.0)%
Operating profit (loss)	52	130	(78)	(60.0)%
Operating margin	8.2 %	20.0%		
Dividend income - equity investments	112	116	(4)	(3.4)%
Depreciation and amortization	45	58	(13)	(22.4)%

Year Ended December 31, 2019 Compared to Year Ended December 31, 2018

Net sales decreased for the year ended December 31, 2019 compared to the same period in 2018 primarily due to:

- lower acetate tow volume due to lower global industry utilization.

Operating profit decreased for the year ended December 31, 2019 compared to the same period in 2018 primarily due to:

- an unfavorable impact of $86 million to Other (charges) gains, net. During the year ended December 31, 2019, we recorded an $83 million long-lived asset impairment loss related to the closure of our acetate flake manufacturing operations in Ocotlán, Mexico. We expect to incur additional exit and shutdown costs related to Ocotlán, Mexico of approximately $12 million through the first quarter of 2021. See Note 4 - Acquisitions, Dispositions and Plant Closures in the accompanying consolidated financial statements for further information; and

- lower Net sales;

partially offset by:

- lower energy costs of $18 million, primarily related to lower natural gas prices and the closure of our manufacturing operations in Ocotlán, Mexico; and

- higher accelerated depreciation and amortization expense of $13 million in 2018 related to the closure of our acetate tow manufacturing unit in Ocotlán, Mexico.

Acetyl Chain

	Year Ended December 31,			%
	2019	2018	Change	Change
	(In $ millions, except percentages)			
Net sales	3,392	4,042	(650)	(16.1)%
Net Sales Variance				
Volume	(1) %			
Price	(13) %			
Currency	(2) %			
Other	— %			
Other (charges) gains, net	(3)	11	(14)	(127.3)%
Operating profit (loss)	678	1,024	(346)	(33.8)%
Operating margin	20.0 %	25.3%		
Equity in net earnings (loss) of affiliates	4	6	(2)	(33.3)%
Depreciation and amortization	161	148	13	8.8 %

Year Ended December 31, 2019 Compared to Year Ended December 31, 2018

Net sales decreased for the year ended December 31, 2019 compared to the same period in 2018 primarily due to:

- lower pricing for most of our products, primarily due to reduced customer demand in Asia, an overall deflationary environment for raw materials, and limited outage and curtailment activity;
- an unfavorable currency impact, primarily related to a weaker Euro relative to the US dollar; and
- lower volume due to reduced customer demand for acetic acid in all regions, mostly offset by higher volume for VAM due to expansion in the western hemisphere.

Operating profit decreased for the year ended December 31, 2019 compared to the same period in 2018 primarily due to:

- lower Net sales;
- higher spending costs of $15 million, primarily related to incremental costs at our Clear Lake, Texas facility resulting from a localized fire;
- an unfavorable impact of $14 million to Other (charges) gains, net. During the year ended December 31, 2018, we received a $13 million non-income tax receivable refund from Nanjing, China, which did not recur in the current year. See Note 18 - Other (Charges) Gains, Net in the accompanying consolidated financial statements for further information; and
- higher accelerated depreciation and amortization expense of $13 million, primarily related to damage to the carbon monoxide production unit from a localized fire at our Clear Lake, Texas facility;

partially offset by:

- lower raw material costs for methanol, ethylene and acetic acid, which combined represents more than three-fourths of the decrease.

Other Activities

	Year Ended December 31,			%
	2019	2018	Change	Change
	(In $ millions, except percentages)			
Other (charges) gains, net	(117)	—	(117)	(100.0)%
Operating profit (loss)	(342)	(280)	(62)	(22.1)%
Equity in net earnings (loss) of affiliates	10	9	1	11.1 %
Non-operating pension and other postretirement employee benefit (expense) income	(20)	(62)	42	67.7 %
Dividend income - equity investments	1	1	—	— %
Depreciation and amortization	15	11	4	36.4 %

Year Ended December 31, 2019 Compared to Year Ended December 31, 2018

Operating loss increased for the year ended December 31, 2019 compared to the same period in 2018 primarily due to:

- an unfavorable impact of $117 million to Other (charges) gains, net. In May 2017, we learned that the European Commission opened a competition law investigation involving certain subsidiaries of Celanese with respect to certain past ethylene purchases. During the year ended December 31, 2019, we recorded a reserve of $89 million as a result of information learned from the European Commission's investigation. Additionally, during the year ended December 31, 2019, we recorded $19 million in losses related to settlements with former third-party customers. We also recorded $9 million in employee termination benefits, primarily related to business optimization projects. See Note 18 - Other (Charges) Gains, Net in the accompanying consolidated financial statements for further information;

partially offset by:

- lower incentive compensation costs and project spending of $48 million.

Non-operating pension and other postretirement employee benefit expense decreased for the year ended December 31, 2019 compared to the same period in 2018 primarily due to:

- a decrease in recognized actuarial loss of $78 million as a result of higher asset returns, partially offset by a decrease in the weighted average discount rate used to determine benefit obligations from 3.8% to 2.8%. See Note 15 - Benefit Obligations in the accompanying consolidated financial statements for further information.

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, 2019 we have $978 million available for borrowing under our senior unsecured revolving credit facility and $5 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 approximately $500 million in 2020 primarily due to additional investments in growth opportunities in our Engineered Materials and Acetyl Chain 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 common stock, par value $0.0001 per share ("Common Stock").

We are subject to capital controls and exchange restrictions imposed by the local governments in certain jurisdictions where we operate, such as China, India and Indonesia. Capital controls impose limitations on our ability to exchange currencies, repatriate earnings or capital, lend via intercompany loans or create cross-border cash pooling arrangements. Our largest exposure to a country with capital controls is in China. Pursuant to applicable regulations, foreign-invested enterprises in China may pay dividends only out of their accumulated profits, if any, determined in accordance with Chinese accounting standards and regulations. In addition, the Chinese government imposes certain currency exchange controls on cash transfers out of China, puts certain limitations on duration, purpose and amount of intercompany loans, and restricts cross-border cash pooling.

Cash Flows

Cash and cash equivalents increased $24 million to $463 million as of December 31, 2019 compared to December 31, 2018. As of December 31, 2019, $391 million of the $463 million of cash and cash equivalents was held by our foreign subsidiaries. Under the TCJA, we have incurred a prior year 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.

Year Ended December 31, 2019 Compared to Year Ended December 31, 2018

- ***Net Cash Provided by (Used in) Operating Activities***

Net cash provided by operating activities decreased $104 million to $1.5 billion for the year ended December 31, 2019 compared to $1.6 billion for the same period in 2018. Net cash provided by operations for the year ended December 31, 2019 decreased primarily due to:

- a decrease in net earnings;

partially offset by:

- favorable trade working capital of $303 million, primarily due to a decrease in trade receivables and inventory. Trade receivables decreased due to timing of collections. Inventory decreased as a result of inventory build-up for plant turnarounds which occurred in the prior year, as well as lower costs for raw materials and the impact of the localized fire at our Clear Lake, Texas facility in the current year.

- ***Net Cash Provided by (Used in) Investing Activities***

Net cash used in investing activities decreased $14 million to $493 million for the year ended December 31, 2019 compared to $507 million for the same period in 2018, primarily due to:

- a net cash outflow of $144 million related to the acquisition of Omni Plastics, L.L.C. and its subsidiaries in February 2018;

partially offset by:

- a net cash outflow of $91 million primarily related to the acquisition of Next Polymers, Ltd. in January 2019; and

- an increase of $33 million in capital expenditures related to growth and efficiency opportunities in our Engineered Materials and Acetyl Chain segments.

- ***Net Cash Provided by (Used in) Financing Activities***

Net cash used in financing activities decreased $230 million to $935 million for the year ended December 31, 2019 compared to $1.2 billion for the same period in 2018, primarily due to:

- an increase in net proceeds from short-term debt of $338 million, primarily as a result of higher borrowings under our revolving credit facility and accounts receivable securitization facility during the year ended December 31, 2019 related to the timing of share repurchases of our Common Stock; and

- an increase in net proceeds from long-term debt of $114 million, primarily due to the issuance of $500 million in principal amount of the 3.500% senior unsecured notes due May 8, 2024 (the "3.500% Notes"), partially offset by the redemption of the 3.250% senior unsecured notes (the "3.250% Notes") during the year ended December 31, 2019, as discussed below;

partially offset by:

- an increase of $191 million in share repurchases of our Common Stock during the year ended December 31, 2019; and

- an increase in cash dividends on our Common Stock of $20 million. During the year ended December 31, 2019, we increased our quarterly cash dividend rate from $0.54 to $0.62 per share.

In addition, exchange rates had an unfavorable impact of $2 million and $23 million on cash and cash equivalents for the years ended December 31, 2019 and 2018, respectively.

Debt and Other Obligations

- ***Senior Credit Facilities***

On January 7, 2019, Celanese, Celanese US and certain subsidiary borrowers entered into a new senior credit agreement (the "Credit Agreement") consisting of a $1.25 billion senior unsecured revolving credit facility (with a letter of credit sublimit), maturing in 2024. The Credit Agreement is guaranteed by Celanese, Celanese US and substantially all of its domestic subsidiaries ("the Subsidiary Guarantors"). We borrowed $1.3 billion and repaid $1.1 billion under our senior unsecured revolving credit facility during the year ended December 31, 2019.

- ***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	Interest Rate	Interest Pay Dates		Maturity Date
		(In millions)	(In percentages)			
3.500% Notes	May 2019	$500	3.500	May 8	November 8	May 8, 2024
2.125% Notes	November 2018	€500	2.125	March 1		March 1, 2027
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
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 May 8, 2019, Celanese US completed an offering of the 3.500% Notes in a public offering registered under the Securities Act. The 3.500% Notes were issued at a discount to par at a price of 99.895%. Net proceeds from the sale of the 3.500% Notes were used to redeem in full the 3.250% Notes, to repay $156 million of outstanding borrowings under the senior unsecured revolving credit facility and for general corporate purposes. In connection with the issuance of the 3.500% Notes, we entered into a cross-currency swap to effectively convert our fixed-rate US dollar denominated debt under the 3.500% Notes, including annual interest payments and the payment of principal at maturity, to fixed-rate Euro denominated debt.

In November 2018, Celanese US completed an offering of the 2.125% Notes in a public offering registered under the Securities Act. The 2.125% Notes were issued under a base indenture dated May 6, 2011. The 2.125% Notes were issued at a discount to par at a price of 99.231%. Net proceeds from the sale of the 2.125% Notes were used to repay $463 million of our senior unsecured term loan and for general corporate purposes.

- ***Other Financing Arrangements***

In June 2018, we entered into a factoring agreement with a global financial institution to sell certain accounts receivable on a non-recourse basis. These transactions are treated as a sale and are accounted for as a reduction in accounts receivable because the agreement transfers effective control over and risk related to the receivables to the buyer. We have no continuing involvement in the transferred receivables, other than collection and administrative responsibilities and, once sold, the accounts receivable are no longer available to satisfy creditors in the event of bankruptcy. We de-recognized $257 million and $117 million of accounts receivable under this factoring agreement as of December 31, 2019 and 2018, respectively.

Our US accounts receivable securitization facility was amended on July 8, 2019 to extend the maturity date to July 6, 2020. We borrowed $112 million and repaid $74 million under this facility during the year ended December 31, 2019.

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, 2019.

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

Share Capital

On February 5, 2020, we declared a quarterly cash dividend of $0.62 per share on our Common Stock amounting to $74 million. The cash dividend will be paid on February 28, 2020 to holders of record as of February 18, 2020.

Our Board of Directors has authorized the aggregate repurchase of $5.4 billion of our Common Stock since February 2008. 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, 2019, we

repurchased shares of our Common Stock at an aggregate cost of $1.0 billion. As of December 31, 2019, we had $1.2 billion remaining under authorizations by our Board of Directors.

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

Contractual Debt and Cash Obligations

The following table sets forth our fixed contractual debt and cash obligations as of December 31, 2019:

		Payments due by period			
	Total	Less Than 1 Year	Years 2 & 3	Years 4 & 5	After 5 Years
		(In $ millions)			
Fixed Contractual Debt Obligations					
Senior notes	3,135	—	900	1,341	894
Interest payments on debt and other obligations	418 [1]	108	156	72	82
Finance lease obligations	144	26	51	30	37
Other debt	644 [2]	470	3	21	150
Total	4,341	604	1,110	1,464	1,163
Operating leases	256	35	50	39	132
Uncertain tax positions, including interest and penalties	165	—	—	—	165 [3]
Unconditional purchase obligations	1,161 [4]	331	323	178	329
Pension and other postretirement funding obligations	442	48	91	90	213
Environmental and asset retirement obligations	75	18	16	13	28
Total	6,440	1,036	1,590	1,784	2,030

[1] Future interest expense is calculated using the rate in effect on December 31, 2019.

[2] Other debt is primarily made up of fixed rate pollution control and industrial revenue bonds, short-term borrowings from affiliated companies, our revolving credit facility, our accounts receivable securitization facility and other bank obligations.

[3] Due to uncertainties in the timing of the effective settlement of tax positions with the respective taxing authorities, we are unable to determine the timing of payments related to our uncertain tax obligations, including interest and penalties. These amounts are therefore reflected in "After 5 Years".

[4] 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, obtained via a survey of Celanese, also include other purchase obligations such as maintenance and service agreements, energy and utility agreements, consulting contracts, software agreements and other miscellaneous agreements and contracts.

Contractual Guarantees and Commitments

As of December 31, 2019, we have standby letters of credit of $28 million and bank guarantees of $17 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.

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 reporting units include our engineered materials, acetate tow, food ingredients, emulsion 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. The qualitative evaluation is an assessment of multiple factors, including the current operating environment, financial performance and market considerations. 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 for some or all of our reporting units 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, 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 liability 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 liabilities 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.

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

- ***Loss Contingencies***

When determinable, we accrue contingent losses for matters that are probable of occurring for which a loss amount can be reasonably estimated. For certain potentially material loss contingency matters, we are sometimes unable to estimate and accrue a loss deemed probable of occurring. For such matters, we disclose an estimate of the possible loss, range of loss or a statement that such estimate cannot be made.

Because our evaluation and assessment of critical facts and circumstances surrounding a contingent loss matter is in advance of the matter's final determination, there is an inherent subjectivity and unpredictability involved in estimating, accounting for and reporting contingent losses. Generally, the less progress made in the resolution of a contingent loss matter or the broader the range of potential outcomes, the more difficult it is for us to estimate, accrue and report a loss. For example, we may disclose certain information about a plaintiff's legal claim against us that is alleged in the plaintiff's pleadings or otherwise publicly available. While information of this type may provide more insight into the potential magnitude of a matter, it might not necessarily be indicative of our estimate of probable or possible loss. In addition, some of our contingent loss exposures may be eligible for reimbursement under the provisions of our insurance coverage. We do not consider the potential availability of insurance coverage in determining our probable or possible loss estimates. As a result of these factors among others, our ultimate contingent loss exposure may be higher or lower, and possibly materially so, than our recorded probable loss accruals and disclosures of possible losses.

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, the United Kingdom, Mexico, 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.

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. Our largest exposures are to the Euro and Chinese Yuan ("CNY"). A decline in the value of the Euro and CNY versus the US dollar results in a decline in the US dollar value of our sales and earnings denominated in Euros and CNYs. Likewise, an increase in the value of the Euro and CNY versus the US dollar would result in an opposite effect. We estimate that a 10% change in the Euro/US dollar and CNY/US dollar exchange rates would impact our earnings by $55 million and $21 million, respectively.

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, 2019	June 30, 2019	September 30, 2019	December 31, 2019
	(Unaudited) (In $ millions, except per share data)			
Net sales	1,687	1,592	1,586	1,432
Gross profit	453	423	414	316
Other (charges) gains, net	4	(98)	(7)	(102)
Operating profit (loss)	320	186	260	68
Earnings (loss) from continuing operations before tax	385	239	323	41
Amounts attributable to Celanese Corporation				
Earnings (loss) from continuing operations	338	210	268	42
Earnings (loss) from discontinued operations	(1)	(1)	(5)	1
Net earnings (loss)	337	209	263	43
Earnings (loss) per common share - basic				
Continuing operations	2.65	1.68	2.18	0.35
Net earnings (loss)	2.64	1.67	2.14	0.36
Earnings (loss) per common share - diluted				
Continuing operations	2.64	1.67	2.17	0.35
Net earnings (loss)	2.63	1.66	2.13	0.36

	Three Months Ended			
	March 31, 2018	June 30, 2018	September 30, 2018	December 31, 2018
	(Unaudited) (In $ millions, except per share data)			
Net sales	1,851	1,844	1,771	1,689
Gross profit	515	521	516	420
Other (charges) gains, net	—	(3)	12	—
Operating profit (loss)	343	358	374	259
Earnings (loss) from continuing operations before tax	432	442	462	174
Amounts attributable to Celanese Corporation				
Earnings (loss) from continuing operations	365	344	407	96
Earnings (loss) from discontinued operations	(2)	—	(6)	3
Net earnings (loss)	363	344	401	99
Earnings (loss) per common share - basic				
Continuing operations	2.69	2.54	3.02	0.73
Net earnings (loss)	2.67	2.54	2.98	0.75
Earnings (loss) per common share - diluted				
Continuing operations	2.68	2.52	3.00	0.73
Net earnings (loss)	2.66	2.52	2.96	0.75

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

None.

Item 9A. ***Controls and Procedures***

Under the supervision and with the participation of our management, including the Chief Executive Officer and Chief Financial Officer, we have evaluated the effectiveness of our disclosure controls and procedures pursuant to Rule 13a-15(b) under the Securities Exchange Act of 1934, as amended, as of the end of the period covered by this Annual Report on Form 10-K. Based on that evaluation, as of December 31, 2019, the Chief Executive Officer and Chief Financial Officer have concluded that our disclosure controls and procedures are effective.

Changes in Internal Control Over Financial Reporting

During the three months ended December 31, 2019, there were no changes in our internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Report of Management on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting for the Company. Internal control over financial reporting is a process to provide reasonable assurance regarding the reliability of our financial reporting for external purposes in accordance with accounting principles generally accepted in the United States of America. Internal control over financial reporting includes maintaining records that in reasonable detail accurately and fairly reflect our transactions; providing reasonable assurance that transactions are recorded as necessary for preparation of our consolidated financial statements; providing reasonable assurance that receipts and expenditures of company assets are made in accordance with management authorization; and providing reasonable assurance that unauthorized acquisition, use or disposition of company assets that could have a material effect on our consolidated financial statements would be prevented or detected on a timely basis. Because of its inherent limitations, internal control over financial reporting is not intended to provide absolute assurance that a misstatement of our consolidated financial statements would be prevented or detected.

Management conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this evaluation, management concluded that the Company's internal control over financial reporting was effective as of December 31, 2019. The Company's independent registered public accounting firm, KPMG LLP, has issued an audit report on the effectiveness of the Company's internal control over financial reporting. Their report follows on page 63.

Item 9B. ***Other Information***

None.

PART III

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

The information required by this Item 10 is incorporated herein by reference from the subsections of "Governance" captioned "Item 1: Election of Directors," "Director Nominees," "Board and Committee Governance," "Additional Governance Features," and the sections "Stock Ownership Information – Delinquent Section 16(a) Reports" and "Questions and Answers – Company Documents, Communications and Stockholder Proposals" of the Company's definitive proxy statement for the 2020 annual meeting of stockholders to be filed with the Securities and Exchange Commission pursuant to Regulation 14A under the Securities Exchange Act of 1934, as amended (the "2020 Proxy Statement"). Information about executive officers of the Company is contained in Part I of this Annual Report.

Codes of Ethics

The Company has adopted a Business Conduct Policy for directors, officers and employees along with a Financial Code of Ethics for its principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. These codes are available on the corporate governance portal of the Company's investor relations website at investors.celanese.com. The Company intends to satisfy the disclosure requirements under Item 5.05 of Form 8-K regarding amendments to and waivers from these codes by posting such information on the same website.

Item 11. *Executive Compensation*

The information required by this Item 11 is incorporated herein by reference from the section "Governance – Director Compensation" and the subsections of "Executive Compensation" captioned "Compensation Discussion and Analysis," "Compensation Risk Assessment," "Compensation and Management Development Committee Report," "Compensation Committee Interlocks and Insider Participation" and "Compensation Tables" of the 2020 Proxy Statement.

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

The information with respect to beneficial ownership required by this Item 12 is incorporated herein by reference from the section captioned "Stock Ownership Information – Principal Stockholders and Beneficial Owners" of the 2020 Proxy Statement.

Equity Compensation Plans

Securities Authorized for Issuance Under Equity Compensation Plans

The following information is provided as of December 31, 2019 with respect to equity compensation plans:

Plan Category	Number of Securities to be Issued upon Exercise of Outstanding Options, Warrants and Rights	Weighted Average Exercise Price of Outstanding Options, Warrants and Rights	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (excluding securities reflected in column (a))
	(a)	(b)	(c)
Equity compensation plans approved by security holders	1,433,599 [1]	$ —	19,952,545 [2]

[1] Includes (a) options to purchase 0 shares of the Company's common stock, par value $0.0001 per share ("Common Stock") under the Celanese Corporation 2009 Global Incentive Plan, as amended and restated April 19, 2012 and February 9, 2017 (the "2009 Plan"), and (b) 959,696 restricted stock units ("RSUs") granted under the 2009 Plan, and 473,903 RSUs granted under the Celanese Corporation 2018 Global Incentive Plan (the "2018 Plan"), including shares that may be issued pursuant to outstanding performance-based RSUs, assuming currently estimated maximum potential performance; actual shares issued may vary, depending on actual performance. If the performance-based RSUs included in this total vest at the target performance level (as opposed to the maximum potential performance), the aggregate RSUs outstanding would be 1,051,151. Also includes 46,204 share equivalents attributable to RSUs deferred by non-management directors under the Company's 2008 Deferred Compensation Plan (and dividends applied to previous deferrals) and distributable in the form of shares of Common Stock under the 2009 Plan and the 2018 Plan. Upon vesting, a share of the Company's Common Stock is issued for each RSU. Column (b) does not take any of these RSU awards into account because they do not have an exercise price.

[2] Includes shares available for future issuance under the 2018 Plan and the Celanese Corporation 2009 Employee Stock Purchase Plan approved by stockholders on April 23, 2009 (the "ESPP"). As of December 31, 2019, an aggregate of 6,244,945 shares were available for future issuance under the 2018 Plan and 13,707,600 shares of our Common Stock were available for future issuance under the ESPP. As of December 31, 2019, 292,400 shares have been offered for purchase under the ESPP.

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

The information required by this Item 13 is incorporated herein by reference from the section captioned "Governance – Director Independence and Related Person Transactions" of the 2020 Proxy Statement.

Item 14. ***Principal Accounting Fees and Services***

The information required by this Item 14 is incorporated herein by reference from the section captioned "Audit Matters – Item 3: Ratification of Independent Registered Public Accounting Firm" of the 2020 Proxy Statement.

PART IV

Item 15. *Exhibits and Financial Statement Schedules*

1. *Financial Statements.* The report of our independent registered public accounting firm and our consolidated financial statements are listed below and begin on page 63 of this Annual Report on Form 10-K.

	Page Number
Report of Independent Registered Public Accounting Firm	63
Consolidated Statements of Operations	66
Consolidated Statements of Comprehensive Income (Loss)	67
Consolidated Balance Sheets	68
Consolidated Statements of Equity	69
Consolidated Statements of Cash Flows	70
Notes to the Consolidated Financial Statements	71

2. *Financial Statement Schedules.*

The financial statement schedules required by this item, if any, are included as Exhibits to this Annual Report on Form 10-K.

3. *Exhibit List.*

INDEX TO EXHIBITS[(1)]

Exhibits will be furnished upon request for a nominal fee, limited to reasonable expenses.

Exhibit Number	Description
3.1	Second Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to the Quarterly Report on Form 10-Q filed with the SEC on October 18, 2016).
3.1(a)	Certificate of Amendment to the Second Amended and Restated Certificate of Incorporation of Celanese Corporation dated as of April 21, 2016 (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K filed with the SEC on April 22, 2016).
3.1(b)	Certificate of Amendment to the Second Amended and Restated Certificate of Incorporation of Celanese Corporation dated as of September 17, 2018 (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K filed with the SEC on September 17, 2018).
3.1(c)	Certificate of Amendment to the Second Amended and Restated Certificate of Incorporation of Celanese Corporation dated as of April 18, 2019 (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K filed with the SEC on April 23, 2019).
3.2	Sixth Amended and Restated By-laws, effective as of July 15, 2019 (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K filed with the SEC on July 18, 2019).
4.1	Form of certificate of Common Stock (incorporated by reference to Exhibit 4.1 to the Registration Statement on Form 8-A/A filed with the SEC on September 18, 2018).
4.2	Indenture, dated May 6, 2011, by and between Celanese US Holdings LLC, Celanese Corporation and Wells Fargo Bank, National Association, as trustee (incorporated by reference to Exhibit 4.2 to the Current Report on Form 8-K (File No. 001-32410) filed with the SEC on May 6, 2011).
4.3	First Supplemental Indenture, 5.875% Senior Notes due 2021, dated May 6, 2011, by and between Celanese US Holdings LLC, the guarantors party thereto and Wells Fargo Bank, National Association, as trustee (incorporated by reference to Exhibit 4.3 to the Current Report on Form 8-K (File No. 001-32410) filed with the SEC on May 6, 2011).
4.4	Second Supplemental Indenture, 4.625% Senior Notes due 2022, dated November 13, 2012, by and between Celanese US Holdings LLC, the guarantors party thereto and Wells Fargo Bank, National Association, as trustee (incorporated by reference to Exhibit 4.2 to the Current Report on Form 8-K (File No. 001-32410) filed with the SEC on November 13, 2012).

Exhibit Number	Description
4.5	Third Supplemental Indenture, dated September 24, 2014, among Celanese US Holdings LLC, Celanese Corporation, the subsidiary guarantors party thereto, Wells Fargo Bank, National Association, as trustee, Deutsche Bank Trust Companies Americas, as paying agent, and Deutsche Bank Luxembourg S.A., as registrar and as transfer agent (incorporated by reference to Exhibit 4.2 to the Current Report on Form 8-K (File No. 001-32410) filed with the SEC on September 25, 2014).
4.6	Fifth Supplemental Indenture, dated July 8, 2015, among Celanese US Holdings LLC, Celanese Sales U.S. Ltd. and Wells Fargo Bank National Association, as trustee (incorporated by reference to Exhibit 4.7 to the Annual Report on Form 10-K filed with the SEC on February 5, 2016).
4.7	Sixth Supplemental Indenture, dated as of September 26, 2016, among Celanese US Holdings LLC, Celanese Corporation, the subsidiary guarantors party thereto, Wells Fargo Bank, National Association, as trustee, and Deutsche Bank Trust Companies Americas, as paying agent, registrar and transfer agent (incorporated by reference to Exhibit 4.2 to the Form 8-K filed with the SEC on September 26, 2016).
4.8	Seventh Supplemental Indenture, dated as of December 11, 2017, among Celanese US Holdings LLC, Celanese Corporation, the subsidiary guarantors party thereto, Wells Fargo Bank, National Association, as trustee, and Deutsche Bank Trust Companies Americas, as paying agent, registrar and transfer agent (incorporated by reference to Exhibit 4.2 to the Form 8-K filed with the SEC on December 11, 2017).
4.9	Eighth Supplemental Indenture, dated as of November 5, 2018, among Celanese US Holdings LLC, Celanese Corporation, the subsidiary guarantors party thereto, Wells Fargo Bank, National Association, as trustee, and Deutsche Bank Trust Company Americas, as paying agent, registrar and transfer agent (incorporated by reference to Exhibit 4.2 to the Current Report on Form 8-K filed with the SEC on November 5, 2018).
4.10	Ninth Supplemental Indenture, dated as of May 8, 2019, among Celanese US Holdings LLC, Celanese Corporation, the subsidiary guarantors party thereto and Wells Fargo Bank, National Association, as trustee (incorporated by reference to Exhibit 4.2 to the Current Report on Form 8-K filed with the SEC on May 8, 2019).
4.11*	Description of the Company's Securities Registered Under Section 12 of the Securities Exchange Act of 1934.
10.1(a)	Credit Agreement, dated as of July 15, 2016, by and among Celanese Corporation, Celanese US Holdings LLC, Celanese Americas LLC, Celanese Europe B.V., Celanese Holdings Luxembourg S.à.r.l., Elwood C.V., certain subsidiaries of Celanese US Holdings LLC from time to time party thereto as borrowers, each lender from time to time party thereto, Bank of America, N.A., as Administrative Agent, a Swing Line Lender and an L/C Issuer and the other Swing Line Lenders and L/C Issuers party thereto (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the SEC on July 21, 2016).
10.1(b)	Credit Agreement, dated as of January 7, 2019, by and among Celanese Corporation, Celanese US Holdings LLC, Celanese Europe B.V., Elwood C.V., certain subsidiaries of Celanese US Holdings LLC from time to time party thereto as borrowers, each lender from time to time part thereto, Bank of America N.A., as Administrative Agent, a Swing Line Lender and an L/C Issuer and other Swing Line Lenders and L/C Issuers party thereto (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the SEC on January 11, 2019).
10.2	Purchase and Sale Agreement, dated August 28, 2013, among Celanese Acetate LLC, Celanese Ltd., Ticona Polymers, Inc. and CE Receivables LLC (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K (File No. 001-32410) filed with the SEC on September 3, 2013).
10.2(a)	Amended and Restated Purchase and Sale Agreement, dated February 2, 2015, among Celanese U.S. Sales LLC, Celanese Ltd., Ticona Polymers, Inc., Celanese International Corporation and CE Receivables LLC (incorporated by reference to Exhibit 10.2(a) to the Annual Report on Form 10-K filed with the SEC on February 6, 2015).
10.2(b)	Joinder Agreement, dated August 1, 2015, among Celanese Sales U.S., Ltd., CE Receivables LLC, Celanese US Holdings LLC, The Bank of Tokyo-Mitsubishi UFJ, Ltd., New York Branch, as administrator and purchaser agent, and PNC Bank, National Association, as purchaser agent (incorporated by reference to Exhibit 10.2(b) to the Annual Report on Form 10-K filed with the SEC on February 5, 2016).
10.2(c)	Receivables Purchase Agreement, dated August 28, 2013, among Celanese International Corporation, CE Receivables LLC, various Conduit Purchasers, Related Committed Purchasers, LC Banks and Purchaser Agents, and The Bank of Tokyo-Mitsubishi UFJ, Ltd., New York Branch, as administrator (incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K (File No. 001-32410) filed with the SEC on September 3, 2013).

Exhibit Number	Description
10.2(d)	First Amendment to Receivables Purchase Agreement, dated October 31, 2013, among Celanese International Corporation, CE Receivables LLC, various Conduit Purchasers, Related Committed Purchasers, LC Banks and Purchaser Agents, and The Bank of Tokyo-Mitsubishi UFJ, Ltd., New York Branch, as administrator (incorporated by reference to Exhibit 10.2(b) to the Annual Report on Form 10-K (File No. 001-32410) filed with the SEC on February 7, 2014).
10.2(e)	Second Amendment to Receivables Purchase Agreement, dated October 20, 2014, among CE Receivables LLC, Celanese International Corporation, various Conduit Purchasers, Related Committed Purchasers, LC Banks and Purchaser Agents, and The Bank of Tokyo-Mitsubishi UFJ, Ltd., New York Branch, as administrator (incorporated by reference to Exhibit 10.2(d) to the Annual Report on Form 10-K filed with the SEC on February 6, 2015).
10.2(f)	Third Amendment to Receivables Purchase Agreement, dated February 2, 2015, among CE Receivables LLC, Celanese International Corporation, various Conduit Purchasers, Related Committed Purchasers, LC Banks and Purchaser Agents, and The Bank of Tokyo-Mitsubishi UFJ, Ltd., New York Branch, as administrator (incorporated by reference to Exhibit 10.2(e) to the Annual Report on Form 10-K filed with the SEC on February 6, 2015).
10.2(g)	Omnibus Amendment, dated as of December 1, 2015, with the effect of Amendment No. 1 to the Amended and Restated Purchase and Sale Agreement, and Amendment No. 4 to the Receivables Purchase Agreement, among Celanese International Corporation, Celanese U.S. Sales LLC, Celanese Ltd., Ticona Polymers, Inc., Celanese Sales U.S. Ltd., CE Receivables LLC, various Conduit Purchasers, Related Committed Purchasers, LC Banks and Purchaser Agents, and The Bank of Tokyo-Mitsubishi UFJ, Ltd., New York Branch, as administrator (incorporated by reference to Exhibit 10.2(g) to the Annual Report on Form 10-K filed with the SEC on February 5, 2016).
10.2(h)	Omnibus Amendment No. 2, dated as of July 8, 2016, with the effect of Amendment No. 2 to the Amended and Restated Purchase and Sale Agreement, and Amendment No. 5 to the Receivables Purchase Agreement, among Celanese International Corporation, Celanese Ltd., Ticona Polymers, Inc., Celanese Sales U.S. Ltd., CE Receivables LLC, various Conduit Purchasers, Related Committed Purchasers, LC Banks and Purchaser Agents, and The Bank of Tokyo-Mitsubishi UFJ, Ltd., New York Branch, as administrator (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the SEC on July 12, 2016).
10.2(i)	Sixth Amendment to Receivables Purchase Agreement, dated July 8, 2019, among CE Receivables LLC, Celanese International Corporation, various Conduit Purchasers, Related Committed Purchasers, LC Banks and Purchaser Agents, and PNC Bank, National Association, as administer (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the SEC on July 10, 2019).
10.2(j)	Performance Guaranty, dated August 28, 2013, by Celanese US Holdings LLC in favor of The Bank of Tokyo-Mitsubishi UFJ, Ltd., New York Branch, as administrator (incorporated by reference to Exhibit 10.3 to the Current Report on Form 8-K (File No. 001-32410) filed with the SEC on September 3, 2013).
10.3‡	Celanese Corporation 2004 Deferred Compensation Plan (incorporated by reference to Exhibit 10.21 to the Registration Statement on Form S-1 (File No. 333-120187) filed with the SEC on January 3, 2005).
10.3(a)‡	Amendment to Celanese Corporation 2004 Deferred Compensation Plan, effective as of April 2, 2007 (incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K (File No. 001-32410) filed with the SEC on April 3, 2007).
10.3(b)‡	Form of 2007 Deferral Agreement between Celanese Corporation and award recipient (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K (File No. 001-32410) filed with the SEC on April 3, 2007).
10.4‡	Celanese Corporation 2008 Deferred Compensation Plan (incorporated by reference to Exhibit 10.6 to the Annual Report on Form 10-K (File No. 001-32410) filed on February 29, 2008).
10.4(a)‡	Amendment Number One to Celanese Corporation 2008 Deferred Compensation Plan dated December 11, 2008 (incorporated by reference to Exhibit 10.2 to the Registration Statement on Form S-8 (File No. 333-158736) filed with the SEC on April 23, 2009).
10.4(b)‡	Amendment Number Two to Celanese Corporation 2008 Deferred Compensation Plan dated December 22, 2008 (incorporated by reference to Exhibit 10.4(b) to the Annual Report on Form 10-K (File No. 001-32410) filed with the SEC on February 7, 2014).
10.4(c)*‡	Amendment Number Three to the Celanese Corporation 2008 Deferred Compensation Plan dated October 31, 2019.

Exhibit Number	Description
10.5‡	Celanese Corporation 2009 Global Incentive Plan (incorporated by reference to Exhibit 4.4 to the Registration Statement on Form S-8 (File No. 333-158734) filed with the SEC on April 23, 2009).
10.5(a)‡	Form of Nonqualified Stock Option Award Agreement for Chief Executive Officer (incorporated by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q (File No. 001-32410) filed with the SEC on July 25, 2012).
10.6‡	Celanese Corporation 2009 Global Incentive Plan, as Amended and Restated, April 19, 2012 (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K (File No. 001-32410) filed with the SEC on April 23, 2012).
10.6(a)‡	Form of 2014-2018 Time-Based Restricted Stock Unit Award Agreement (for non-employee directors) (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q (File No. 001-32410) filed with the SEC on July 18, 2014).
10.6(b)‡	Form of 2016-2017 Performance-Based Restricted Stock Unit Award Agreement (incorporated by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q filed with the SEC on April 19, 2016).
10.6(c)‡	Form of 2016-2017 Time-Based Restricted Stock Unit Award Agreement (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q filed with the SEC on April 19, 2016).
10.7‡	Celanese Corporation 2009 Global Incentive Plan, as Amended and Restated, February 9, 2017 (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q filed with the SEC on April 18, 2017).
10.7(a)‡	Form of 2017 Performance-Based Restricted Stock Unit Award Agreement (incorporated by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q filed with the SEC on April 18, 2017).
10.7(b)‡	Form of 2018 Performance-Based Restricted Stock Unit Award Agreement (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q filed with the SEC on April 17, 2018).
10.7(c)‡	Form of 2018 Restricted Stock Unit Award Agreement for Chief Executive Officer (incorporated by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q filed with the SEC on April 17, 2018).
10.8‡	Celanese Corporation 2009 Employee Stock Purchase Program (incorporated by reference to Exhibit 4.5 to the Registration Statement on Form S-8 (File No. 333-158734) filed on April 23, 2009).
10.9‡	Celanese Corporation 2018 Global Incentive Plan, effective as of April 23, 2018 (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the SEC on April 20, 2018).
10.9(a)‡	Form of 2019 Performance-Based Restricted Stock Unit Award Agreement (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q filed with the SEC on April 23, 2019).
10.9(b)‡	Form of 2019 Restricted Stock Award Agreement for the Chief Executive Officer (incorporated by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q filed with the SEC on April 23, 2019).
10.9(c)‡	Form of 2019 Time-Based Restricted Stock Unit Award Agreement (incorporated by reference to Exhibit 10.3 to the Quarterly Report on Form 10-Q filed with the SEC on April 23, 2019).
10.9(d)‡	Form of 2019 Time-Based Restricted Stock Unit Award Agreement (for non-employee directors) (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q filed with the SEC on July 23, 2019).
10.10(a)‡	Executive Severance Benefits Plan, amended effective February 6, 2013 (incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K (File No. 001-32410) filed with the SEC on February 12, 2013).
10.10(b)‡	Executive Severance Benefits Plan, amended effective October 18, 2017 (incorporated by reference to Exhibit 10.9(b) the Annual Report on Form 10-K filed with the SEC on February 9, 2018).
10.11(a)‡	Letter Agreement, dated November 4, 2011, between Celanese Corporation and Mark C. Rohr (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K (File No. 001-32410) filed with the SEC on November 7, 2011).
10.11(b)‡	Agreement and General Release, dated January 18, 2017, between Celanese Corporation and Gjon N. Nivica Jr. (incorporated by reference to Exhibit 10.3 to the Quarterly Report on Form 10-Q filed with the SEC on April 18, 2017).
10.11(c)‡	Offer Letter, dated January 6, 2017, between Celanese Corporation and Peter G. Edwards (incorporated by reference to Exhibit 10.4 to the Quarterly Report on Form 10-Q filed with the SEC on April 18, 2017).

Exhibit Number	Description
10.11(d)‡	Agreement and General Release, dated September 12, 2017, between Celanese Corporation and Patrick D. Quarles (incorporated by reference to Exhibit 10.10(g) the Annual Report on Form 10-K filed with the SEC on February 9, 2018).
10.11(e)‡	Agreement and General Release, dated February 16, 2018, between Celanese Corporation and Christopher W. Jensen (incorporated by reference to Exhibit 10.3 to the Quarterly Report on Form 10-Q filed with the SEC on April 17, 2018).
10.11(f)‡	Agreement and General Release, dated November 5, 2018, between Celanese Corporation and Peter G. Edwards (incorporated by reference to Exhibit 10.4 to the Quarterly Report on Form 10-Q filed with the SEC on April 23, 2019).
10.11(g)‡	Agreement and General Release, dated January 7, 2019, between Celanese Corporation and Scott M. Sutton (incorporated by reference to Exhibit 10.5 to the Quarterly Report on Form 10-Q filed with the SEC on April 23, 2019).
10.11(h)‡	Offer Letter, dated December 12, 2018, between Celanese Corporation and A. Lynne Puckett (incorporated by reference to Exhibit 10.6 to the Quarterly Report on Form 10-Q filed with the SEC on April 23, 2019).
10.11(i)‡	Offer Letter, dated April 5, 2019, between Celanese Corporation and Lori J. Ryerkerk (incorporated by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q filed with the SEC on October 22, 2019).
10.12(a)‡	Form of 2012 Change in Control Agreement between Celanese Corporation and participant, together with a schedule identifying each of the executive officers with substantially identical agreements (incorporated by reference to Exhibit 10.5 to the Quarterly Report on Form 10-Q (File No. 001-32410) filed with the SEC on July 25, 2012).
10.12(b)‡	Form of 2015 Change in Control Agreement between Celanese Corporation and participant, together with a schedule identifying each of the executive officers with substantially identical agreements (incorporated by reference to Exhibit 10.12(e) to the Annual Report on Form 10-K filed with the SEC on February 5, 2016).
10.12(c)*‡	Form of 2019 Change in Control Agreement between Celanese Corporation and participant, together with a schedule identifying each of the executive officers with substantially identical agreements.
10.13‡	Form of Long-Term Incentive Claw-Back Agreement between Celanese Corporation and award recipient (incorporated by reference to Exhibit 10.4 to the Current Report on Form 8-K/A (File No. 001-32410) filed with the SEC on January 26, 2009).
10.14‡	Celanese Americas Supplemental Retirement Savings Plan, as amended and restated effective January 1, 2014 (incorporated by reference to Exhibit 10.14(a) to the Annual Report on Form 10-K filed with the SEC on February 6, 2015).
10.15*‡	Celanese Americas Supplemental Retirement Pension Plan, as amended and restated effective January 1, 2009.
10.15(a)*‡	First Amendment to the Celanese Americas Supplemental Retirement Pension Plan, as amended and restated effective January 1, 2009, dated as of July 22, 2013.
10.16*‡	Summary of Non-Employee Director Compensation.
21.1*	List of subsidiaries of Celanese Corporation.
23.1*	Consent of Independent Registered Public Accounting Firm of Celanese Corporation, KPMG LLP.
24.1*	Power of Attorney (included on the signature page of this Annual Report on Form 10-K).
31.1*	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1*	Certification of Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2*	Certification of Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS*	Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH*	Inline XBRL Taxonomy Extension Schema Document.
101.CAL*	Inline XBRL Taxonomy Extension Calculation Linkbase Document.

Exhibit Number	Description
101.DEF*	Inline XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB*	Inline XBRL Taxonomy Extension Label Linkbase Document.
101.PRE*	Inline XBRL Taxonomy Extension Presentation Linkbase Document.
104	The cover page from the Company's Annual Report on Form 10-K for the year ended December 31, 2019 has been formatted in Inline XBRL.

* Filed herewith.

‡ Indicates a management contract or compensatory plan or arrangement.

(1) The Company and its subsidiaries have in the past issued, and may in the future issue from time to time, long-term debt. The Company may not file with the applicable report copies of the instruments defining the rights of holders of long-term debt to the extent that the aggregate principal amount of the debt instruments of any one series of such debt instruments for which the instruments have not been filed has not exceeded or will not exceed 10% of the assets of the Company at any pertinent time. The Company hereby agrees to furnish a copy of any such instrument(s) to the SEC upon request.

SIGNATURES

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

CELANESE CORPORATION

By:	/s/ LORI J. RYERKERK
Name:	Lori J. Ryerkerk
Title:	Chief Executive Officer and President
Date:	February 6, 2020

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Scott A. Richardson and Benita M. Casey, and each of them, his or her true and lawful attorney-in-fact and agent, each with full power of substitution and resubstitution to sign in his or her name, place and stead, in any and all capacities, to do any and all things and execute any and all instruments that any such attorney-in-fact may deem necessary or advisable under the Securities Exchange Act of 1934 and any rules, regulations and requirements of the US Securities and Exchange Commission in connection with the Annual Report on Form 10-K for the fiscal year ended December 31, 2019 and any and all amendments hereto, as fully for all intents and purposes as he or she might or could do in person, and hereby ratifies and confirms all that such said attorney-in-fact, acting alone, or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

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

Signature	Title	Date
/s/ LORI J. RYERKERK Lori J. Ryerkerk	Chief Executive Officer, President and Director (Principal Executive Officer)	February 6, 2020
/s/ SCOTT A. RICHARDSON Scott A. Richardson	Senior Vice President and Chief Financial Officer (Principal Financial Officer)	February 6, 2020
/s/ BENITA M. CASEY Benita M. Casey	Vice President, Finance, Controller and Chief Accounting Officer (Principal Accounting Officer)	February 6, 2020
/s/ JEAN S. BLACKWELL Jean S. Blackwell	Director	February 6, 2020
/s/ WILLIAM M. BROWN William M. Brown	Director	February 6, 2020
/s/ EDWARD G. GALANTE Edward G. Galante	Director	February 6, 2020
/s/ KATHRYN M. HILL Kathryn M. Hill	Director	February 6, 2020

Signature	Title	Date
/s/ DAVID F. HOFFMEISTER David F. Hoffmeister	Director	February 6, 2020
/s/ JAY V. IHLENFELD Jay V. Ihlenfeld	Director	February 6, 2020
/s/ MARK C. ROHR Mark C. Rohr	Executive Chairman (Chairman of the Board of Directors)	February 6, 2020
/s/ KIM K.W. RUCKER Kim K.W. Rucker	Director	February 6, 2020
/s/ JOHN K. WULFF John K. Wulff	Director	February 6, 2020

CELANESE CORPORATION AND SUBSIDIARIES
INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

	Page Number
Report of Independent Registered Public Accounting Firm	63
Consolidated Statements of Operations for the years ended December 31, 2019, 2018 and 2017	66
Consolidated Statements of Comprehensive Income (Loss) for the years ended December 31, 2019, 2018 and 2017	67
Consolidated Balance Sheets as of December 31, 2019 and 2018	68
Consolidated Statements of Equity for the years ended December 31, 2019, 2018 and 2017	69
Consolidated Statements of Cash Flows for the years ended December 31, 2019, 2018 and 2017	70
Notes to the Consolidated Financial Statements	71
1. Description of the Company and Basis of Presentation	71
2. Summary of Accounting Policies	72
3. Recent Accounting Pronouncements	82
4. Acquisitions, Dispositions and Plant Closures	83
5. Ventures and Variable Interest Entities	84
6. Marketable Securities	85
7. Receivables, Net	85
8. Inventories	85
9. Investments in Affiliates	86
10. Property, Plant and Equipment, Net	88
11. Goodwill and Intangible Assets, Net	89
12. Current Other Liabilities	91
13. Noncurrent Other Liabilities	91
14. Debt	92
15. Benefit Obligations	95
16. Environmental	103
17. Stockholders' Equity	105
18. Other (Charges) Gains, Net	107
19. Income Taxes	109
20. Management Compensation Plans	114
21. Leases	116
22. Derivative Financial Instruments	118
23. Fair Value Measurements	120
24. Commitments and Contingencies	121
25. Supplemental Cash Flow Information	123
26. Segment Information	123
27. Revenue Recognition	125
28. Earnings (Loss) Per Share	126
29. Consolidating Guarantor Financial Information	127
30. Subsequent Events	139

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors
Celanese Corporation:

Opinions on the Consolidated Financial Statements and Internal Control Over Financial Reporting

We have audited the accompanying consolidated balance sheets of Celanese Corporation and subsidiaries (the Company) as of December 31, 2019 and 2018, the related consolidated statements of operations, comprehensive income (loss), equity, and cash flows for each of the years in the three-year period ended December 31, 2019, and the related notes (collectively, the consolidated financial statements). We also have audited the Company's internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

In our opinion, the consolidated financial statements referred to above, present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2019, in conformity with U.S. generally accepted accounting principles. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019 based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

Change in Accounting Principle

As discussed in Note 3 to the consolidated financial statements, the Company has changed its method of accounting for leasing transactions as of January 1, 2019 due to the adoption of Financial Accounting Standards Board's Accounting Standards Update 2016-02, *Leases*.

Basis for Opinions

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

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

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

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the

company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Evaluation of the Company's determination and realizability of foreign tax credit carryforwards

As discussed in Notes 2 and 19 to the consolidated financial statements, the Company had $243 million of U.S. foreign tax credit carryforwards, and a related valuation allowance of $207 million, as of December 31, 2019. Foreign tax credit carryforwards may be used to reduce current U.S. tax liabilities related to foreign-source income or deferred and utilized over a ten-year period. Realization of these deferred tax assets requires generation of sufficient foreign-source taxable income within this period.

We identified the evaluation of the Company's determination and realizability of foreign tax credit carryforwards available for U.S. federal income tax purposes as a critical audit matter. This is due to the magnitude of this deferred tax asset and complex auditor judgment required in evaluating the application of U.S. federal income tax regulations related to the generation and utilization of foreign tax credit carryforwards. Additionally, a high degree of auditor judgment was required in evaluating the Company's related forecast of foreign-source taxable income, allocation of overhead and other directly allocable expenses.

The primary procedures we performed to address this critical audit matter included the following. We tested certain internal controls over 1) the computation of foreign tax credit carryforwards generated, 2) assessing the realizability of associated deferred tax assets, and 3) the application of relevant income tax regulations for the generation of foreign tax credit carryforwards and foreign-source taxable income forecasted to be generated prior to carryforward expirations. To assess the Company's ability to forecast, we compared historical forecasts of foreign-source taxable income to actual results. We involved income tax professionals with specialized skills and knowledge, who assisted in evaluating the types and amounts of foreign-source taxable income utilized in the Company's forecasts, including the allocable expenses and method of expense allocation. They also assisted in assessing 1) the application of U.S. federal income tax regulations related to the generation and utilization of foreign tax credit carryforwards, and 2) the determination of the foreign tax credit carryforwards generated, including their realizability, by independently re-performing the computation and comparing our determination to the Company's assessment.

Evaluation of the Company's assessment of changes in, and the application of, international tax regulations

As discussed in Note 19 to the consolidated financial statements, $131 million of income tax expense for the year ended December 31, 2019 was related to the Company's international operations. In the current global tax environment, the Company's effective income tax rate and related income tax attributes are significantly impacted by changes in tax regulation in its significant operating locations. As a result, the Company continuously monitors, evaluates, and responds to these tax regulation changes.

We identified the evaluation of the Company's assessment of changes in, and the application of, international tax regulations as a critical audit matter. This was due to the complex and subjective nature of recent tax regulation changes, the steps taken by the Company in response to such changes, and their collective impacts on multiple foreign income tax computations. As a result, a high degree of auditor judgment was required to 1) evaluate significant tax regulation changes, 2) assess the application of the foreign taxing authorities' regulations on the Company's business operations, and 3) evaluate certain internal restructuring and other transactions.

The primary procedures we performed to address this critical audit matter included the following. We tested certain internal controls over 1) the changes in, and the application of, international tax regulations, 2) the execution of certain

internal restructuring and other transactions, and 3) their collective impacts on multiple foreign income tax computations. We involved income tax professionals with specialized skills and knowledge, who assisted in evaluating the Company's interpretation and application of tax regulations, including tax regulation changes, and the associated income tax consequences. They also assisted in assessing certain internal restructuring and other transactions, including reviewing the underlying legal step documentation and evaluating the resulting impact on the Company's global tax rate.

/s/ KPMG LLP

We have served as the Company's auditor since 2004.

Dallas, Texas
February 6, 2020

CELANESE CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS

	Year Ended December 31,		
	2019	2018	2017
	(In $ millions, except share and per share data)		
Net sales	6,297	7,155	6,140
Cost of sales	(4,691)	(5,183)	(4,629)
Gross profit	1,606	1,972	1,511
Selling, general and administrative expenses	(483)	(546)	(496)
Amortization of intangible assets	(24)	(24)	(20)
Research and development expenses	(67)	(72)	(73)
Other (charges) gains, net	(203)	9	(59)
Foreign exchange gain (loss), net	7	—	(1)
Gain (loss) on disposition of businesses and assets, net	(2)	(5)	(5)
Operating profit (loss)	834	1,334	857
Equity in net earnings (loss) of affiliates	182	233	183
Non-operating pension and other postretirement employee benefit (expense) income	(20)	(62)	44
Interest expense	(115)	(125)	(122)
Refinancing expense	(4)	(1)	—
Interest income	6	6	2
Dividend income - equity investments	113	117	108
Other income (expense), net	(8)	8	3
Earnings (loss) from continuing operations before tax	988	1,510	1,075
Income tax (provision) benefit	(124)	(292)	(213)
Earnings (loss) from continuing operations	864	1,218	862
Earnings (loss) from operation of discontinued operations	(8)	(5)	(16)
Gain (loss) on disposition of discontinued operations	—	—	—
Income tax (provision) benefit from discontinued operations	2	—	3
Earnings (loss) from discontinued operations	(6)	(5)	(13)
Net earnings (loss)	858	1,213	849
Net (earnings) loss attributable to noncontrolling interests	(6)	(6)	(6)
Net earnings (loss) attributable to Celanese Corporation	852	1,207	843
Amounts attributable to Celanese Corporation			
Earnings (loss) from continuing operations	858	1,212	856
Earnings (loss) from discontinued operations	(6)	(5)	(13)
Net earnings (loss)	852	1,207	843
Earnings (loss) per common share - basic			
Continuing operations	6.93	9.03	6.21
Discontinued operations	(0.05)	(0.04)	(0.10)
Net earnings (loss) - basic	6.88	8.99	6.11
Earnings (loss) per common share - diluted			
Continuing operations	6.89	8.95	6.19
Discontinued operations	(0.05)	(0.04)	(0.10)
Net earnings (loss) - diluted	6.84	8.91	6.09
Weighted average shares - basic	123,925,697	134,305,269	137,902,667
Weighted average shares - diluted	124,651,759	135,416,858	138,317,395

See the accompanying notes to the consolidated financial statements.

CELANESE CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

	Year Ended December 31,		
	2019	**2018**	**2017**
	(In $ millions)		
Net earnings (loss)	858	1,213	849
Other comprehensive income (loss), net of tax			
Unrealized gain (loss) on marketable securities	—	—	(1)
Foreign currency translation	(16)	(60)	174
Gain (loss) on cash flow hedges	(30)	(10)	(1)
Pension and postretirement benefits	(7)	—	9
Total other comprehensive income (loss), net of tax	(53)	(70)	181
Total comprehensive income (loss), net of tax	805	1,143	1,030
Comprehensive (income) loss attributable to noncontrolling interests	(6)	(6)	(6)
Comprehensive income (loss) attributable to Celanese Corporation	799	1,137	1,024

See the accompanying notes to the consolidated financial statements.

CELANESE CORPORATION AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

	As of December 31,	
	2019	2018
	(In $ millions, except share data)	
ASSETS		
Current Assets		
Cash and cash equivalents (variable interest entity restricted - 2019: $57; 2018: $24)	463	439
Trade receivables - third party and affiliates (net of allowance for doubtful accounts - 2019: $9; 2018: $10; variable interest entity restricted - 2019: $6; 2018: $6)	850	1,017
Non-trade receivables, net	331	301
Inventories	1,038	1,046
Marketable securities	40	31
Other assets	43	40
Total current assets	2,765	2,874
Investments in affiliates	975	979
Property, plant and equipment (net of accumulated depreciation - 2019: $2,957; 2018: $2,803; variable interest entity restricted - 2019: $622; 2018: $659)	3,713	3,719
Operating lease right-of-use assets	203	—
Deferred income taxes	96	84
Other assets (variable interest entity restricted - 2019: $9; 2018: $5)	338	290
Goodwill	1,074	1,057
Intangible assets, net (variable interest entity restricted - 2019: $22; 2018: $23)	312	310
Total assets	9,476	9,313
LIABILITIES AND EQUITY		
Current Liabilities		
Short-term borrowings and current installments of long-term debt - third party and affiliates	496	561
Trade payables - third party and affiliates	780	819
Other liabilities	461	343
Income taxes payable	17	56
Total current liabilities	1,754	1,779
Long-term debt, net of unamortized deferred financing costs	3,409	2,970
Deferred income taxes	257	255
Uncertain tax positions	165	158
Benefit obligations	589	564
Operating lease liabilities	181	—
Other liabilities	223	208
Commitments and Contingencies		
Stockholders' Equity		
Preferred stock, $0.01 par value, 100,000,000 shares authorized (2019 and 2018: 0 issued and outstanding)	—	—
Common stock, $0.0001 par value, 400,000,000 shares authorized (2019: 168,973,172 issued and 119,555,207 outstanding; 2018: 168,418,954 issued and 128,095,849 outstanding)	—	—
Treasury stock, at cost (2019: 49,417,965 shares; 2018: 40,323,105 shares)	(3,846)	(2,849)
Additional paid-in capital	254	233
Retained earnings	6,399	5,847
Accumulated other comprehensive income (loss), net	(300)	(247)
Total Celanese Corporation stockholders' equity	2,507	2,984
Noncontrolling interests	391	395
Total equity	2,898	3,379
Total liabilities and equity	9,476	9,313

See the accompanying notes to the consolidated financial statements.

CELANESE CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF EQUITY

	Year Ended December 31,					
	2019		2018		2017	
	Shares	Amount	Shares	Amount	Shares	Amount
	(In $ millions, except share data)					
Common Stock						
Balance as of the beginning of the period	128,095,849	—	135,769,256	—	140,660,447	—
Stock option exercises	14,045	—	—	—	20,151	—
Purchases of treasury stock	(9,166,267)	—	(7,935,392)	—	(5,436,803)	—
Stock awards	611,580	—	261,985	—	525,461	—
Balance as of the end of the period	119,555,207	—	128,095,849	—	135,769,256	—
Treasury Stock						
Balance as of the beginning of the period	40,323,105	(2,849)	32,387,713	(2,031)	26,950,910	(1,531)
Purchases of treasury stock, including related fees	9,166,267	(1,000)	7,935,392	(818)	5,436,803	(500)
Issuance of treasury stock under stock plans	(71,407)	3	—	—	—	—
Balance as of the end of the period	49,417,965	(3,846)	40,323,105	(2,849)	32,387,713	(2,031)
Additional Paid-In Capital						
Balance as of the beginning of the period		233		175		157
Stock-based compensation, net of tax		22		58		23
Stock option exercises, net of tax		(1)		—		1
Affiliate purchase of shares from noncontrolling interests		—		—		(6)
Balance as of the end of the period		254		233		175
Retained Earnings						
Balance as of the beginning of the period		5,847		4,920		4,320
Cumulative effect adjustment from adoption of new accounting standard (Note 2)		—		—		(1)
Net earnings (loss) attributable to Celanese Corporation		852		1,207		843
Common stock dividends		(300)		(280)		(241)
Restricted stock unit dividends		—		—		(1)
Balance as of the end of the period		6,399		5,847		4,920
Accumulated Other Comprehensive Income (Loss), Net						
Balance as of the beginning of the period		(247)		(177)		(358)
Other comprehensive income (loss), net of tax		(53)		(70)		181
Balance as of the end of the period		(300)		(247)		(177)
Total Celanese Corporation stockholders' equity		2,507		2,984		2,887
Noncontrolling Interests						
Balance as of the beginning of the period		395		412		433
Net earnings (loss) attributable to noncontrolling interests		6		6		6
(Distributions to) contributions from noncontrolling interests		(10)		(23)		(27)
Balance as of the end of the period		391		395		412
Total equity		2,898		3,379		3,299

See the accompanying notes to the consolidated financial statements.

CELANESE CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year Ended December 31,		
	2019	2018	2017
	(In $ millions)		
Operating Activities			
Net earnings (loss)	858	1,213	849
Adjustments to reconcile net earnings (loss) to net cash provided by (used in) operating activities			
Asset impairments	83	—	—
Depreciation, amortization and accretion	356	349	310
Pension and postretirement net periodic benefit cost	(58)	(92)	(80)
Pension and postretirement contributions	(47)	(47)	(363)
Actuarial (gain) loss on pension and postretirement plans	87	165	46
Pension curtailments and settlements, net	—	(1)	—
Deferred income taxes, net	(31)	137	(152)
(Gain) loss on disposition of businesses and assets, net	3	7	5
Stock-based compensation	48	71	47
Undistributed earnings in unconsolidated affiliates	(14)	(12)	(52)
Other, net	18	26	12
Operating cash provided by (used in) discontinued operations	—	(10)	8
Changes in operating assets and liabilities			
Trade receivables - third party and affiliates, net	165	(48)	(110)
Inventories	6	(158)	(97)
Other assets	(9)	(113)	(7)
Trade payables - third party and affiliates	(59)	15	126
Other liabilities	48	56	261
Net cash provided by (used in) operating activities	1,454	1,558	803
Investing Activities			
Capital expenditures on property, plant and equipment	(370)	(337)	(267)
Acquisitions, net of cash acquired	(91)	(144)	(269)
Proceeds from sale of businesses and assets, net	1	13	1
Purchases of marketable securities	(16)	—	—
Other, net	(17)	(39)	(14)
Net cash provided by (used in) investing activities	(493)	(507)	(549)
Financing Activities			
Net change in short-term borrowings with maturities of 3 months or less	247	(38)	111
Proceeds from short-term borrowings	117	51	182
Repayments of short-term borrowings	(91)	(78)	(124)
Proceeds from long-term debt	499	561	351
Repayments of long-term debt	(360)	(536)	(77)
Purchases of treasury stock, including related fees	(996)	(805)	(500)
Stock option exercises	(1)	—	1
Common stock dividends	(300)	(280)	(241)
(Distributions to) contributions from noncontrolling interests	(10)	(23)	(27)
Other, net	(40)	(17)	(27)
Net cash provided by (used in) financing activities	(935)	(1,165)	(351)
Exchange rate effects on cash and cash equivalents	(2)	(23)	35
Net increase (decrease) in cash and cash equivalents	24	(137)	(62)
Cash and cash equivalents as of beginning of period	439	576	638
Cash and cash equivalents as of end of period	463	439	576

See the accompanying notes to the consolidated financial statements.

CELANESE CORPORATION AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

1. Description of the Company and Basis of Presentation

Description of the Company

Celanese Corporation and its subsidiaries (collectively, the "Company") is a global chemical and specialty materials company. The Company produces high performance engineered polymers that are used in a variety of high-value applications, as well as acetyl products, which are intermediate chemicals for nearly all major industries. The Company also engineers and manufactures a wide variety of products essential to everyday living. The Company's 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.

Definitions

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 term "Celanese US" refers to the Company's subsidiary, Celanese US Holdings LLC, a Delaware limited liability company, and not its subsidiaries.

Basis of Presentation

The consolidated financial statements contained in this Annual Report were prepared in accordance with accounting principles generally accepted in the United States of America ("US GAAP") for all periods presented and include the accounts of the Company, its majority owned subsidiaries over which the Company exercises control and, when applicable, variable interest entities in which the Company is the primary beneficiary. The consolidated financial statements and other financial information included in this Annual Report, unless otherwise specified, have been presented to separately show the effects of discontinued operations.

In the ordinary course of business, the Company enters into contracts and agreements relative to a number of topics, including acquisitions, dispositions, joint ventures, supply agreements, product sales and other arrangements. The Company endeavors to describe those contracts or agreements that are material to its business, results of operations or financial position. The Company may also describe some arrangements that are not material but in which the Company believes investors may have an interest or which may have been included in a Form 8-K filing. Investors should not assume the Company has described all contracts and agreements relative to the Company's business in this Annual Report.

For those consolidated ventures in which the Company owns or is exposed to less than 100% of the economics, the outside stockholders' interests are shown as noncontrolling interests.

The Company has reclassified certain prior period amounts to conform to the current period's presentation.

2. Summary of Accounting Policies

Critical Accounting Policies

Recoverability of Goodwill and Indefinite-Lived Assets

The Company assesses the recoverability of the carrying amount of its reporting unit goodwill and indefinite-lived intangible assets either qualitatively or quantitatively annually during the third quarter of its 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. The Company assesses the recoverability of finite-lived intangible assets in the same manner as for property, plant and equipment. Impairment losses are generally recorded in Other (charges) gains, net in the consolidated statements of operations.

Recoverability of the carrying amount of goodwill is measured at the reporting unit level. The qualitative evaluation is an assessment of multiple factors, including the current operating environment, financial performance and market considerations, to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount, including goodwill. The Company may elect to bypass this qualitative assessment for some or all of its reporting units and perform a quantitative test, based on management's judgment. In performing a quantitative analysis, the Company measures the recoverability of goodwill for each reporting unit using a discounted cash flow model incorporating discount rates commensurate with the risks involved, which is classified as a Level 3 fair value measurement. 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. Discount rates used are similar to the rates estimated by the weighted average cost of capital ("WACC") considering any differences in company-specific risk factors. The Company may engage third-party valuation consultants to assist with this process.

Management tests indefinite-lived intangible assets for impairment quantitatively utilizing the relief from royalty method under the income approach to determine the estimated fair value for each indefinite-lived intangible asset, which is classified as a Level 3 fair value measurement. The relief from royalty method estimates the Company's theoretical royalty savings from ownership of the intangible asset. The 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, 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.

Environmental Liabilities

The Company manufactures and sells a diverse line of chemical products throughout the world. Accordingly, the Company's operations are subject to various hazards incidental to the production of industrial chemicals including the use, handling, processing, storage and transportation of hazardous materials. The Company recognizes losses and accrues 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, the Company accrues through 15 years, unless the Company has government orders or other agreements that extend beyond 15 years. The Company estimates 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 liability 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 liabilities do not take into account any claims or recoveries from insurance. The measurement of environmental liabilities is based on the Company's periodic estimate of what it will cost to perform each of the elements of the remediation effort. The Company utilizes third parties to assist in the management and development of cost estimates for its 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.

Pension and Other Postretirement Obligations

The Company recognizes a balance sheet asset or liability for each of its pension and other postretirement benefit plans equal to the plan's funded status as of a December 31 measurement date. 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 Company applies the long-term expected rate of return to the fair value of plan assets and immediately recognizes in operating results the change in fair value of plan assets and net actuarial gains and losses annually in the fourth quarter of each fiscal year and whenever a plan is required to be remeasured. Events requiring a plan remeasurement will be recognized in the quarter in which such remeasurement event occurs. The remaining components of pension and other postretirement plan net periodic benefit costs are recorded on a quarterly basis.

The Company allocates the service cost and amortization of prior service cost (or credit) components of its pension and postretirement plans to its business segments. Interest cost, expected return on assets and net actuarial gains and losses are considered financing activities managed at the corporate level and are recorded to Other Activities. The Company believes the expense allocation appropriately matches the cost incurred for active employees to the respective business segment.

Other postretirement benefit plans provide medical and life insurance benefits to retirees who meet minimum age and service requirements. The key determinants of the accumulated postretirement benefit obligation ("APBO") are the discount rate and the health care cost trend rate.

- ***Discount Rate***

As of the measurement date, the Company determines the appropriate discount rate used to calculate the present value of future cash flows currently expected to be required to settle the pension and other postretirement benefit obligations. The discount rate is generally based on the yield on high-quality corporate fixed-income securities.

In the US, the rate used to discount pension and other postretirement benefit plan liabilities is based on a yield curve developed from market data of over 300 Aa-grade non-callable bonds at the measurement date. This yield curve has discount rates that vary based on the duration of the obligations. The estimated future cash flows for the pension and other benefit obligations were matched to the corresponding rates on the yield curve to derive a weighted average discount rate.

The Company determines its discount rates in the Euro zone using the iBoxx Euro Corporate AA Bond indices with appropriate adjustments for the duration of the plan obligations. In other international locations, the Company determines its discount rates based on the yields of high quality government bonds with a duration appropriate to the duration of the plan obligations.

- ***Expected Long-Term Rate of Return on Assets***

The Company determines the long-term expected rate of return on plan assets by considering the current target asset allocation, as well as the historical and expected rates of return on various asset categories in which the plans are invested. A single long-term expected rate of return on plan assets is then calculated for each plan as the weighted average of the target asset allocation and the long-term expected rate of return assumptions for each asset category within each plan.

The expected rate of return is assessed annually and is based on long-term relationships among major asset classes and the level of incremental returns that can be earned by the successful implementation of different active investment management strategies. Equity returns are based on estimates of long-term inflation rate, real rate of return, 10-year Treasury bond premium over cash and historical equity risk premium. Fixed income returns are based on maturity, historical long-term inflation, real rate of return and credit spreads.

- ***Investment Policies and Strategies***

The investment objectives for the Company's pension plans are to earn, over a moving 20-year period, a long-term expected rate of return, net of investment fees and transaction costs, sufficient to satisfy the benefit obligations of the plan, while at the same time maintaining adequate liquidity to pay benefit obligations and proper expenses, and meet any other cash needs, in the short- to medium-term.

The equity and debt securities objectives are to provide diversified exposure across the US and global equity and fixed income markets, and to manage the risks and returns of the plans through the use of multiple managers and strategies. The fixed income strategies are designed to reduce liability-related interest rate risk by investing in bonds that match the duration and credit quality of the plan liabilities. Derivatives-based strategies may be used to mitigate investment risks.

The financial objectives of the qualified pension plans are established in conjunction with a comprehensive review of each plan's liability structure. The Company's asset allocation policy is based on detailed asset/liability analysis. In developing investment policy and financial goals, consideration is given to each plan's demographics, the returns and risks associated with current and alternative investment strategies and the current and projected cash, expense and funding ratios of each plan. Investment policies must also comply with local statutory requirements as determined by each country. A formal asset/liability study of each plan is undertaken every three to five years or whenever there has been a material change in plan demographics, benefit structure or funding status and investment market. The Company has adopted a long-term investment horizon such that the risk and duration of investment losses are weighed against the long-term potential for appreciation of assets. Although there cannot be complete assurance that these objectives will be realized, it is believed that the likelihood for their realization is reasonably high, based upon the asset allocation chosen and the historical and expected performance of the asset classes utilized by the plans. The intent is for investments to be broadly diversified across asset classes, investment styles, market sectors, investment managers, developed and emerging markets and securities in order to moderate portfolio volatility and risk. Investments may be in separate accounts, commingled trusts, mutual funds and other pooled asset portfolios provided they all conform to fiduciary standards.

External investment managers are hired to manage pension assets. Investment consultants assist with the screening process for each new manager hired. Over the long-term, the investment portfolio is expected to earn returns that exceed a composite of market indices that are weighted to match each plan's target asset allocation. The portfolio return should also (over the long-term) meet or exceed the return used for actuarial calculations in order to meet the future needs of each plan.

Loss Contingencies

When determinable, the Company accrues contingent losses for matters that are probable of occurring for which a loss amount can be reasonably estimated. For certain potentially material loss contingency matters, the Company is sometimes unable to estimate and accrue a loss deemed probable of occurring. For such matters, the Company discloses an estimate of the possible loss, range of loss or a statement that such estimate cannot be made.

Because the Company's evaluation and assessment of critical facts and circumstances surrounding a contingent loss matter is in advance of the matter's final determination, there is an inherent subjectivity and unpredictability involved in estimating, accounting for and reporting contingent losses. Generally, the less progress made in the resolution of a contingent loss matter or the broader the range of potential outcomes, the more difficult it is for the Company to estimate, accrue and report a loss. For example, the Company may disclose certain information about a plaintiff's legal claim against the Company that is alleged in the plaintiff's pleadings or otherwise publicly available. While information of this type may provide more insight into the potential magnitude of a matter, it might not necessarily be indicative of the Company's estimate of probable or possible loss. In addition, some of the Company's contingent loss exposures may be eligible for reimbursement under the provisions of its insurance coverage. The Company does not consider the potential availability of insurance coverage in determining its probable or possible loss estimates. As a result of these factors among others, the Company's ultimate contingent loss exposure may be higher or lower, and possibly materially so, than the Company's recorded probable loss accruals and disclosures of possible losses.

Income Taxes

The provision for income taxes is determined using the asset and liability approach of accounting for income taxes. Under this approach, deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes and net operating loss and tax credit carryforwards. The amount of deferred taxes on these temporary differences is determined using the tax rates that are expected to apply to the period when the asset is realized or the liability is settled, as applicable, based on tax rates and laws in the respective tax jurisdiction enacted as of the balance sheet date.

The Company reviews its deferred tax assets for recoverability and establishes a valuation allowance based on historical taxable income, projected future taxable income, remaining carryforward periods, applicable tax strategies and the expected timing of the reversals of existing temporary differences. A valuation allowance is provided when it is more likely than not (likelihood of greater than 50%) that some portion or all of the deferred tax assets will not be realized.

The Company considers many factors when evaluating and estimating its tax positions and tax benefits, which may require periodic adjustments and which may not accurately anticipate actual outcomes. Tax positions are recognized only when it is more likely than not (likelihood of greater than 50%), based on technical merits, that the positions will be sustained upon examination. Tax positions that meet the more-likely-than-not threshold are measured using a probability weighted approach as the largest amount of tax benefit that is greater than 50% likely of being realized upon settlement. Whether the more-likely-than-not recognition threshold is met for a tax position is a matter of judgment based on the individual facts and circumstances of that position evaluated in light of all available evidence.

The Company recognizes interest and penalties related to uncertain tax positions in Income tax (provision) benefit in the consolidated statements of operations.

Other Accounting Policies

Consolidation Principles

The consolidated financial statements have been prepared in accordance with US GAAP for all periods presented and include the accounts of the Company and its majority owned subsidiaries over which the Company exercises control. All intercompany accounts and transactions have been eliminated in consolidation.

Estimates and Assumptions

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. Significant estimates pertain to impairments of goodwill, intangible assets and other long-lived assets, purchase price allocations, restructuring costs and other (charges) gains, net, income taxes, pension and other postretirement benefits, asset retirement obligations, environmental liabilities and loss contingencies, among others. Actual results could differ from those estimates.

Purchase Accounting

The Company recognizes the identifiable tangible and intangible assets acquired and liabilities assumed based on their estimated fair values as of the acquisition date. The excess of purchase price over the aggregate fair values is recorded as goodwill. Intangible assets are valued using the relief from royalty, multi-period excess earnings and discounted cash flow methodologies, which are considered Level 3 measurements. The relief from royalty method estimates the Company's theoretical royalty savings from ownership of the intangible asset. Key assumptions used in this method include discount rates, royalty rates, growth rates, sales projections and terminal value rates. Key assumptions used in the multi-period excess earnings method include discount rates, retention rates, growth rates, sales projections, expense projections and contributory asset charges. Key assumptions used in the discounted cash flow valuation model include discount rates, growth rates, tax rates, cash flow projections and terminal value rates. All of these methodologies require significant management judgment and, therefore, are susceptible to change. The Company calculates the fair value of the identifiable tangible and intangible assets acquired and liabilities assumed to allocate the purchase price at the acquisition date. The Company may use the assistance of third-party valuation consultants.

Fair Value Measurements

The Company determines fair value based on the price that would be received from selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. When determining the fair value measurements for assets and liabilities required to be recorded at fair value, the Company considers assumptions that market participants would use when pricing the asset or liability. Market participant assumptions are categorized by a three-tiered fair value hierarchy which prioritizes the inputs used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurement) and the lowest priority to unobservable inputs (Level 3 measurement). This hierarchy requires entities to maximize the use of observable inputs and minimize the use of unobservable inputs. If a financial instrument uses inputs that fall in different levels of the hierarchy, the instrument will be categorized based upon the lowest level of input that is significant to the fair value calculation. Valuations for fund investments, such as common/collective trusts, registered investment companies and short-term investment funds, which do not have readily determinable fair values, are typically estimated using a net asset value provided by a third party as a practical expedient.

The levels of inputs used to measure fair value are as follows:

Level 1 - unadjusted quoted prices for identical assets or liabilities in active markets accessible by the Company

Level 2 - inputs that are observable in the marketplace other than those inputs classified as Level 1

Level 3 - inputs that are unobservable in the marketplace and significant to the valuation

Cash and Cash Equivalents

All highly liquid investments with original maturities of three months or less are considered cash equivalents.

Inventories

Inventories, including stores and supplies, are stated at the lower of cost and net realizable value. Cost for inventories is determined using the first-in, first-out ("FIFO") method. Cost includes raw materials, direct labor and manufacturing overhead. Cost for stores and supplies is primarily determined by the average cost method.

Investments in Affiliates

Investments in equity securities where the Company can exercise significant influence over operating and financial policies of an investee, which is generally considered when an investor owns 20% or more of the voting stock of an investee, are accounted for under the equity method of accounting. Investments in equity securities where the Company does not exercise significant influence are accounted for at fair value or, if such investments do not have a readily determinable fair value, an election may be made to measure them at cost after considering observable price changes for similar instruments, minus impairment, if any. The Company determined it cannot exercise significant influence over certain investments where the Company owns greater than a 20% interest due to local government investment in and influence over these entities, limitations on the Company's involvement in the day-to-day operations and the present inability of the entities to provide timely financial information prepared in accordance with US GAAP. Further, these investments were determined not to have a readily determinable fair value. Accordingly, these investments are accounted for using the alternative measure described above.

In certain instances, the financial information of the Company's equity investees is not available on a timely basis. Accordingly, the Company records its proportional share of the investee's earnings or losses on a consistent lag of no more than one quarter.

When required to assess the recoverability of its investments in affiliates, the Company estimates fair value using a discounted cash flow model. The Company may engage third-party valuation consultants to assist with this process.

Property, Plant and Equipment, Net

Land is recorded at historical cost. Buildings, machinery and equipment, including capitalized interest, and property under finance lease agreements, are recorded at cost less accumulated depreciation. The Company records depreciation and amortization in its consolidated statements of operations as either Cost of sales, Selling, general and administrative expenses or Research and development expenses consistent with the utilization of the underlying assets. Depreciation is calculated on a straight-line basis over the following estimated useful lives of depreciable assets:

Land improvements	20 years
Buildings and improvements	30 years
Machinery and equipment	20 years

Leasehold improvements are amortized over 10 years or the remaining life of the respective lease, whichever is shorter.

Accelerated depreciation is recorded when the estimated useful life is shortened. Ordinary repair and maintenance costs, including costs for planned maintenance turnarounds, that do not extend the useful life of the asset are charged to earnings as incurred. Fully depreciated assets are retained in property and depreciation accounts until sold or otherwise disposed. In the case of disposals, assets and related depreciation are removed from the accounts, and the net amounts, less proceeds from disposal, are included in earnings.

The Company assesses the recoverability of the carrying amount of its property, plant and equipment whenever events or changes in circumstances indicate that the carrying amount of an asset or asset group may not be recoverable. An impairment

loss would be assessed when estimated undiscounted future cash flows from the operation and disposition of the asset group are less than the carrying amount of the asset group. Asset groups have identifiable cash flows and are largely independent of other asset groups. Measurement of an impairment loss is based on the excess of the carrying amount of the asset group over its fair value. The Company calculates the fair value using a discounted cash flow model incorporating discount rates commensurate with the risks involved for the asset group, which is classified as a Level 3 fair value measurement. 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 involve significant judgment and are based on management's estimate of current and forecasted market conditions and cost structure. Impairment losses are generally recorded in Other (charges) gains, net in the consolidated statements of operations.

Definite-lived Intangible Assets

Customer-related intangible assets and other intangible assets with finite lives are amortized on a straight-line basis over their estimated useful lives, which range from three to 30 years.

Derivative and Hedging Instruments

The Company manages its exposures to interest rates, foreign exchange rates and commodity prices through a risk management program that includes the use of derivative financial instruments. The Company does not use derivative financial instruments for speculative trading purposes. The fair value of derivative instruments other than foreign currency forwards and swaps is recorded as an asset or liability on a net basis at the balance sheet date.

- ***Interest Rate Risk Management***

The Company entered into a forward-starting interest rate swap to mitigate the risk of variability in the benchmark interest rate for an expected debt issuance in 2021. The interest rate swap agreement is designated as a cash flow hedge. Accordingly, to the extent the cash flow hedge is effective, changes in the fair value of the interest rate swap are included in gain (loss) from cash flow hedges within Accumulated other comprehensive income (loss), net in the consolidated balance sheets. Hedge accounting is discontinued when the interest rate swap is no longer effective in offsetting cash flows attributable to the hedged risk, the interest rate swap expires or the cash flow hedge is dedesignated because it is no longer probable that the forecasted transaction will occur according to the original strategy.

- ***Foreign Exchange Risk Management***

Certain subsidiaries of the Company have assets and liabilities denominated in currencies other than their respective functional currencies, which creates foreign exchange risk. The Company also is exposed to foreign currency fluctuations on transactions with third-party entities as well as intercompany transactions. The Company minimizes its exposure to foreign currency fluctuations by entering into foreign currency forwards and swaps. These foreign currency forwards and swaps are not designated as hedges. Gains and losses on foreign currency forwards and swaps entered into to offset foreign exchange impacts on intercompany balances are included in Other income (expense), net in the consolidated statements of operations. Gains and losses on foreign currency forwards and swaps entered into to offset foreign exchange impacts on all other assets and liabilities are included in Foreign exchange gain (loss), net in the consolidated statements of operations.

The Company uses non-derivative financial instruments that may give rise to foreign currency transaction gains or losses to hedge the foreign currency exposure of net investments in foreign operations. Accordingly, the effective portion of gains and losses from remeasurement of the non-derivative financial instrument is included in foreign currency translation within Accumulated other comprehensive income (loss), net in the consolidated balance sheets. Gains and losses are reclassified to earnings in the period the hedged investment is sold or liquidated.

The Company entered into a cross-currency swap to synthetically convert its USD borrowing to EUR borrowing in 2019. The cross-currency swap agreement is designated as a net investment hedge. Accordingly, to the extent the net investment hedge is effective, changes in the fair value of the cross-currency swap are included in foreign currency translation within Accumulated other comprehensive income (loss), net in the consolidated balance sheets. Gains and losses are reclassified to earnings in the period the hedged investment is sold or liquidated.

- ***Commodity Risk Management***

The Company has exposure to the prices of commodities in its procurement of certain raw materials. The Company manages its exposure to commodity risk primarily through the use of long-term supply agreements, multi-year purchasing and sales agreements and forward purchase contracts. The Company regularly assesses its practice of using forward purchase contracts

and other raw material hedging instruments in accordance with changes in economic conditions. Forward purchases and swap contracts for raw materials are principally settled through physical delivery of the commodity. For qualifying contracts, the Company has elected to apply the normal purchases and normal sales exception based on the probability at the inception and throughout the term of the contract that the Company would not net settle and the transaction would result in the physical delivery of the commodity. Accordingly, realized gains and losses on these contracts are included in the cost of the commodity upon the settlement of the contract.

The Company also uses commodity swaps to hedge the risk of fluctuating price changes in certain raw materials and in which physical settlement does not occur. These commodity swaps fix the variable fee component of the price of certain commodities. All or a portion of these commodity swap agreements may be designated as cash flow hedges. Accordingly, to the extent the cash flow hedge was effective, changes in the fair value of commodity swaps are included in gain (loss) from cash flow hedges within Accumulated other comprehensive income (loss), net in the consolidated balance sheets. Gains and losses are reclassified to earnings in the period that the hedged item affected earnings.

Insurance Loss Liabilities

The Company has two wholly-owned insurance companies (the "Captives") that are used as a form of self-insurance for liability and workers compensation risks. Capitalization of the Captives is determined by regulatory guidelines. Premiums written are recognized as revenue based on policy periods. One of the Captives also insures certain third-party risks. The Captives use reinsurance arrangements to reduce their risks, however these arrangements do not relieve the Captives from their obligations to policyholders. The financial condition of the Captives' reinsurers are monitored to minimize exposure to insolvencies. However, failure of the reinsurers to honor their obligations could result in losses to the Captives.

Claim liabilities are established when sufficient information is available to indicate a specific policy is involved and the Company can reasonably estimate its liability. These liabilities are based on management estimates and periodic actuarial valuations. In addition, liabilities have been established to cover exposures for both known and unreported claims. Estimates of these liabilities are reviewed and updated regularly, however it is possible that actual results could differ significantly from the recorded liabilities.

Asset Retirement Obligations

Periodically, the Company will conclude a site no longer has an indeterminate life based on long-lived asset impairment triggering events and decisions made by the Company. Accordingly, the Company will record asset retirement obligations associated with such sites. To measure the fair value of the asset retirement obligations, the Company will use the expected present value technique, which is classified as a Level 3 fair value measurement. The expected present value technique uses a set of cash flows that represent the probability-weighted average of all possible cash flows based on the Company's judgment. The Company uses the following inputs to determine the fair value of the asset retirement obligations based on the Company's experience with fulfilling obligations of this type and the Company's knowledge of market conditions: (a) labor costs; (b) allocation of overhead costs; (c) profit on labor and overhead costs; (d) effect of inflation on estimated costs and profits; (e) risk premium for bearing the uncertainty inherent in cash flows, other than inflation; (f) time value of money represented by the risk-free interest rate commensurate with the timing of the associated cash flows; and (g) nonperformance risk relating to the liability, which includes the Company's own credit risk. The asset retirement obligations are accreted to their undiscounted values until the time at which they are expected to be settled.

The Company has identified but not recognized asset retirement obligations related to certain of its existing operating facilities. Examples of these types of obligations include demolition, decommissioning, disposal and restoration activities. Legal obligations exist in connection with the retirement of these assets upon closure of the facilities or abandonment of the existing operations. However, the Company currently plans on continuing operations at these facilities indefinitely and therefore, a reasonable estimate of fair value cannot be determined at this time. In the event the Company considers plans to abandon or cease operations at these sites, an asset retirement obligation will be reassessed at that time. If certain operating facilities were to close, the related asset retirement obligations could significantly affect the Company's results of operations and cash flows.

Deferred Financing Costs

Deferred financing costs are amortized using a method that approximates the effective interest rate method over the term of the related debt into Interest expense in the consolidated statements of operations. Upon the extinguishment of the related debt, any unamortized deferred financing costs are immediately expensed and included in Refinancing expense in the consolidated statements of operations. Upon the modification of the related debt, a portion of unamortized deferred financing costs may be immediately expensed and included in Refinancing expense in the consolidated statements of operations. Direct costs of refinancing activities are generally expensed and included in Refinancing expense in the consolidated statements of operations.

Revenue Recognition

Revenue is recognized when performance obligations under the terms of a contract with a customer are satisfied. The majority of the Company's contracts have a single performance obligation to transfer products. Accordingly, the Company recognizes revenue when title and risk of loss have been transferred to the customer, generally at the time of shipment of products. Revenue is measured as the amount of consideration the Company expects to receive in exchange for transferring products and is generally based upon a negotiated, formula, list or fixed price. The Company sells its products both directly to customers and through distributors generally under agreements with payment terms typically less than 90 days.

The Company has elected to account for shipping and handling as activities to fulfill the promise to transfer the good. As such, shipping and handling fees billed to customers in a sales transaction are recorded in Net sales and shipping and handling costs incurred are recorded in Cost of sales. The Company has elected to exclude from Net sales any value add, sales and other taxes which it collects concurrent with revenue-producing activities.

- ***Contract Estimates***

The nature of certain of the Company's contracts gives rise to variable consideration, which may be constrained, including retrospective volume-based rebates to certain customers. The Company issues retrospective volume-based rebates to customers when they purchase a certain volume level, and the rebates are applied retroactively to prior purchases. The Company also issues prospective volume-based rebates to customers when they purchase a certain volume level, and the rebates are applied to future purchases. Prospective volume-based rebates represent a material right within the contract and therefore are considered to be separate performance obligations. For both retrospective and prospective volume-based rebates, the Company estimates the level of volumes based on anticipated purchases at the beginning of the period and records a rebate accrual for each purchase toward the requisite rebate volume. These estimated rebates are included in the transaction price of the Company's contracts with customers as a reduction to Net sales and are included in Current Other liabilities in the consolidated balance sheets (Note 12). This methodology is consistent with the manner in which the Company historically estimated and recorded volume-based rebates.

The majority of the Company's revenue is derived from contracts (i) with an original expected length of one year or less and (ii) contracts for which it recognizes revenue at the amount in which it has the right to invoice as product is delivered. The Company has elected the practical expedient not to disclose the value of remaining performance obligations associated with these types of contracts. However, the Company has certain contracts that represent take-or-pay revenue arrangements in which the Company's performance obligations extend over multiple years. As of December 31, 2019, the Company had $585 million of remaining performance obligations related to take-or-pay contracts. The Company expects to recognize approximately $167 million of its remaining performance obligations as Net sales in 2020, $160 million in 2021, $88 million in 2022 and the balance thereafter.

The Company has certain contracts which contain performance obligations which are immaterial in the context of the contract with the customer. The Company has elected the practical expedient not to assess whether these promised goods or services are performance obligations.

- ***Contract Balances***

Contract liabilities primarily relate to advances or deposits received from the Company's customers before revenue is recognized. These amounts are recorded as deferred revenue and are included in Noncurrent Other liabilities in the consolidated balance sheets (Note 13).

The Company does not have any material contract assets as of December 31, 2019.

Research and Development

The costs of research and development are charged as an expense in the period in which they are incurred.

Management Compensation Plans

Share-based compensation expense is measured at the grant date, based on the fair value of the award, and is recognized over the participant's requisite service period. Upon termination of a participant's employment with the Company by reason of death or disability, retirement or by the Company without cause (as defined in the respective award agreements), a prorated award will generally vest on the original vesting date(s). The prorated award is calculated based on the time lapsed between the grant date and the date of termination, reduced by awards previously vested. Upon the termination of a Participant's employment with the Company for any other reason, any unvested portion of the award shall be forfeited and canceled without consideration.

- ***Restricted Stock Units ("RSUs")***

Performance-based RSUs. The Company generally grants performance-based RSUs to the Company's executive officers and certain employees annually in February. The Company may also grant performance-based RSUs to certain new employees or to employees who assume positions of increasing responsibility at the time those events occur. The fair value of the Company's performance-based RSUs with a performance condition is equal to the average of the high and low price of the Company's common stock, par value $0.0001 per share ("Common Stock"), on the grant date less the present value of the expected dividends not received during the vesting period. Outstanding performance-based RSUs generally cliff-vest three years from the date of grant. Compensation expense for performance-based RSUs is recognized over the vesting period of the respective grant on a straight-line basis. Historically, the Company recognized share-based compensation net of estimated forfeitures over the vesting period of the respective grant. Effective January 1, 2017, the Company elected to change its accounting policy to recognize forfeitures as they occur. The new forfeiture policy election was adopted using a modified retrospective approach with a cumulative effect adjustment of $1 million to Retained earnings as of January 1, 2017.

The number of performance-based RSUs that ultimately vest is dependent on one or both of the following according to the terms of the specific award agreement: the achievement of (a) internal profitability targets (performance condition) and (b) market performance targets measured by the comparison of the Company's stock performance versus a defined peer group (market condition). Based on the achievement of internal profitability targets, the ultimate number of shares of the Company's Common Stock issued will range from zero to stretch, with stretch typically defined as 200% of target. Performance-based RSUs are canceled to the extent actual results do not meet minimum internal profitability measures, as defined individually under each award.

Time-based RSUs. The Company grants non-employee Directors time-based RSUs annually that generally vest one year from the grant date. The Company also grants time-based RSUs to the Company's executives and certain employees that generally vest ratably over three years. The fair value of the time-based RSUs is equal to the average of the high and low price of the Company's Common Stock on the grant date less the present value of the expected dividends not received during the vesting period. Compensation expense for time-based RSUs is recognized over the vesting period of the respective grant on a straight-line basis.

Upon the vesting of RSUs, the Company withholds a portion of the earned units to cover minimum statutory income and employment taxes and remits the net shares to an individual brokerage account. Authorized shares of the Company's Common Stock, or shares held in treasury from repurchases, are used to settle the RSUs.

Under the 2009 Global Incentive Plan, as amended ("2009 GIP") and the 2018 Global Incentive Plan ("2018 GIP"), the Company may not grant RSUs with the right to participate in dividends or dividend equivalents prior to vesting.

Leases

The Company leases certain real estate, fleet assets, warehouses and equipment. Leases with an initial term of 12 months or less ("short-term leases") are not recorded on the consolidated balance sheet; the Company recognizes lease expense for these leases on a straight-line basis over the lease term. The Company determines if an arrangement is a lease at inception.

Operating lease right-of-use ("ROU") assets and operating lease liabilities are recognized based on the present value of lease payments over the lease term at commencement date. Because most of the Company's leases do not provide an implicit rate of return, the Company uses its imputed collateralized rate based on the information available at commencement date in determining the present value of lease payments. The estimated rate is based on a risk-free rate plus a risk-adjusted margin. Operating lease ROU assets are comprised of the lease liability plus prepaid rents and are reduced by lease incentives or deferred rents. The Company has lease agreements with non-lease components which are not bifurcated.

Most leases include one or more options to renew, with renewal terms that can extend the lease term from one to 30 years. The exercise of a lease renewal option typically occurs at the discretion of both parties. Certain leases also include options to purchase the leased property. For purposes of calculating operating lease liabilities, lease terms are deemed not to include options to extend the lease termination until it is reasonably certain that the Company will exercise that option. Certain of the Company's lease agreements include payments adjusted periodically for inflation based on the consumer price index. The Company's lease agreements do not contain any material residual value guarantees or material restrictive covenants.

See Note 3 for additional information regarding the adoption of Accounting Standards Update ("ASU") 2016-02, *Leases.*

Functional and Reporting Currencies

For the Company's international operations where the functional currency is other than the US dollar, assets and liabilities are translated using period-end exchange rates, while the statement of operations amounts are translated using the average exchange rates for the respective period. Differences arising from the translation of assets and liabilities in comparison with the translation of the previous periods or from initial recognition during the period are included as a separate component of Accumulated other comprehensive income (loss), net.

3. Recent Accounting Pronouncements

The following table provides a brief description of recent ASUs issued by the Financial Accounting Standards Board ("FASB"):

Standard	Description	Effective Date	Effect on the Financial Statements or Other Significant Matters
In December 2019, the FASB issued ASU 2019-12, Simplifying the Accounting for Income Taxes.	The new guidance simplifies the accounting for income taxes by removing certain exceptions to the general principles in FASB Accounting Standards Codification ("ASC") Topic 740, Income Taxes ("Topic 740"). The guidance also clarifies and amends existing guidance under Topic 740.	January 1, 2021. Early adoption is permitted.	The Company has completed its assessment and will adopt the new guidance effective January 1, 2021. The adoption of the new guidance will not have a material impact to the Company.
In August 2018, the FASB issued ASU 2018-14, Disclosure Framework - Changes to the Disclosure Requirements for Defined Benefit Plans.	The new guidance modifies the disclosure requirements for employers that sponsor defined benefit pension or other postretirement plans by removing disclosures that no longer are considered cost beneficial, clarifying the specific requirements of disclosures and adding disclosure requirements identified as relevant.	January 1, 2020. Early adoption is permitted.	The Company adopted the new guidance effective January 1, 2019. The adoption of the new guidance did not have a material impact to the Company's disclosures.
In February 2018, the FASB issued ASU 2018-02, Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income.	The new guidance allows a reclassification from accumulated other comprehensive income to retained earnings for stranded tax effects resulting from the Tax Cuts and Jobs Act and will improve the usefulness of information reported to financial statement users.	January 1, 2019.	The Company adopted the new guidance effective January 1, 2019. The adoption of the new guidance did not have a material impact to the Company.
In June 2016, the FASB issued ASU 2016-13, Measurement of Credit Losses on Financial Instruments.	The new guidance requires financial instruments measured at amortized cost basis to be presented at the net amount expected to be collected through application of the current expected credit losses model. The model requires an estimate of the credit losses expected over the life of an exposure or pool of exposures. The income statement will reflect the measurement of credit losses for newly recognized financial assets, as well as the expected increases or decreases of expected credit losses that have taken place during the period.	January 1, 2020. Early adoption is permitted.	The Company has completed its assessment and will adopt the new guidance effective January 1, 2020. The adoption of the new guidance will not have a material impact to the Company.
In February 2016, the FASB issued ASU 2016-02, Leases. Since that date, the FASB has issued additional ASUs clarifying certain aspects of ASU 2016-02.	The new guidance supersedes the lease guidance under FASB ASC Topic 840, Leases, resulting in the creation of FASB ASC Topic 842, Leases. The guidance requires a lessee to recognize in the statement of financial position a liability to make lease payments and a right-of-use asset representing its right to use the underlying asset for the lease term for both finance and operating leases. Subsequent guidance issued after February 2016 did not change the core principle of ASU 2016-02.	January 1, 2019.	The Company adopted the new guidance effective January 1, 2019, using the modified retrospective transition method, which did not require the Company to adjust comparative periods. See the *Adoption of ASU 2016-02* section below for additional information.

Adoption of ASU 2016-02, Leases

The Company adopted ASU 2016-02 as of January 1, 2019, using the modified retrospective approach. Prior period amounts have not been adjusted. In addition, the Company elected the following practical expedients:

- the package of practical expedients permitted under the transition guidance within the new standard, which among other things, allowed the Company to carry forward the historical lease classification;
- the land easements practical expedient, which allowed the Company to carry forward the accounting treatment for land easements on existing agreements;
- the short-term lease practical expedient, which allowed the Company to exclude short-term leases from recognition in the consolidated balance sheets; and
- the bifurcation of lease and non-lease components practical expedient, which did not require the Company to bifurcate lease and non-lease components for all classes of assets.

The adoption of this accounting standard resulted in the recording of Operating lease ROU assets and Operating lease liabilities of $223 million and $240 million, respectively, as of January 1, 2019. The difference between the operating lease assets and liabilities was recorded as an adjustment to Other liabilities, primarily related to deferred rent (lease incentives). The adoption of ASU 2016-02 had no impact on Retained earnings.

See Note 2 and Note 21 for additional information.

4. Acquisitions, Dispositions and Plant Closures

Plant Closures

- ***Ocotlán, Mexico***

On June 28, 2019, the Company announced it was consolidating its global acetate manufacturing capabilities with the closure of its acetate flake manufacturing operations in Ocotlán, Mexico. In June 2018, the Company initiated the closure of its acetate tow manufacturing unit at the same location. The Ocotlán, Mexico operations are included in the Company's Acetate Tow segment.

The exit and shutdown costs related to the Ocotlán, Mexico closure were as follows:

	Year Ended December 31,	
	2019	2018
	(In $ millions)	
Asset impairments[1]	83	—
Restructuring[1]	4	2
Accelerated depreciation expense	9	15
Loss on disposition of assets, net	1	1
Other	7 [2]	1
Total	104	19

(1) Included in Other (charges) gains, net in the consolidated statements of operations (Note 18).

(2) Primarily related to inventory write-offs.

The Company expects to incur additional exit and shutdown costs related to Ocotlán, Mexico of approximately $12 million through the first quarter of 2021.

5. Ventures and Variable Interest Entities

Consolidated Variable Interest Entities

The Company has a joint venture, Fairway Methanol LLC ("Fairway"), with Mitsui & Co., Ltd., of Tokyo, Japan ("Mitsui"), in which the Company owns 50% of Fairway, for the production of methanol at the Company's integrated chemical plant in Clear Lake, Texas. The methanol unit utilizes natural gas in the US Gulf Coast region as a feedstock and benefits from the existing infrastructure at the Company's Clear Lake facility. Both Mitsui and the Company supply their own natural gas to Fairway in exchange for methanol tolling under a cost-plus off-take arrangement.

Fairway is a variable interest entity ("VIE") in which the Company is the primary beneficiary. Under the terms of the joint venture agreements, the Company provides site services and day-to-day operations for the methanol facility. In addition, the joint venture agreements provide that the Company indemnifies Mitsui for environmental obligations that exceed a specified threshold, as well as an equity option between the partners. Accordingly, the Company consolidates the venture and records a noncontrolling interest for the share of the venture owned by Mitsui. Fairway is included in the Company's Acetyl Chain segment.

The carrying amount of the assets and liabilities associated with Fairway included in the consolidated balance sheets are as follows:

	As of December 31,	
	2019	**2018**
	(In $ millions)	
Cash and cash equivalents	57	24
Trade receivables, net - third party and affiliates	12	11
Property, plant and equipment (net of accumulated depreciation - 2019: $174; 2018: $130)	622	659
Intangible assets (net of accumulated amortization - 2019: $4; 2018: $3)	22	23
Other assets	9	5
Total assets[1]	722	722
Trade payables	24	16
Other liabilities[2]	5	4
Total debt	4	5
Deferred income taxes	4	3
Total liabilities	37	28

____

[1] Joint venture assets can only be used to settle the obligations of Fairway.

[2] Primarily represents amounts owed by Fairway to the Company for reimbursement of expenditures.

Nonconsolidated Variable Interest Entities

The Company holds variable interests in entities that supply certain raw materials and services to the Company. The variable interests primarily relate to cost-plus contractual arrangements with the suppliers and recovery of capital expenditures for certain plant assets plus a rate of return on such assets. Liabilities for such supplier recoveries of capital expenditures have been recorded as finance lease obligations. The entities are not consolidated because the Company is not the primary beneficiary of the entities as it does not have the power to direct the activities of the entities that most significantly impact the entities' economic performance. The Company's maximum exposure to loss as a result of its involvement with these VIEs as of December 31, 2019 relates primarily to the recovery of capital expenditures for certain property, plant and equipment.

The carrying amount of the assets and liabilities associated with the obligations to nonconsolidated VIEs, as well as the maximum exposure to loss relating to these nonconsolidated VIEs are as follows:

	As of December 31,	
	2019	2018
	(In $ millions)	
Property, plant and equipment, net	31	42
Trade payables	30	27
Current installments of long-term debt	16	14
Long-term debt	41	58
Total liabilities	87	99
Maximum exposure to loss	113	134

The difference between the total liabilities associated with obligations to nonconsolidated VIEs and the maximum exposure to loss primarily represents take-or-pay obligations for services included in the Company's unconditional purchase obligations (Note 24).

6. Marketable Securities

The Company holds securities as of December 31, 2019 and 2018 of $40 million and $31 million, respectively, that were recorded at fair value.

7. Receivables, Net

	As of December 31,	
	2019	2018
	(In $ millions)	
Trade receivables - third party and affiliates	859	1,027
Allowance for doubtful accounts - third party and affiliates	(9)	(10)
Trade receivables - third party and affiliates, net	850	1,017

	As of December 31,	
	2019	2018
	(In $ millions)	
Non-income taxes receivable	203	176
Reinsurance receivables	16	14
Income taxes receivable	27	26
Other	85	85
Non-trade receivables, net	331	301

8. Inventories

	As of December 31,	
	2019	2018
	(In $ millions)	
Finished goods	718	697
Work-in-process	76	70
Raw materials and supplies	244	279
Total	1,038	1,046

9. Investments in Affiliates

Entities in which the Company has an investment accounted for under the equity method of accounting or equity investments without readily determinable fair values are considered affiliates; any transactions or balances with such companies are considered affiliate transactions.

Equity Method

Equity method investments and ownership interests by business segment are as follows:

	Ownership as of December 31,		Carrying Value as of December 31,		Share of Earnings (Loss) Year Ended December 31,			Dividends and Other Distributions Year Ended December 31,		
	2019	2018	2019	2018	2019	2018	2017	2019	2018	2017
	(In percentages)		(In $ millions)							
Engineered Materials										
Ibn Sina	25	25	164	164	68	96	58	(69)	(112)	(1)
InfraServ GmbH & Co. Hoechst KG[1][3]	32	32	116	129	14	20	19	(17)	(25)	(26)
Fortron Industries LLC	50	50	133	122	18	14	17	(7)	(3)	(6)
Korea Engineering Plastics Co., Ltd.	50	50	146	150	27	29	25	(28)	(27)	(25)
Polyplastics Co., Ltd.	45	45	192	196	44	64	57	(39)	(45)	(64)
Sherbrooke Capital Health and Wellness, L.P.[2]	—	10	—	2	—	—	1	—	—	—
Other Activities[3]										
InfraServ GmbH & Co. Gendorf KG[4]	30	30	38	36	8	7	4	(5)	(5)	(5)
YNCORIS GmbH & Co. KG[4][5]	22	22	16	16	3	3	2	(3)	(4)	(4)
Total			805	815	182	233	183	(168)	(221)	(131)

____

[1] InfraServ GmbH & Co. Hoechst KG is owned primarily by an entity included in the Company's Engineered Materials segment. The Company's Acetyl Chain segment also holds an ownership percentage.

[2] The Company accounted for its ownership interest in Sherbrooke Capital Health and Wellness, L.P. ("Sherbrooke") under the equity method of accounting because the Company was able to exercise significant influence.

[3] InfraServ real estate service companies ("InfraServ Entities") own and operate sites in Frankfurt am Main-Hoechst, Gendorf and Knapsack, Germany. The InfraServ Entities were created to own land and property and to provide various technical and administrative services at these manufacturing locations.

[4] See Note 18 for further information.

[5] Formerly known as InfraServ GmbH & Co. Knapsack KG.

Because financial information for Ibn Sina is not available to the Company on a timely basis, the Company's proportional share is reported on a one quarter lag. Accordingly, summarized financial information for Ibn Sina is as follows:

	As of September 30,	
	2019	2018
	(In $ millions)	
Current assets	253	448
Noncurrent assets	871	825
Current liabilities	148	200
Noncurrent liabilities	433	450

	Twelve Months Ended September 30,		
	2019	2018	2017
	(In $ millions)		
Revenues	726	913	759
Gross profit	299	396	306
Net income	227	322	256

Equity Investments Without Readily Determinable Fair Values

Equity investments without readily determinable fair values and ownership interests by business segment are as follows:

	Ownership as of December 31,		Carrying Value as of December 31,		Dividend Income for the Year Ended December 31,		
	2019	2018	2019	2018	2019	2018	2017
	(In percentages)		(In $ millions)				
Acetate Tow							
Kunming Cellulose Fibers Co. Ltd.	30	30	14	14	11	12	12
Nantong Cellulose Fibers Co. Ltd.	31	31	121	115	79	87	81
Zhuhai Cellulose Fibers Co. Ltd.	30	30	30	30	22	13	14
Other Activities							
InfraServ GmbH & Co. Wiesbaden KG	8	8	5	5	1	1	1
Other			—	—	—	4	—
Total			170	164	113	117	108

Transactions with Affiliates

The Company owns manufacturing facilities at the InfraServ location in Frankfurt am Main-Hoechst, Germany and has contractual agreements with the InfraServ Entities and certain other equity affiliates and investees accounted for at cost less impairment, adjusted for observable price changes for an identical or similar investment of the same issuer. These contractual agreements primarily relate to energy purchases, site services and purchases of product for consumption and resale.

Transactions and balances with affiliates are as follows:

	Year Ended December 31,		
	2019	2018	2017
	(In $ millions)		
Purchases	291	305	250
Sales and other credits	102	117	77
Interest expense	1	1	—

	As of December 31,	
	2019	2018
	(In $ millions)	
Trade receivables	1	—
Non-trade receivables	35	29
Total due from affiliates	36	29
Short-term borrowings[1]	67	50
Trade payables	43	46
Current Other liabilities	10	11
Total due to affiliates	120	107

[1] The Company has agreements with certain affiliates whereby excess affiliate cash is lent to and managed by the Company at variable interest rates governed by those agreements.

10. Property, Plant and Equipment, Net

	As of December 31,	
	2019	2018
	(In $ millions)	
Land	46	46
Land improvements	78	77
Buildings and building improvements	775	760
Machinery and equipment	5,316	5,223
Construction in progress	455	416
Gross asset value	6,670	6,522
Accumulated depreciation	(2,957)	(2,803)
Net book value	3,713	3,719

Assets under finance leases, net, included in the amounts above are as follows:

	As of December 31,	
	2019	2018
	(In $ millions)	
Buildings	13	14
Machinery and equipment	272	279
Accumulated depreciation	(202)	(188)
Net book value	83	105

Capitalized interest costs and depreciation expense are as follows:

	Year Ended December 31,		
	2019	2018	2017
	(In $ millions)		
Capitalized interest	8	10	6
Depreciation expense	327	319	285

During 2019 and 2017, certain long-lived assets were impaired (Note 18). No long-lived assets were impaired during 2018.

11. Goodwill and Intangible Assets, Net

Goodwill

	Engineered Materials	Acetate Tow	Acetyl Chain	Total
	(In $ millions)			
As of December 31, 2017	643	149	211	1,003
Acquisitions	84 [1]	—	—	84
Exchange rate changes	(20)	(1)	(9)	(30)
As of December 31, 2018	707	148	202	1,057
Acquisitions	29 [2]	—	—	29
Exchange rate changes	(9)	—	(3)	(12)
As of December 31, 2019[3]	727	148	199	1,074

____

[1] Represents goodwill related to the acquisition of Omni Plastics, L.L.C. ("Omni Plastics").

[2] Represents goodwill related to the acquisition of Next Polymers Ltd. ("Next Polymers").

[3] There were $0 million of accumulated impairment losses as of December 31, 2019.

In connection with the Company's annual goodwill impairment assessment, the Company did not record an impairment loss to goodwill during the nine months ended September 30, 2019, as the estimated fair value for each of the Company's reporting units exceeded the carrying amount of the underlying assets by a substantial margin (Note 2). No events or changes in circumstances occurred during the three months ended December 31, 2019 that indicated the carrying amount of the assets may not be fully recoverable. Accordingly, no additional impairment analysis was performed during that period.

Intangible Assets, Net

Finite-lived intangible assets are as follows:

	Licenses	Customer-Related Intangible Assets	Developed Technology	Covenants Not to Compete and Other	Total
			(In $ millions)		
Gross Asset Value					
As of December 31, 2017	38	640	45	54	777
Acquisitions	—	32	—	3	35 [(1)]
Renewals	6 [(2)]	—	—	—	6
Exchange rate changes	(2)	(21)	(1)	(1)	(25)
As of December 31, 2018	42	651	44	56	793
Acquisitions	—	25	—	—	25 [(3)]
Exchange rate changes	—	(9)	—	—	(9)
As of December 31, 2019	42	667	44	56	809
Accumulated Amortization					
As of December 31, 2017	(33)	(496)	(30)	(32)	(591)
Amortization	(2)	(16)	(3)	(3)	(24)
Exchange rate changes	2	17	1	—	20
As of December 31, 2018	(33)	(495)	(32)	(35)	(595)
Amortization	(2)	(16)	(3)	(3)	(24)
Exchange rate changes	—	7	—	—	7
As of December 31, 2019	(35)	(504)	(35)	(38)	(612)
Net book value	7	163	9	18	197

____

[(1)] Primarily related to intangible assets acquired from Omni Plastics during the year ended December 31, 2018, with a weighted average amortization period of 11 years.

[(2)] During the year ended December 31, 2018, the Company extended a research and development technology agreement license, which is being amortized over a period of 5 years.

[(3)] Related to intangible assets acquired from Next Polymers during the year ended December 31, 2019, with a weighted average amortization period of 13 years.

Indefinite-lived intangible assets are as follows:

	Trademarks and Trade Names
	(In $ millions)
As of December 31, 2017	115
Acquisitions	—
Exchange rate changes	(3)
As of December 31, 2018	112
Acquisitions	4 [(1)]
Impairment loss (Note 2)	—
Exchange rate changes	(1)
As of December 31, 2019	115

____

[(1)] Related to indefinite-lived intangible assets acquired from Next Polymers.

In connection with the Company's annual indefinite-lived intangible assets impairment assessment, the Company did not record an impairment loss to indefinite-lived intangible assets during the nine months ended September 30, 2019, as the estimated fair value for each of the Company's indefinite-lived intangible assets exceeded the carrying amount of the underlying asset by a substantial margin (Note 2). No events or changes in circumstances occurred during the three months ended December 31, 2019 that indicated the carrying amount of the assets may not be fully recoverable. Accordingly, no additional impairment analysis was performed during that period.

During the year ended December 31, 2019, the Company did not renew or extend any intangible assets.

Estimated amortization expense for the succeeding five fiscal years is as follows:

	(In $ millions)
2020	21
2021	21
2022	19
2023	17
2024	16

12. Current Other Liabilities

	As of December 31,	
	2019	2018
	(In $ millions)	
Asset retirement obligations	6	3
Benefit obligations (Note 15)	28	30
Customer rebates	63	76
Derivatives (Note 22)	8	7
Environmental (Note 16)	12	20
Insurance	6	4
Interest	29	21
Legal (Note 24)	105	4
Operating leases (Note 21)	29	—
Restructuring (Note 18)	13	4
Salaries and benefits	89	119
Sales and use tax/foreign withholding tax payable	35	22
Other	38	33
Total	461	343

13. Noncurrent Other Liabilities

	As of December 31,	
	2019	2018
	(In $ millions)	
Asset retirement obligations	13	13
Deferred proceeds	43	44
Deferred revenue	6	7
Derivatives (Note 22)	50	11
Environmental (Note 16)	49	49
Insurance	34	37
Other	28	47
Total	223	208

Changes in asset retirement obligations are as follows:

	Year Ended December 31,		
	2019	2018	2017
	(In $ millions)		
Balance at beginning of year	16	26	29
Additions[1]	5	2	—
Accretion	—	—	1
Payments	(3)	(4)	(5)
Revisions to cash flow estimates[2]	1	(8)	1
Balance at end of year	19	16	26

(1) Primarily relates to sites which management no longer considers to have an indeterminate life.

(2) Primarily relates to revisions to the estimated cost and timing of future obligations.

Included in the asset retirement obligations for the year ended December 31, 2017 was $10 million related to indemnifications received for a business acquired in 2005. The asset retirement obligation related to the indemnifications was completed during 2018.

14. Debt

	As of December 31,	
	2019	2018
	(In $ millions)	
Short-Term Borrowings and Current Installments of Long-Term Debt - Third Party and Affiliates		
Current installments of long-term debt	28	367
Short-term borrowings, including amounts due to affiliates[1]	81	77
Revolving credit facility[2]	272	40
Accounts receivable securitization facility[3]	115	77
Total	496	561

(1) The weighted average interest rate was 2.3% and 3.2% as of December 31, 2019 and 2018, respectively.

(2) The weighted average interest rate was 1.6% and 6.0% as of December 31, 2019 and 2018, respectively.

(3) The weighted average interest rate was 2.4% and 3.1% as of December 31, 2019 and 2018, respectively.

	As of December 31,	
	2019	2018
	(In $ millions)	
Long-Term Debt		
Senior unsecured notes due 2019, interest rate of 3.250%	—	343
Senior unsecured notes due 2021, interest rate of 5.875%	400	400
Senior unsecured notes due 2022, interest rate of 4.625%	500	500
Senior unsecured notes due 2023, interest rate of 1.125%	841	857
Senior unsecured notes due 2024, interest rate of 3.500%	499	—
Senior unsecured notes due 2025, interest rate of 1.250%	337	343
Senior unsecured notes due 2027, interest rate of 2.125%	558	568
Pollution control and industrial revenue bonds due at various dates through 2030, interest rates ranging from 4.05% to 5.00%	167	167
Nilit Group ("Nilit") bank loans due at various dates through 2026[1]	9	10
Obligations under finance leases due at various dates through 2054	144	167
Subtotal	3,455	3,355
Unamortized debt issuance costs[2]	(18)	(18)
Current installments of long-term debt	(28)	(367)
Total	3,409	2,970

____

(1) The weighted average interest rate was 1.3% and 1.3% as of December 31, 2019 and 2018, respectively.

(2) Related to the Company's long-term debt, excluding obligations under finance leases.

Senior Credit Facilities

On January 7, 2019, Celanese, Celanese US and certain subsidiary borrowers entered into a new senior credit agreement (the "Credit Agreement") consisting of a $1.25 billion senior unsecured revolving credit facility (with a letter of credit sublimit), maturing in 2024. The Credit Agreement is guaranteed by Celanese, Celanese US and substantially all of its domestic subsidiaries ("the Subsidiary Guarantors").

The Company's debt balances and amounts available for borrowing under its senior unsecured revolving credit facility are as follows:

	As of December 31, 2019
	(In $ millions)
Revolving Credit Facility	
Borrowings outstanding[1]	272
Letters of credit issued	—
Available for borrowing[2]	978

____

(1) The Company borrowed $1.3 billion and repaid $1.1 billion under its senior unsecured revolving credit facility during the year ended December 31, 2019.

(2) The margin for borrowings under the senior unsecured revolving credit facility was 1.25% above LIBOR or EURIBOR at current Company credit ratings.

Senior Notes

The Company has outstanding senior unsecured notes, issued in public offerings registered under the Securities Act of 1933 ("Securities Act"), as amended (collectively, the "Senior Notes"). 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 May 8, 2019, Celanese US completed an offering of $500 million in principal amount of 3.500% senior unsecured notes due May 8, 2024 (the "3.500% Notes") in a public offering registered under the Securities Act. The 3.500% Notes were issued at a discount to par at a price of 99.895%, which is being amortized to Interest expense in the consolidated statement of operations over the term of the 3.500% Notes. Net proceeds from the sale of the 3.500% Notes were used to redeem in full the 3.250% senior unsecured notes due October 15, 2019 (the "3.250 Notes"), to repay $156 million of outstanding borrowings under the senior unsecured revolving credit facility and for general corporate purposes. In connection with the issuance of the 3.500% Notes, the Company entered into a cross-currency swap to effectively convert its fixed-rate US dollar denominated debt under the 3.500% Notes, including annual interest payments and the payment of principal at maturity, to fixed-rate Euro denominated debt. See Note 22 for additional information.

In November 2018, Celanese US completed an offering of €500 million in principal amount of 2.125% senior unsecured notes due March 1, 2027 (the "2.125% Notes") in a public offering registered under the Securities Act. The 2.125% Notes were issued under a base indenture dated May 6, 2011. The 2.125% Notes were issued at a discount to par at a price of 99.231%, which is being amortized to Interest expense in the consolidated statements of operations over the term of the 2.125% Notes. Net proceeds from the sale of the 2.125% Notes were used to repay $463 million of the senior unsecured term loan and for general corporate purposes.

Principal payments scheduled to be made on the Company's debt, including short-term borrowings, are as follows:

	(In $ millions)
2020	496
2021	429
2022	525
2023	859
2024	533
Thereafter	1,081
Total	3,923

Accounts Receivable Securitization Facility

The Company has a US accounts receivable securitization facility involving receivables of certain of its domestic subsidiaries of the Company transferred to a wholly-owned, "bankruptcy remote" special purpose subsidiary of the Company ("SPE"). The facility, which permits cash borrowings and letters of credit, was amended on July 8, 2019 to extend the maturity date to July 6, 2020 and modify certain events of default, limitations on concentrations of obligors and certain of the components used to calculate the SPE reserves. All of the SPE's assets have been pledged to the administrative agent in support of the SPE's obligations under the facility.

The Company's debt balances and amounts available for borrowing under its securitization facility are as follows:

	As of December 31, 2019
	(In $ millions)
Accounts Receivable Securitization Facility	
Borrowings outstanding[(1)]	115
Letters of credit issued	—
Available for borrowing	5
Total borrowing base	120
Maximum borrowing base[(2)]	120

____

(1) The Company borrowed $112 million and repaid $74 million under this facility during the year ended December 31, 2019.

(2) Outstanding accounts receivable transferred to the SPE was $161 million.

Other Financing Arrangements

In June 2018, the Company entered into a factoring agreement with a global financial institution to sell certain accounts receivable on a non-recourse basis. These transactions are treated as a sale and are accounted for as a reduction in accounts receivable because the agreement transfers effective control over and risk related to the receivables to the buyer. The Company has no continuing involvement in the transferred receivables, other than collection and administrative responsibilities and, once sold, the accounts receivable are no longer available to satisfy creditors in the event of bankruptcy. The Company de-recognized $257 million and $117 million of accounts receivable under this factoring agreement as of December 31, 2019 and 2018, respectively.

Covenants

The Company's 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. The Company is in compliance with all of the covenants related to its debt agreements as of December 31, 2019.

15. Benefit Obligations

Pension Obligations

The Company sponsors defined benefit pension plans in North America, Europe and Asia. Independent trusts or insurance companies administer the majority of these plans. Pension obligations are established for benefits payable in the form of retirement, disability and surviving dependent pensions. The commitments result from participation in defined contribution and defined benefit plans, primarily in the US. Benefits are dependent on years of service and the employee's compensation. Supplemental retirement benefits provided to certain employees are nonqualified for US tax purposes. Separate nonqualified trusts have been established for certain US nonqualified plan obligations. Pension costs under the Company's retirement plans are actuarially determined.

The Company participates in a multiemployer defined benefit plan and a multiemployer defined contribution plan in Germany covering certain employees. The Company's contributions to the multiemployer defined benefit plan are based on specified percentages of employee contributions as outlined in a works council agreement, covering all German entity employees hired prior to January 1, 2012. As of January 1, 2012, the multiemployer defined benefit pension plan described above was closed to new employees. Qualifying employees hired in Germany after December 31, 2011 are covered by a multiemployer defined contribution plan. The Company's contributions to the multiemployer defined contribution plan are based on specified percentages of employee contributions, similar to the multiemployer defined benefit plan, but at a lower rate.

Statutory regulations and the works council agreement require the contributions to fully fund the multiemployer plans. The risks of participating in the multiemployer plans are different from single-employer plans in the following aspects:

- Assets contributed to the multiemployer plan by one employer may be used to provide benefits to employees of other participating employers.
- If a participating employer stops contributing to the plan, any underfunding may be borne by the remaining participants, especially since regulations strictly enforce funding requirements.
- If the Company chooses to stop participating in the multiemployer plan, the Company may be required to pay the plan an amount based on the underfunded status of the plan, referred to as the withdrawal liability.

Based on the 2019 unaudited and 2018 audited multiemployer defined benefit plan's financial statements, the plan is 100% funded in 2019, 2018 and 2017. The number of employees covered by the Company's multiemployer defined benefit plan remained relatively stable year over year from 2017 to 2019, resulting in minimal changes to employer contributions. Participation in the German multiemployer defined benefit plan is not considered individually significant to the Company.

Contributions made by the Company to the German multiemployer plan are as follows:

	Year Ended December 31,		
	2019	2018	2017
	(In $ millions)		
Multiemployer defined benefit plan	8	8	7

Other Postretirement Obligations

Certain retired employees receive postretirement health care and life insurance benefits under plans sponsored by the Company, which has the right to modify or terminate these plans at any time. The cost for coverage is shared between the Company and the retiree. The cost of providing retiree health care and life insurance benefits is actuarially determined and accrued over the service period of the active employee group. The Company's policy is to fund benefits as claims and premiums are paid. The US postretirement health care plan was closed to new participants effective January 1, 2006.

Postemployment Obligations

The Company provides benefits to certain employees after employment but prior to retirement, including severance and disability-related benefits offered pursuant to ongoing benefit arrangements. The cost of providing postemployment benefits is actuarially determined and recorded when the obligation is probable of occurring and can be reasonably estimated.

Postemployment obligations are as follows:

	As of December 31,	
	2019	2018
	(In $ millions)	
Postemployment benefits	7	8

Defined Contribution Plans

The Company sponsors various defined contribution plans in North America, Europe and Asia covering certain employees. Employees may contribute to these plans and the Company will match these contributions in varying amounts. The Company's matching contribution to the defined contribution plans are based on specified percentages of employee contributions.

The amount of costs recognized for the Company's defined contribution plans are as follows:

	Year Ended December 31,		
	2019	2018	2017
	(In $ millions)		
Defined contribution plans	42	40	40

Summarized information on the Company's pension and postretirement benefit plans is as follows:

	Pension Benefits As of December 31,		Postretirement Benefits As of December 31,	
	2019	2018	2019	2018
	(In $ millions)			
Change in Projected Benefit Obligation				
Projected benefit obligation as of beginning of period	3,412	3,728	59	66
Service cost	9	9	—	1
Interest cost	115	104	2	2
Net actuarial (gain) loss[1]	377	(163)	8	(4)
Settlements	(3)	—	—	—
Benefits paid	(230)	(235)	(5)	(4)
Curtailments	—	(1)	—	—
Special termination benefits	1	2	—	—
Exchange rate changes	(3)	(32)	—	(2)
Other[2]	(68)	—	—	—
Projected benefit obligation as of end of period	3,610	3,412	64	59
Change in Plan Assets				
Fair value of plan assets as of beginning of period	2,915	3,251	—	—
Actual return on plan assets	467	(124)	—	—
Employer contributions	42	43	5	4
Settlements	(3)	—	—	—
Benefits paid[3]	(230)	(235)	(5)	(4)
Other[2]	(52)	—	—	—
Exchange rate changes	2	(20)	—	—
Fair value of plan assets as of end of period	3,141	2,915	—	—
Funded status as of end of period	(469)	(497)	(64)	(59)
Amounts Recognized in the Consolidated Balance Sheets Consist of:				
Noncurrent Other assets	77	30	—	—
Current Other liabilities	(23)	(24)	(4)	(5)
Benefit obligations	(523)	(503)	(60)	(54)
Net amount recognized	(469)	(497)	(64)	(59)
Amounts Recognized in Accumulated Other Comprehensive Income Consist of:				
Net actuarial (gain) loss[4]	15	8	—	—
Prior service (benefit) cost	—	—	(1)	—
Net amount recognized[5]	15	8	(1)	—

____

(1) Primarily relates to changes in discount rates.

(2) Primarily relates to lump sum offers for certain participants of the US qualified defined benefit pension plan.

(3) Includes benefit payments to nonqualified pension plans of $21 million and $22 million as of December 31, 2019 and 2018, respectively.

(4) Relates to the pension plans of the Company's equity method investments.

(5) Amount shown net of an income tax benefit of $4 million and $5 million as of December 31, 2019 and 2018, respectively, in the consolidated statements of equity (Note 17).

The percentage of US and international projected benefit obligation at the end of the period is as follows:

	Pension Benefits As of December 31,		Postretirement Benefits As of December 31,	
	2019	2018	2019	2018
	(In percentages)			
US plans	81	82	55	57
International plans	19	18	45	43
Total	100	100	100	100

The percentage of US and international fair value of plan assets at the end of the period is as follows:

	Pension Benefits As of December 31,	
	2019	2018
	(In percentages)	
US plans	87	88
International plans	13	12
Total	100	100

Pension plans with projected benefit obligations in excess of plan assets are as follows:

	As of December 31,	
	2019	2018
	(In $ millions)	
Projected benefit obligation	881	840
Fair value of plan assets	337	314

Pension plans with accumulated benefit obligations in excess of plan assets are as follows:

	As of December 31,	
	2019	2018
	(In $ millions)	
Accumulated benefit obligation	776	749
Fair value of plan assets	255	243

Other postretirement plans with accumulated postretirement benefit obligations in excess of plan assets are as follows:

	As of December 31,	
	2019	2018
	(In $ millions)	
Accumulated postretirement benefit obligation	64	58
Fair value of plan assets	—	—

The accumulated benefit obligation for all defined benefit pension plans is as follows:

	As of December 31,	
	2019	2018
	(In $ millions)	
Accumulated benefit obligation	3,584	3,390

The components of net periodic benefit cost are as follows:

	Pension Benefits Year Ended December 31,			Postretirement Benefits Year Ended December 31,		
	2019	2018	2017	2019	2018	2017
	(In $ millions)					
Service cost	9	9	9	—	1	1
Interest cost	115	104	107	2	2	1
Expected return on plan assets	(185)	(210)	(198)	—	—	—
Amortization of prior service cost / (credit)	—	—	—	—	—	(1)
Recognized actuarial (gain) loss	79	169	48	8	(4)	(2)
Curtailment (gain) loss	—	(1)	—	—	—	—
Special termination benefit	1	2	1	—	—	—
Total	19	73	(33)	10	(1)	(1)

The Company maintains nonqualified pension plans funded with nonqualified trusts for certain US employees as follows:

	As of December 31,	
	2019	2018
	(In $ millions)	
Nonqualified Trust Assets		
Marketable securities	24	31
Noncurrent Other assets, consisting of insurance contracts	35	37
Nonqualified Pension Obligations		
Current Other liabilities	20	21
Benefit obligations	219	213

(Income) expense relating to the nonqualified pension plans included in net periodic benefit cost, excluding returns on the assets held by the nonqualified trusts, is as follows:

	Year Ended December 31,		
	2019	2018	2017
	(In $ millions)		
Total	26	(3)	18

Valuation

The principal weighted average assumptions used to determine benefit obligation are as follows:

	Pension Benefits As of December 31,		Postretirement Benefits As of December 31,	
	2019	2018	2019	2018
	(In percentages)			
Discount Rate Obligations				
US plans	3.2	4.2	3.1	4.1
International plans	1.4	2.1	2.7	3.4
Combined	2.8	3.8	2.9	3.8
Rate of Compensation Increase				
US plans	N/A	N/A		
International plans	2.6	2.8		
Combined	2.6	2.8		

The principal weighted average assumptions used to determine net periodic benefit cost are as follows:

	Pension Benefits Year Ended December 31,			Postretirement Benefits Year Ended December 31,		
	2019	2018	2017	2019	2018	2017
	(In percentages)					
Discount Rate Obligations						
US plans	4.2	3.5	3.9	4.1	3.4	3.8
International plans	2.1	2.1	2.1	3.4	3.2	3.3
Combined	3.8	3.3	3.7	3.8	3.2	3.4
Discount Rate Service Cost						
US plans	3.1	1.9	1.2	4.6	3.7	4.0
International plans	2.5	2.3	2.5	3.4	3.3	3.4
Combined	2.5	2.2	2.5	3.4	2.9	2.9
Discount Rate Interest Cost						
US plans	3.9	3.1	3.3	3.8	3.0	3.1
International plans	1.8	1.7	1.7	3.2	2.9	2.9
Combined	3.5	2.9	3.1	3.5	2.9	2.9
Expected Return on Plan Assets						
US plans	6.7	6.8	7.5			
International plans	5.6	5.9	5.9			
Combined	6.5	6.7	7.3			
Rate of Compensation Increase						
US plans	N/A	N/A	N/A			
International plans	2.8	2.8	2.8			
Combined	2.8	2.8	2.8			
Interest Crediting Rate						
US plans	3.0	2.8	2.3			
International plans	N/A	N/A	N/A			
Combined	3.0	2.8	2.3			

The Company's health care cost trend assumptions for US postretirement medical plan's net periodic benefit cost are as follows:

	As of December 31,		
	2019	2018	2017
	(In percentages, except year)		
Health care cost trend rate assumed for next year	8.0	8.5	9.0
Health care cost trend ultimate rate	5.0	5.0	5.0
Health care cost trend ultimate rate year	2026	2026	2026

Plan Assets

The weighted average target asset allocations for the Company's pension plans in 2019 are as follows:

	US Plans	International Plans
	(In percentages)	
Bonds - domestic to plans	80	58
Equities - domestic to plans	10	15
Equities - international to plans	10	—
Other	—	27
Total	100	100

On average, the actual return on the US qualified defined pension plans' assets over the long-term (20 years) has exceeded the expected long-term rate of asset return assumption. The US qualified defined benefit plans' actual return on assets for the year ended December 31, 2019 was 16.6% versus an expected long-term rate of asset return assumption of 6.7%. The expected long-term rate of asset return assumption used to determine 2020 net periodic benefit cost is 6.7% for the US qualified defined benefit plans.

The Company's defined benefit plan assets are measured at fair value on a recurring basis (Note 2) as follows:

Cash and Cash Equivalents: Foreign and domestic currencies as well as short term securities are valued at cost plus accrued interest, which approximates fair value.

Equity securities, treasuries and corporate debt: Valued at the closing price reported on the active market in which the individual securities are traded. Automated quotes are provided by multiple pricing services and validated by the plan custodian. These securities are traded on exchanges as well as in the over the counter market.

Registered Investment Companies: Composed of various mutual funds and other investment companies whose diversified portfolio is comprised of foreign and domestic equities, fixed income securities, and short-term investments. Investments are valued at the net asset value of units held by the plan at year-end.

Common/Collective Trusts: Composed of various funds whose diversified portfolio is comprised of foreign and domestic equities, fixed income securities, and short-term investments. Investments are valued at the net asset value of units held by the plan at year-end.

Derivatives: Derivative financial instruments are valued in the market using discounted cash flow techniques. These techniques incorporate Level 1 and Level 2 fair value measurement inputs such as interest rates and foreign currency exchange rates. These market inputs are utilized in the discounted cash flow calculation considering the instrument's term, notional amount, discount rate and credit risk. Significant inputs to the derivative valuation for interest rate swaps, foreign currency forwards and swaps, and options are observable in the active markets and are classified as Level 2 in the fair value measurement hierarchy.

Mortgage backed securities: Fair value is estimated based on valuations obtained from third-party pricing services for identical or comparable assets. Mortgage Backed Securities are traded in the over the counter broker/dealer market.

Insurance contracts: Valued at contributions made, plus earnings, less participant withdrawals and administrative expenses, which approximates fair value.

Short-term investment funds: Composed of various funds whose portfolio is comprised of foreign and domestic currencies as well as short-term securities. Investments are valued at the net asset value of units held by the plan at year-end.

Other: Composed of real estate investment trust common stock valued at closing price as reported on the active market in which the individual securities are traded.

	Fair Value Measurement					
	Quoted Prices in Active Markets for Identical Assets (Level 1)		Significant Other Observable Inputs (Level 2)		Total	
	As of December 31,					
	2019	2018	2019	2018	2019	2018
	(In $ millions)					
Assets						
Cash and cash equivalents	8	2	—	—	8	2
Derivatives						
Swaps	—	—	7	3	7	3
Equity securities						
International companies	77	59	—	—	77	59
Fixed income						
Corporate debt	—	—	762	691	762	691
Treasuries, other debt	35	127	1,403	1,293	1,438	1,420
Mortgage backed securities	—	—	15	8	15	8
Insurance contracts	—	—	47	35	47	35
Other	4	4	1	1	5	5
Total investments, at fair value[1]	124	192	2,235	2,031	2,359	2,223
Liabilities						
Derivatives						
Swaps	—	—	7	3	7	3
Total liabilities	—	—	7	3	7	3
Total net assets[2]	124	192	2,228	2,028	2,352	2,220

____

(1) Certain investments that are measured at fair value using the NAV per share practical expedient have not been classified in the fair value hierarchy. Total investments, at fair value, for the year ended December 31, 2019 excludes investments in common/collective trusts, registered investment companies and short-term investment funds with fair values of $689 million, $62 million and $35 million, respectively. Total investments, at fair value, for the year ended December 31, 2018 excludes investments in common/collective trusts, registered investment companies and short-term investment funds with fair values of $595 million, $54 million and $29 million, respectively.

(2) Total net assets excludes non-financial plan receivables and payables of $29 million and $26 million, respectively, as of December 31, 2019 and $36 million and $19 million, respectively, as of December 31, 2018. Non-financial items include due to/from broker, interest receivables and accrued expenses.

Benefit obligation funding is as follows:

	Total Expected 2020
	(In $ millions)
Cash contributions to defined benefit pension plans	23
Benefit payments to nonqualified pension plans	20
Benefit payments to other postretirement benefit plans	5

The Company's estimates of its US defined benefit pension plan contributions reflect the provisions of the Pension Protection Act of 2006.

Pension and postretirement benefits expected to be paid are as follows:

	Pension Benefit Payments[1]	Company Portion of Postretirement Benefit Cost[2]
	(In $ millions)	
2020	238	5
2021	228	4
2022	225	4
2023	223	4
2024	219	4
2025-2029	1,038	17

____

(1) Payments are expected to be made primarily from plan assets.

(2) Payments are expected to be made primarily from Company assets.

16. Environmental

The Company is subject to environmental laws and regulations worldwide that impose limitations on the discharge of pollutants into the air and water, establish standards for the treatment, storage and disposal of solid and hazardous wastes, and impose record keeping and notification requirements. Failure to timely comply with these laws and regulations may expose the Company to penalties. The Company believes that it is in substantial compliance with all applicable environmental laws and regulations and engages in an ongoing process of updating its controls to mitigate compliance risks. The Company is also subject to retained environmental obligations specified in various contractual agreements arising from the divestiture of certain businesses by the Company or one of its predecessor companies.

The components of environmental remediation liabilities are as follows:

	As of December 31,	
	2019	2018
	(In $ millions)	
Demerger obligations (Note 24)	23	26
Divestiture obligations (Note 24)	12	16
Active sites	13	14
US Superfund sites	11	11
Other environmental remediation liabilities	2	2
Total	61	69

Remediation

Due to its industrial history and through retained contractual and legal obligations, the Company has the obligation to remediate specific areas on its own sites as well as on divested, demerger, orphan or US Superfund sites (as defined below). In addition, as part of the demerger agreement between the Company and Hoechst AG ("Hoechst"), a specified portion of the responsibility for environmental liabilities from a number of Hoechst divestitures was transferred to the Company (Note 24). Certain of these sites, at which the Company maintains continuing involvement, were and continue to be designated as discontinued operations when closed. The Company provides for such obligations when the event of loss is probable and reasonably estimable. The Company believes that environmental remediation costs will not have a material adverse effect on the financial position of the Company, but may have a material adverse effect on the results of operations or cash flows in any given period.

The Company did not record any insurance recoveries during 2019 or have any receivables for insurance recoveries related to these matters as of December 31, 2019.

German InfraServ Entities

The Company's InfraServ Entities (Note 9) are liable for any residual contamination and other pollution because they own the real estate on which the individual facilities operate. In addition, Hoechst, and its legal successors, as the responsible party under German public law, is liable to third parties for all environmental damage that occurred while it was still the owner of the plants and real estate (Note 24). The contribution agreements entered into in 1997 between Hoechst and the respective operating companies, as part of the divestiture of these companies, provide that the operating companies will indemnify Hoechst, and its legal successors, against environmental liabilities resulting from the transferred businesses. Additionally, the InfraServ Entities have agreed to indemnify Hoechst, and its legal successors, against any environmental liability arising out of or in connection with environmental pollution of any site.

The InfraServ partnership agreements provide that, as between the partners, each partner is responsible for any contamination caused predominantly by such partner. Any liability, which cannot be attributed to an InfraServ partner and for which no third party is responsible, is required to be borne by the InfraServ partnership. Also, under lease agreements entered into by an InfraServ partner as landlord, the tenants agreed to pay certain remediation costs on a pro rata basis.

If an InfraServ partner defaults on its respective indemnification obligations to eliminate residual contamination, the owners of the remaining participation in the InfraServ companies have agreed to fund such liabilities, subject to a number of limitations. To the extent that any liabilities are not satisfied by either the InfraServ Entities or their owners, these liabilities are to be borne by the Company in accordance with the demerger agreement. However, Hoechst, and its legal successors, will reimburse the Company for two-thirds of any such costs. Likewise, in certain circumstances the Company could be responsible for the elimination of residual contamination on several sites that were not transferred to InfraServ companies, in which case Hoechst, and its legal successors, must also reimburse the Company for two-thirds of any costs so incurred.

The Company's ownership interest and environmental liability participation percentages for such liabilities, which cannot be attributed to an InfraServ partner are as follows:

	As of December 31, 2019		
	Ownership	**Liability**	**Reserves[1]**
	(In percentages)		**(In $ millions)**
InfraServ GmbH & Co. Gendorf KG	30	10	9
InfraServ GmbH & Co. Hoechst KG	32	40	68
YNCORIS GmbH & Co. KG[2]	22	22	1

____

[1] Gross reserves maintained by the respective entity.

[2] Formerly known as InfraServ GmbH & Co. Knapsack KG.

US Superfund Sites

In the US, the Company may be subject to substantial claims brought by US federal or state regulatory agencies or private individuals pursuant to statutory authority or common law. In particular, the Company has a potential liability under the US Federal Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, and related state laws (collectively referred to as "Superfund") for investigation and cleanup costs at certain sites. At most of these sites, numerous companies, including the Company, or one of its predecessor companies, have been notified that the US Environmental Protection Agency ("EPA"), state governing bodies or private individuals consider such companies to be potentially responsible parties ("PRP") under Superfund or related laws. The proceedings relating to these sites are in various stages. The cleanup process has not been completed at most sites, and the status of the insurance coverage for some of these proceedings is uncertain. Consequently, the Company cannot accurately determine its ultimate liability for investigation or cleanup costs at these sites.

As events progress at each site for which it has been named a PRP, the Company accrues any probable and reasonably estimable liabilities. In establishing these liabilities, the Company considers the contaminants of concern, the potential impact thereof, the relationship of the contaminants of concern to its current and historic operations, its shipment of waste to a site, its percentage of total waste shipped to the site, the types of wastes involved, the conclusions of any studies, the magnitude of any remedial actions that may be necessary and the number and viability of other PRPs. Often the Company joins with other PRPs to sign joint defense agreements that settle, among PRPs, each party's percentage allocation of costs at the site. Although the ultimate liability may differ from the estimate, the Company routinely reviews the liabilities and revises the estimate, as appropriate, based on the most current information available.

One such site is the Diamond Alkali Superfund Site, which is comprised of a number of sub-sites, including the Lower Passaic River Study Area ("LPRSA"), which is the lower 17-mile stretch of the Passaic River ("Lower Passaic River Site"), and the Newark Bay Area. The Company and 70 other companies are parties to a May 2007 Administrative Order on Consent with the EPA to perform a Remedial Investigation/Feasibility Study ("RI/FS") at the Lower Passaic River Site in order to identify the levels of contaminants and potential cleanup actions, including the potential migration of contaminants between the Lower Passaic River Site and the Newark Bay Area. Work on the RI/FS is ongoing.

In March 2016, the EPA issued its final Record of Decision concerning the remediation of the lower 8.3 miles of the Lower Passaic River Site ("Lower 8.3 Miles"). Pursuant to the EPA's Record of Decision, the Lower 8.3 Miles must be dredged bank to bank and an engineered cap must be installed at an EPA estimated cost of approximately $1.4 billion. The Company owned and/or operated facilities in the vicinity of the Lower 8.3 Miles, but has found no evidence that it contributed any of the contaminants of concern to the Passaic River. On June 30, 2018, Occidental Chemical Corporation ("OCC"), the successor to the Diamond Alkali Company, sued a subsidiary of the Company and 119 other parties alleging claims for joint and several damages, contribution and declaratory relief under Section 107 and 113 of Superfund for costs to clean up the LPRSA portion of the Diamond Alkali Superfund Site, *Occidental Chemical Corporation v. 21st Century Fox America, Inc., et al*, No. 2:18-CV-11273-JLL-JAD (U.S. District Court New Jersey), alleging that each of the defendants owned or operated a facility that contributed contamination to the LPRSA. With respect to the Company, the OCC lawsuit is limited to the former Celanese facility that Essex County, New Jersey has agreed to indemnify the Company for and does not change the Company's estimated liability for LPRSA cleanup costs. The Company is vigorously defending these matters and currently believes that its ultimate allocable share of the cleanup costs with respect to the Lower Passaic River Site, estimated at less than 1%, will not be material to the Company's results of operations, cash flows or financial position.

17. Stockholders' Equity

Common Stock

The Company's Board of Directors follows a policy of declaring, subject to legally available funds, a quarterly cash dividend on each share of the Company's Common Stock, unless the Company's Board of Directors, in its sole discretion, determines otherwise. The amount available to the Company to pay cash dividends is not currently restricted by its existing senior credit facility and its indentures governing its senior unsecured notes. Any decision to declare and pay dividends in the future will be made at the discretion of the Company's Board of Directors and will depend on, among other things, the results of operations, cash requirements, financial condition, contractual restrictions and other factors that the Company's Board of Directors may deem relevant.

The Company's Board of Directors approved increases in the Company's Common Stock cash dividend rates as follows:

	Increase	Quarterly Common Stock Cash Dividend	Annual Common Stock Cash Dividend	Effective Date
	(In percentages)	(In $ per share)		
April 2017	28	0.46	1.84	May 2017
April 2018	17	0.54	2.16	May 2018
April 2019	15	0.62	2.48	May 2019

On February 5, 2020, the Company declared a quarterly cash dividend of $0.62 per share on its Common Stock amounting to $74 million. The cash dividend will be paid on February 28, 2020 to holders of record as of February 18, 2020.

Treasury Stock

The Company's Board of Directors authorizes repurchases of Common Stock from time to time. 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.

The share repurchase activity pursuant to this authorization is as follows:

	Year Ended December 31,			Total From February 2008 Through December 31, 2019
	2019	2018	2017	
Shares repurchased	9,166,267	7,933,692 [(1)]	5,436,803	56,878,978
Average purchase price per share	$ 109.10	$ 103.01	$ 91.97	$ 73.01
Amount spent on repurchased shares (in millions)	$ 1,000	$ 817	$ 500	$ 4,153
Aggregate Board of Directors repurchase authorizations during the period (in millions)	$ 1,500	$ —	$ 1,500	$ 5,366

(1) Excludes 1,700 common shares reacquired pursuant to an employee clawback agreement.

The purchase of treasury stock reduces the number of shares outstanding. The repurchased shares may be used by the Company for compensation programs utilizing the Company's stock and other corporate purposes. The Company accounts for treasury stock using the cost method and includes treasury stock as a component of stockholders' equity.

Other Comprehensive Income (Loss), Net

	Year Ended December 31,								
	2019			2018			2017		
	Gross Amount	Income Tax (Provision) Benefit	Net Amount	Gross Amount	Income Tax (Provision) Benefit	Net Amount	Gross Amount	Income Tax (Provision) Benefit	Net Amount
	(In $ millions)								
Unrealized gain (loss) on marketable securities	—	—	—	—	—	—	—	(1)	(1)
Foreign currency translation	(10)	(6)	(16)	(65)	5	(60)	162	12	174
Gain (loss) on cash flow hedges	(38)	8	(30)	(12)	2	(10)	—	(1)	(1)
Pension and postretirement benefits	(6)	(1)	(7)	1	(1)	—	7	2	9
Total	(54)	1	(53)	(76)	6	(70)	169	12	181

Adjustments to Accumulated other comprehensive income (loss), net, are as follows:

	Unrealized Gain (Loss) on Marketable Securities (Note 6)	Foreign Currency Translation	Gain (Loss) from Cash Flow Hedges (Note 22)	Pension and Postretirement Benefits (Note 15)	Accumulated Other Comprehensive Income (Loss), Net
			(In $ millions)		
As of December 31, 2016	1	(350)	3	(12)	(358)
Other comprehensive income (loss) before reclassifications	—	162	4	8	174
Amounts reclassified from accumulated other comprehensive income (loss)	—	—	(4)	(1)	(5)
Income tax (provision) benefit	(1)	12	(1)	2	12
As of December 31, 2017	—	(176)	2	(3)	(177)
Other comprehensive income (loss) before reclassifications	—	(65)	(11)	1	(75)
Amounts reclassified from accumulated other comprehensive income (loss)	—	—	(1)	—	(1)
Income tax (provision) benefit	—	5	2	(1)	6
As of December 31, 2018	—	(236)	(8)	(3)	(247)
Other comprehensive income (loss) before reclassifications	—	(10)	(36)	(6)	(52)
Amounts reclassified from accumulated other comprehensive income (loss)	—	—	(2)	—	(2)
Income tax (provision) benefit	—	(6)	8	(1)	1
As of December 31, 2019	—	(252)	(38)	(10)	(300)

18. Other (Charges) Gains, Net

	Year Ended December 31,		
	2019	2018	2017
	(In $ millions)		
Restructuring (Note 4)	(23)	(4)	(3)
InfraServ ownership change	—	—	(4)
Asset impairments (Note 4)	(83)	—	—
Plant/office closures	(4)	13	(52)
Commercial disputes	(4)	—	—
European Commission investigation	(89)	—	—
Total	(203)	9	(59)

2019

During the year ended December 31, 2019, the Company recorded an $83 million long-lived asset impairment loss related to the closure of its acetate flake manufacturing operations in Ocotlán, Mexico (Note 4). The long-lived asset impairment loss was measured at the date of impairment to write-off the related property, plant and equipment and was included in the Company's Acetate Tow segment.

During the year ended December 31, 2019, the Company recorded a $4 million loss within commercial disputes, which included $19 million in losses related to settlements with former third-party customers that were included within the Other Activities segment, partially offset by a $15 million gain related to a settlement from a previous acquisition that was included within the Engineered Materials segment.

In May 2017, the Company learned that the European Commission opened a competition law investigation involving certain subsidiaries of the Company with respect to certain past ethylene purchases. During the year ended December 31, 2019, the

Company recorded a reserve of $89 million as a result of information learned from the European Commission's investigation, which was included within the Other Activities segment.

During the year ended December 31, 2019, the Company recorded $23 million of employee termination benefits primarily related to Company-wide business optimization projects.

2018

During the year ended December 31, 2018, the Company recorded a $13 million gain within plant/office closures related to a non-income tax receivable refund from Nanjing, China, in its Acetyl Chain segment.

During the year ended December 31, 2018, the Company recorded $4 million of employee termination benefits primarily related to the Company's ongoing efforts to align its businesses around its core value drivers.

2017

During the year ended December 31, 2017, the Company recorded $3 million of employee termination benefits primarily related to the Company's ongoing efforts to align its businesses around its core value drivers.

A partner in the Company's InfraServ equity affiliate investments exercised an option right to purchase additional ownership interests in the InfraServ entities from the Company. The purchase of these interests reduced the Company's ownership interests in InfraServ GmbH & Co. Gendorf KG and YNCORIS GmbH & Co. KG (formerly known as InfraServ GmbH & Co. Knapsack KG) from 39% and 27%, to 30% and 22%, respectively. Accordingly, during the year ended December 31, 2017, the Company reduced the carrying value of these investments by $4 million. These InfraServ investments are primarily owned by entities included in the Other Activities segment.

During the year ended December 31, 2017, the Company provided notice of termination of a contract with a key raw materials supplier at its ethanol production unit in Nanjing, China. As a result, the Company recorded $52 million of plant/office closure costs primarily consisting of a $22 million contract termination charge and a $21 million reduction to its non-income tax receivable. The Nanjing, China ethanol production unit is included in the Company's Acetyl Chain segment.

The changes in the restructuring liabilities by business segment are as follows:

	Engineered Materials	Acetate Tow	Acetyl Chain	Other	Total
			(In $ millions)		
Employee Termination Benefits					
As of December 31, 2017	1	—	1	1	3
Additions	—	2	2	—	4
Cash payments	(1)	—	(1)	(1)	(3)
Other changes	—	—	—	—	—
Exchange rate changes	—	—	—	—	—
As of December 31, 2018	—	2	2	—	4
Additions	10	4	1	9	24
Cash payments	(5)	(3)	(2)	(4)	(14)
Other changes	—	—	(1)	—	(1)
Exchange rate changes	—	—	—	—	—
As of December 31, 2019	5	3	—	5	13
Other Plant/Office Closures					
As of December 31, 2017	—	—	2	—	2
Additions	—	—	—	—	—
Cash payments	—	—	(2)	—	(2)
Other changes	—	—	—	—	—
Exchange rate changes	—	—	—	—	—
As of December 31, 2018	—	—	—	—	—
Additions	—	1	—	—	1
Cash payments	—	(1)	—	—	(1)
Other changes	—	—	—	—	—
Exchange rate changes	—	—	—	—	—
As of December 31, 2019	—	—	—	—	—
Total	5	3	—	5	13

19. Income Taxes

On December 31, 2017, the Tax Cuts and Jobs Act (the "TCJA") was enacted and was effective January 1, 2018. In accordance with ASC 740, *Accounting for Income Taxes*, which requires companies to recognize the effects of tax law changes in the period of enactment, the Company recorded the initial impacts of the TCJA in 2017. 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.

The deemed repatriation of previously unremitted foreign earnings, of which the Company had accumulated approximately $3.0 billion as of December 31, 2017, was taxed at 8% to the extent those earnings were reinvested in non-cash foreign assets, while previously unremitted earnings that had not been reinvested, computed based upon a two-year historical average of foreign cash and cash equivalents balances, were taxed at 15.5%. The Company recorded a net charge of $197 million for this deemed repatriation in 2017, for which it does not expect a material cash outlay due to available foreign tax credit carryforwards.

The Company was also required to adjust the recorded amounts of its US deferred tax assets and liabilities resulting from the reduction in the US corporate tax rate and the impact of the dividends received deduction provisions on its deferred tax liabilities related to outside basis differences in certain joint venture investments. As a result of these changes, the Company recognized a tax benefit of approximately $107 million in 2017.

At the time the TCJA was enacted, the global minimum income tax and base erosion provisions would not be effective until the tax years beginning after December 31, 2017. Based on available elections, the Company chose to not record deferred taxes related to the estimated future income tax effects of the global minimum income tax provision.

The US Treasury issued proposed regulations in 2018 that sought to clarify the application of the TCJA provisions for the limitation of interest expense, including treatment of depreciation and other deductions in arriving at adjusted taxable income and application of the rules to controlled foreign affiliates.

In 2019, the US Treasury issued additional final and proposed regulations supplementing the TCJA provisions around base erosion payments, expense and foreign tax apportionment for foreign tax credit purposes and dividends received deductions at the foreign affiliate level. These proposed regulations are generally effective for years ending after the date they are published in the federal register. For guidance provided in both 2018 and 2019, the Company does not expect the final or proposed regulations, in current form, to have a material impact on current or future income tax expense. As a result, the Company will continue to monitor their expected impacts on the Company's filing positions and will record the impacts as discrete income tax expense adjustments in the period that the guidance is finalized.

Income Tax Provision

Earnings (loss) from continuing operations before tax by jurisdiction are as follows:

	Year Ended December 31,		
	2019	2018	2017
	(In $ millions)		
US	252	480	262
International	736	1,030	813
Total	988	1,510	1,075

The income tax provision (benefit) consists of the following:

	Year Ended December 31,		
	2019	2018	2017
	(In $ millions)		
Current			
US	(8)	(184)	201
International	149	143	158
Total	141	(41)	359
Deferred			
US	1	314	(110)
International	(18)	19	(36)
Total	(17)	333	(146)
Total	124	292	213

A reconciliation of the significant differences between the US federal statutory tax rate of 21% (35% for 2017) and the effective income tax rate on income from continuing operations is as follows:

	Year Ended December 31,		
	2019	2018	2017
	(In $ millions, except percentages)		
Income tax provision computed at US federal statutory tax rate	208	317	376
Change in valuation allowance	(47)	94	218
Equity income and dividends	(38)	(48)	(87)
(Income) expense not resulting in tax impact, net	(9)	(51)	(157)
US tax effect of foreign earnings and dividends	85	25	521
Foreign tax credits	(76)	(20)	(759)
Other foreign tax rate differentials	4	17	(38)
Legislative changes	(3)	(59)	116
State income taxes, net of federal benefit	6	4	12
Other, net	(6)	13	11
Income tax provision (benefit)	124	292	213
Effective income tax rate	13%	19%	20%

As a result of the TCJA, US federal and state income taxes have been recorded on undistributed foreign earnings accumulated from 1986 through December 31, 2017. Based on the provisions of the law, the Company's previously taxed income for its foreign subsidiaries significantly exceeds its offshore cash balances. The Company has not recorded a deferred tax liability for foreign withholding or other foreign local tax that would be due when cash is actually repatriated to the US because those foreign earnings are considered permanently reinvested in the business or may be remitted substantially free of any additional local taxes. The determination of the amount of the unrecognized deferred tax liability related to the undistributed earnings is not practicable.

The effective income tax rate for the year ended December 31, 2019 was significantly lower than the effective income tax rate for the year ended December 31, 2018. This variation was primarily due to a valuation allowance provided against Luxembourg net operating loss carryforwards in 2018. In addition, the 2019 effective income tax rate benefited from the favorable impact of a 2019 release of valuation allowances due to higher projected utilization of foreign tax credit carryforwards. The higher projected utilization resulted from (1) a shift in the expected sourcing of forecasted US taxable income (domestic vs. foreign sourced) and (2) new regulatory guidance issued in 2019.

The effective tax rate for the year ended December 31, 2018 was comparable to the effective tax rate for the year ended December 31, 2017. The effective tax rate for 2018 was slightly less than the statutory US tax rate primarily due to the positive impact from the jurisdictional mix of earnings, largely offset by increased valuation allowances established on certain deferred tax assets, particularly related to increases in provisionally recorded estimates of valuation allowances on foreign tax credits in the US and net operating loss carryforwards in Luxembourg, due to certain restructuring transactions completed to facilitate future repatriation of cash to the US.

During 2017, the Company undertook various reorganization transactions to separate certain Acetate Tow assets to reorganize the holdings of its various foreign subsidiaries. As a result, the Company generated additional net foreign tax credit carryforwards of approximately $240 million, the gross impacts of which were reflected in the Foreign tax credits line and the US tax effect of foreign earnings lines above, that will be carried forward to future tax periods. These new credit carryforwards, as well as other credits carried forward into 2017, were evaluated for realizability under the provisions of the TCJA. Due to the TCJA and uncertainty as to future sources of general limitation foreign source income to allow for utilization of these credits, the Company recorded a valuation allowance on these foreign tax credits in the amount of $164 million, which was reflected in the Change in valuation allowance line in the effective tax rate reconciliation above.

Deferred Income Taxes

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of the consolidated deferred tax assets and liabilities are as follows:

	As of December 31,	
	2019	2018
	(In $ millions)	
Deferred Tax Assets		
Pension and postretirement obligations	140	138
Accrued expenses	57	61
Inventory	11	13
Net operating loss carryforwards	506	616
Tax credit carryforwards	273	330
Other	227	195
Subtotal	1,214	1,353
Valuation allowance[(1)]	(714)	(899)
Total	500	454
Deferred Tax Liabilities		
Depreciation and amortization	411	375
Investments in affiliates	192	203
Other	58	47
Total	661	625
Net deferred tax assets (liabilities)	(161)	(171)

____

(1) Includes deferred tax asset valuation allowances for the Company's deferred tax assets in the US, Luxembourg, Spain, China, the United Kingdom, Mexico, Canada and France. These valuation allowances relate primarily to net operating loss carryforward benefits and other net deferred tax assets, all of which may not be realizable.

Tax Carryforwards

- ***Net Operating Loss Carryforwards***

As of December 31, 2019, the Company had available US federal net operating loss carryforwards of $31 million that are subject to limitation. These net operating loss carryforwards begin to expire in 2022. As of December 31, 2019, the Company also had available state net operating loss carryforwards, net of federal tax impact, of $35 million, $28 million of which are offset by a valuation allowance due to uncertain recoverability. The Company also has foreign net operating loss carryforwards available as of December 31, 2019 of $1.8 billion primarily for Luxembourg, China, Mexico and Spain, with various expiration dates. Net operating loss carryforwards of $167 million in China are scheduled to expire beginning in 2020 through 2024. Net operating losses in most other foreign jurisdictions do not have an expiration date.

- ***Tax Credit Carryforwards***

The Company had available $243 million of foreign tax credit carryforwards, which are mostly offset by a valuation allowance of $207 million due to uncertain recoverability and $18 million of alternative minimum tax credit carryforwards in the US. The foreign tax credit carryforwards are subject to a ten-year carryforward period and expire beginning in 2027. The alternative minimum tax credits are subject to annual limitation due to prior ownership changes, but have an unlimited carryforward period and can be used to offset federal tax liability in future years. The Company also has $8 million of research and development tax credit carryforwards as of December 31, 2019, which it expects to utilize prior to expiration beginning in 2037.

The Company evaluates its deferred tax assets on a quarterly basis to determine whether a valuation allowance is necessary. Realization of deferred tax assets ultimately depends on the existence of sufficient taxable income in the applicable carryback or carryforward periods. Changes in the Company's estimates of future taxable income and prudent and feasible tax planning strategies will affect the estimate of the realization of the tax benefits of these foreign tax credit carryforwards. As such, the Company is currently evaluating tax planning strategies to enable use of the foreign tax credit carryforwards that may decrease the Company's effective tax rate in future periods as the valuation allowance is reversed.

Uncertain Tax Positions

Activity related to uncertain tax positions is as follows:

	Year Ended December 31,		
	2019	2018	2017
	(In $ millions)		
As of the beginning of the year	162	119	114
Increases in tax positions for the current year	1	61	14
Increases in tax positions for prior years[1]	37	4	4
Decreases in tax positions for prior years	(41)	(21)	(7)
Decreases due to settlements	(25)	(1)	(6)
As of the end of the year	134	162	119
Total uncertain tax positions that if recognized would impact the effective tax rate	132	154	100
Total amount of interest expense (benefit) and penalties recognized in the consolidated statements of operations[2]	5	1	6
Total amount of interest expense and penalties recognized in the consolidated balance sheets	45	38	38

____

(1) Includes the impact on uncertain tax positions for the year ended December 31, 2019 due to the closure of federal income tax audits for the years 2009 through 2012 and uncertain tax positions related to the Nilit acquisition of $4 million for the year ended December 31, 2017.

(2) This amount reflects interest on uncertain tax positions and release of certain tax positions as a result of an audit closure that was reflected in the consolidated statements of operations.

The Company primarily operates in the US, Germany, Belgium, Canada, China, Italy, Mexico and Singapore. Examinations are ongoing in a number of these jurisdictions. The Company's US tax returns for the years 2013 through 2015 are currently under audit by the US Internal Revenue Service ("IRS"). Outside of the US, the Company's German tax returns for the years 2008 through 2015 are under audit as well as certain of the Company's other subsidiaries within their respective jurisdictions.

The decrease in uncertain tax positions for the year ended December 31, 2019 was primarily due to progress of tax examinations. While it is reasonably possible that a further change in the unrecognized tax benefits may occur within the next twelve months related to the settlement of one or more of these audits, the Company is unable to estimate the amount of any such change.

During the year ended December 31, 2019, the IRS concluded federal income tax audits of the Company's tax returns for the years 2009 through 2012. The examinations did not result in a material impact to income tax expense. The Company's 2013 through 2015 tax years are under joint examination by the US, German and Dutch taxing authorities. The examinations are in the preliminary data gathering phase.

20. Management Compensation Plans

General Plan Description

The 2018 GIP enables the compensation committee of the Board of Directors (and the Board of Directors as to non-management directors) to award incentive and nonqualified stock options, stock appreciation rights, shares of Common Stock, restricted stock awards, RSUs and incentive bonuses (which may be paid in cash or stock or a combination thereof), any of which may be performance-based, with vesting and other award provisions that provide effective incentive to Company employees (including officers), non-management directors and other service providers.

Total shares available for awards and total shares subject to outstanding awards are as follows:

	As of December 31, 2019	
	Shares Available for Awards	**Shares Subject to Outstanding Awards**
2018 GIP	6,244,945	473,903
2009 GIP	—	959,696

Restricted Stock Units

A summary of changes in nonvested performance-based RSUs outstanding is as follows:

	Number of Units	**Weighted Average Grant Date Fair Value**
	(In thousands)	**(In $)**
As of December 31, 2018	812	75.25
Granted	259	92.61
Additional performance-based RSUs granted[1]	330	56.14
Vested	(663)	56.14
Forfeited	(88)	90.70
As of December 31, 2019	650	89.86

(1) Represents additional 2016 performance-based RSU grants that were awarded in 2019 as a result of achieving internal profitability targets.

The fair value of shares vested for performance-based RSUs is as follows:

	Year Ended December 31,		
	2019	**2018**	**2017**
		(In $ millions)	
Total	66	8	42

A summary of changes in nonvested time-based RSUs outstanding is as follows:

	Number of Units	Weighted Average Grant Date Fair Value
	(In thousands)	(In $)
As of December 31, 2018	386	86.69
Granted	228	96.22
Vested	(188)	80.95
Forfeited	(25)	90.42
As of December 31, 2019	401	94.56

The fair value of shares vested for time-based RSUs is as follows:

	Year Ended December 31,		
	2019	2018	2017
	(In $ millions)		
Total	20	21	12

The weighted average grant date fair value of RSUs granted is as follows:

	Year Ended December 31,		
	2019	2018	2017
	(In $ millions)		
Total	46	48	59

As of December 31, 2019, there was $42 million of unrecognized compensation cost related to RSUs, excluding actual forfeitures, which is expected to be recognized over a weighted average period of 2 years.

The Company realized income tax benefits from RSU vestings as follows:

	Year Ended December 31,		
	2019	2018	2017
	(In $ millions)		
Income tax benefit realized	6	7	9

21. Leases

The components of lease expense are as follows:

	Year Ended December 31, 2019	Statement of Operations Classification
	(In $ millions)	
Lease Cost		
Operating lease cost	39	Cost of sales / Selling, general and administrative expenses
Short-term lease cost	23	Cost of sales / Selling, general and administrative expenses
Variable lease cost	8	Cost of sales / Selling, general and administrative expenses
Finance lease cost		
Amortization of leased assets	19	Cost of sales
Interest on lease liabilities	18	Interest expense
Total net lease cost	107	

Supplemental consolidated balance sheet information related to leases is as follows:

	As of December 31, 2019	Balance Sheet Classification
	(In $ millions)	
Leases		
Assets		
Operating lease assets	203	Operating lease ROU assets
Finance lease assets	83	Property, plant and equipment, net
Total leased assets	286	
Liabilities		
Current		
Operating	29	Current Other liabilities
Finance	26	Short-term borrowings and current installments of long-term debt
Noncurrent		
Operating	181	Operating lease liabilities
Finance	118	Long-term debt
Total lease liabilities	354	

	As of December 31, 2019
Weighted-Average Remaining Lease Term (years)	
Operating leases	15.0
Finance leases	6.9
Weighted-Average Discount Rate	
Operating leases	2.7%
Finance leases	11.5%

Supplemental consolidated cash flow information related to leases is as follows:

	Year Ended December 31, 2019
	(In $ millions)
Cash paid for amounts included in the measurement of lease liabilities	
Operating cash flows from operating leases	36
Operating cash flows from finance leases	19
Financing cash flows from finance leases	23
ROU assets obtained in exchange for finance lease liabilities	—
ROU assets obtained in exchange for operating lease liabilities	11

Maturities of lease liabilities are as follows:

	As of December 31, 2019	
	Operating Leases	Finance Leases
	(In $ millions)	
2020	35	42
2021	27	40
2022	23	31
2023	21	23
2024	18	18
Later years	132	70
Total lease payments	256	224
Less amounts representing interest	(46)	(80)
Total lease obligations	210	144

See Note 3 for additional information regarding the adoption of ASU 2016-02, *Leases*.

Disclosures related to periods prior to adoption of ASU 2016-02

Operating lease rent expense was approximately $96 million for the year ended December 31, 2018. Future minimum lease payments under non-cancelable rental and lease agreements which had initial or remaining terms in excess of one year are as follows:

	As of December 31, 2018	
	Operating Leases	Capital Leases
	(In $ millions)	
2019	43	42
2020	34	42
2021	25	40
2022	23	32
2023	21	23
Later years	130	88
Minimum lease commitments	276	267
Less amounts representing interest		(100)
Present value of net minimum lease obligations		167

22. Derivative Financial Instruments

Derivatives Designated As Hedges

Cash Flow Hedges

The total notional amount of the forward-starting interest rate swap designated as a cash flow hedge is as follows:

	As of December 31,	
	2019	2018
	(In $ millions)	
Total	400	400

Net Investment Hedges

The total notional amount of foreign currency denominated debt designated as a net investment hedge of net investments in foreign operations are as follows:

	As of December 31,	
	2019	2018
	(In € millions)	
Total	1,578	1,550

Derivatives Not Designated As Hedges

Foreign Currency Forwards and Swaps

Each of the contracts included in the table below will have approximately offsetting effects from actual underlying payables, receivables, intercompany loans or other assets or liabilities subject to foreign exchange remeasurement. The total US dollar equivalents of net foreign exchange exposure related to (short) long foreign exchange forward contracts outstanding by currency are as follows:

	2020 Maturity
	(In $ millions)
Currency	
Brazilian real	(10)
British pound sterling	(88)
Canadian dollar	(8)
Chinese yuan	(46)
Euro	(170)
Hungarian forint	13
Indonesian rupiah	(11)
Korean won	16
Mexican peso	(27)
Singapore dollar	30
Swedish krona	(4)
Total	(305)

Gross notional values of the foreign currency forwards and swaps are as follows:

	As of December 31,	
	2019	2018
	(In $ millions)	
Total	692	1,071

Hedging activity for foreign currency forwards, commodity swaps and interest rate swaps is as follows:

	Year Ended December 31,			Statement of Operations Classification
	2019	2018	2017	
	(In $ millions)			
Hedging activities	2	1	4	Cost of sales; Interest expense

Information regarding changes in the fair value of the Company's derivative and non-derivative instruments is as follows:

	Gain (Loss) Recognized in Other Comprehensive Income (Loss)			Gain (Loss) Recognized in Earnings (Loss)			
	Year Ended December 31,			Year Ended December 31,			
	2019	2018	2017	2019	2018	2017	Statement of Operations Classification
	(In $ millions)						
Designated as Cash Flow Hedges							
Commodity swaps	(5)	(2)	4	2	1	5	Cost of sales
Interest rate swaps	(30)	(10)	—	—	—	—	Interest expense
Foreign currency forwards	—	1	(1)	—	—	(1)	Cost of sales
Total	(35)	(11)	3	2	1	4	
Designated as Net Investment Hedges							
Foreign currency denominated debt (Note 14)	37	51	(119)	—	—	—	N/A
Cross-currency swaps (Note 14)	3	—	—	—	—	—	N/A
Foreign currency forwards	—	—	2	—	—	—	N/A
Total	40	51	(117)	—	—	—	
Not Designated as Hedges							
Foreign currency forwards and swaps	—	—	—	(3)	13	2	Foreign exchange gain (loss), net; Other income (expense), net
Total	—	—	—	(3)	13	2	

See Note 23 for additional information regarding the fair value of the Company's derivative instruments.

Certain of the Company's commodity swaps, interest rate swaps, cross-currency swaps and foreign currency forwards and swaps permit the Company to net settle all contracts with the counterparty through a single payment in an agreed upon currency in the event of default or early termination of the contract, similar to a master netting arrangement.

Information regarding the gross amounts of the Company's derivative instruments and the amounts offset in the consolidated balance sheets is as follows:

	As of December 31,	
	2019	2018
	(In $ millions)	
Derivative Assets		
Gross amount recognized	16	11
Gross amount offset in the consolidated balance sheets	1	2
Net amount presented in the consolidated balance sheets	15	9
Gross amount not offset in the consolidated balance sheets	8	3
Net amount	7	6

	As of December 31,	
	2019	2018
	(In $ millions)	
Derivative Liabilities		
Gross amount recognized	59	20
Gross amount offset in the consolidated balance sheets	1	2
Net amount presented in the consolidated balance sheets	58	18
Gross amount not offset in the consolidated balance sheets	8	3
Net amount	50	15

23. Fair Value Measurements

The Company's financial assets and liabilities are measured at fair value on a recurring basis (Note 2) as follows:

Derivatives. Derivative financial instruments include interest rate swaps, commodity swaps, cross-currency swaps and foreign currency forwards and swaps and are valued in the market using discounted cash flow techniques. These techniques incorporate Level 1 and Level 2 fair value measurement inputs such as interest rates and foreign currency exchange rates. These market inputs are utilized in the discounted cash flow calculation considering the instrument's term, notional amount, discount rate and credit risk. Significant inputs to the derivative valuation for interest rate swaps, commodity swaps, cross-currency swaps and foreign currency forwards and swaps are observable in the active markets and are classified as Level 2 in the fair value measurement hierarchy.

	Fair Value Measurement						
	Quoted Prices in Active Markets for Identical Assets (Level 1)		Significant Other Observable Inputs (Level 2)		Total		
	As of December 31,						
	2019	2018	2019	2018	2019	2018	Balance Sheet Classification
	(In $ millions)						
Derivatives Designated as Cash Flow Hedges							
Commodity swaps	—	—	—	1	—	1	Current Other assets
Designated as Net Investment Hedges							
Cross-currency swaps	—	—	13	—	13	—	Current Other assets
Derivatives Not Designated as Hedges							
Foreign currency forwards and swaps	—	—	2	8	2	8	Current Other assets
Total assets	—	—	15	9	15	9	
Derivatives Designated as Cash Flow Hedges							
Commodity swaps	—	—	(4)	—	(4)	—	Current Other liabilities
Commodity swaps	—	—	(3)	(1)	(3)	(1)	Noncurrent Other liabilities
Interest rate swaps	—	—	(40)	(10)	(40)	(10)	Noncurrent Other liabilities
Derivatives Designated as a Net Investment Hedges							
Cross-currency swaps	—	—	(1)	—	(1)	—	Current Other liabilities
Cross-currency swaps	—	—	(7)	—	(7)	—	Noncurrent Other liabilities
Derivatives Not Designated as Hedges							
Foreign currency forwards and swaps	—	—	(3)	(7)	(3)	(7)	Current Other liabilities
Total liabilities	—	—	(58)	(18)	(58)	(18)	

Carrying values and fair values of financial instruments that are not carried at fair value are as follows:

	Carrying Amount		Fair Value Measurement: Significant Other Observable Inputs (Level 2)		Fair Value Measurement: Unobservable Inputs (Level 3)		Fair Value Measurement: Total	
	As of December 31,							
	2019	2018	2019	2018	2019	2018	2019	2018
	(In $ millions)							
Equity investments without readily determinable fair values	170	164	—	—	—	—	—	—
Insurance contracts in nonqualified trusts	35	37	35	37	—	—	35	37
Long-term debt, including current installments of long-term debt	3,455	3,355	3,456	3,204	143	168	3,599	3,372

In general, the equity investments included in the table above are not publicly traded and their fair values are not readily determinable. The Company believes the carrying values approximate fair value. Insurance contracts in nonqualified trusts consist of long-term fixed income securities, which are valued using independent vendor pricing models with observable inputs in the active market and therefore represent a Level 2 fair value measurement. The fair value of long-term debt is based on valuations from third-party banks and market quotations and is classified as Level 2 in the fair value measurement hierarchy. The fair value of obligations under finance leases, which are included in long-term debt, is based on lease payments and discount rates, which are not observable in the market and therefore represents a Level 3 fair value measurement.

As of December 31, 2019 and 2018, the fair values of cash and cash equivalents, receivables, trade payables, short-term borrowings and the current installments of long-term debt approximate carrying values due to the short-term nature of these instruments. These items have been excluded from the table with the exception of the current installments of long-term debt.

24. Commitments and Contingencies

Commitments

Guarantees

The Company has agreed to guarantee or indemnify third parties for environmental and other liabilities pursuant to a variety of agreements, including asset and business divestiture agreements, leases, settlement agreements and various agreements with affiliated companies. Although many of these obligations contain monetary and/or time limitations, others do not provide such limitations.

As indemnification obligations often depend on the occurrence of unpredictable future events, the future costs associated with them cannot be determined at this time.

The Company has accrued for all probable and reasonably estimable losses associated with all known matters or claims. These known obligations include the following:

- ***Demerger Obligations***

In connection with the Hoechst demerger, the Company agreed to indemnify Hoechst, and its legal successors, for various liabilities under the demerger agreement, including for environmental liabilities associated with contamination arising either from environmental damage in general ("Category A") or under 19 divestiture agreements entered into by Hoechst prior to the demerger ("Category B") (Note 16).

The Company's obligation to indemnify Hoechst, and its legal successors, is capped under Category B at €250 million. If and to the extent the environmental damage should exceed €750 million in aggregate, the Company's obligation to indemnify Hoechst and its legal successors applies, but is then limited to 33.33% of the remediation cost without further limitations. Cumulative payments under the divestiture agreements as of December 31, 2019 are $92 million. Though the Company is significantly under its obligation cap under Category B, most of the divestiture agreements have become time barred and/or any notified environmental damage claims have been partially settled.

The Company has also undertaken in the demerger agreement to indemnify Hoechst and its legal successors for (i) 33.33% of any and all Category A liabilities that result from Hoechst being held as the responsible party pursuant to public law or current or future environmental law or by third parties pursuant to private or public law related to contamination and (ii) liabilities that Hoechst is required to discharge, including tax liabilities, which are associated with businesses that were included in the demerger but were not demerged due to legal restrictions on the transfers of such items. These indemnities do not provide for any monetary or time limitations. The Company has not been requested by Hoechst to make any payments in connection with this indemnification. Accordingly, the Company has not made any payments to Hoechst and its legal successors.

Based on the Company's evaluation of currently available information, including the lack of requests for indemnification, the Company cannot estimate the remaining demerger obligations, if any, in excess of amounts accrued.

- ***Divestiture Obligations***

The Company and its predecessor companies agreed to indemnify third-party purchasers of former businesses and assets for various pre-closing conditions, as well as for breaches of representations, warranties and covenants. Such liabilities also include environmental liability, product liability, antitrust and other liabilities. These indemnifications and guarantees represent standard contractual terms associated with typical divestiture agreements and, other than environmental liabilities, the Company does not believe that they expose the Company to significant risk (Note 16).

The Company has divested numerous businesses, investments and facilities through agreements containing indemnifications or guarantees to the purchasers. Many of the obligations contain monetary and/or time limitations, which extend through 2037. The aggregate amount of outstanding indemnifications and guarantees provided for under these agreements is $116 million as of December 31, 2019. Other agreements do not provide for any monetary or time limitations.

Based on the Company's evaluation of currently available information, including the number of requests for indemnification or other payment received by the Company, the Company cannot estimate the remaining divestiture obligations, if any, in excess of amounts accrued.

Purchase Obligations

In the normal course of business, the Company enters into various purchase commitments for goods and services. The Company maintains a number of "take-or-pay" contracts for purchases of raw materials, utilities and other services. Certain of the contracts contain a contract termination buy-out provision that allows for the Company to exit the contracts for amounts less than the remaining take-or-pay obligations. Additionally, the Company has other outstanding commitments representing maintenance and service agreements, energy and utility agreements, consulting contracts and software agreements. As of December 31, 2019, the Company had unconditional purchase obligations of $1.2 billion, which extend through 2036.

Contingencies

The Company is involved in legal and regulatory proceedings, lawsuits, claims and investigations incidental to the normal conduct of business, relating to such matters as product liability, land disputes, insurance coverage disputes, contracts, employment, antitrust or competition compliance, 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 the Company is named as a defendant and, based on the current facts, does not believe the outcomes from these matters would be material to the Company's results of operations, cash flows or financial position.

European Commission Investigation

In May 2017, the Company learned that the European Commission opened a competition law investigation involving certain subsidiaries of the Company with respect to certain past ethylene purchases. Based on information learned from the European Commission regarding its investigation, Celanese recorded a reserve of $89 million during the year ended December 31, 2019. The Company is continuing to cooperate with the European Commission. See Note 18 for additional information.

25. Supplemental Cash Flow Information

	Year Ended December 31,		
	2019	2018	2017
	(In $ millions)		
Interest paid, net of amounts capitalized	118	133	130
Taxes paid, net of refunds	157	100	123
Noncash Investing and Financing Activities			
Accrued treasury stock repurchases	4	13	—
Accrued capital expenditures	20	(4)	14
Asset retirement obligations	6	(7)	2
Fair value adjustment to securities available for sale, net of tax	—	—	(1)

26. Segment Information

Business Segments

The Company operates through business segments according to the nature and economic characteristics of its products and customer relationships, as well as the manner in which the information is used internally by the Company's key decision maker, who is the Company's Chief Executive Officer.

The Company's business segments are as follows:

- ***Engineered Materials***

The Company's Engineered Materials segment includes the engineered materials business, our food ingredients business and certain strategic affiliates. The engineered materials business develops, produces and supplies a broad portfolio of high performance specialty polymers for automotive and medical applications, as well as industrial products and consumer electronics. Together with its strategic affiliates, the Company's engineered materials business is a leading participant in the global specialty polymers industry. The primary products of Engineered Materials are used in a broad range of end-use products including fuel system components, automotive safety systems, medical applications, electronics, appliances, industrial products, battery separators, conveyor belts, filtration equipment, coatings, and electrical applications and products. It is also a leading global supplier of acesulfame potassium for the food and beverage industry and is a leading producer of food protection ingredients, such as potassium sorbate and sorbic acid.

- ***Acetate Tow***

The Company's Acetate Tow segment serves consumer-driven applications and is a leading global producer and supplier of acetate tow and acetate flake, primarily used in filter products applications.

- ***Acetyl Chain***

The Company's Acetyl Chain segment includes the integrated chain of intermediate chemistry, emulsion polymers and ethylene vinyl acetate ("EVA") polymers businesses. The Company's intermediate chemistry business produces and supplies acetyl products, including acetic acid, vinyl acetate monomer, acetic anhydride and acetate esters. These products are generally used as starting materials for colorants, paints, adhesives, coatings and pharmaceuticals. It also produces organic solvents and intermediates for pharmaceutical, agricultural and chemical products. The Company's 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. The Company's 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 low-density polyethylene. The Company's EVA polymers products are used in many applications, including flexible packaging films, lamination film products, hot melt adhesives, automotive parts and carpeting.

- ***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 financing activities and results of the Company's captive insurance companies. Other Activities also includes the components of net periodic benefit cost (interest cost, expected return on assets and net actuarial gains and losses) for the Company's defined benefit pension plans and other postretirement plans not allocated to the Company's business segments.

The business segment management reporting and controlling systems are based on the same accounting policies as those described in the summary of significant accounting policies (Note 2).

Sales transactions between business segments are generally recorded at values that approximate third-party selling prices.

	Engineered Materials	Acetate Tow	Acetyl Chain	Other Activities	Eliminations	Consolidated
	(In $ millions)					
	Year Ended December 31, 2019					
Net sales	2,386	636 [1]	3,392 [2]	—	(117)	6,297
Other (charges) gains, net (Note 18)	5	(88)	(3)	(117)	—	(203)
Operating profit (loss)	446	52	678	(342)	—	834
Equity in net earnings (loss) of affiliates	168	—	4	10	—	182
Depreciation and amortization	131	45	161	15	—	352
Capital expenditures	104	43	208	35	—	390 [3]
	As of December 31, 2019					
Goodwill and intangible assets, net	999	153	234	—	—	1,386
Total assets	4,125	977	3,489	885	—	9,476
	Year Ended December 31, 2018					
Net sales	2,593	649 [1]	4,042 [2]	—	(129)	7,155
Other (charges) gains, net (Note 18)	—	(2)	11	—	—	9
Operating profit (loss)	460	130	1,024	(280)	—	1,334
Equity in net earnings (loss) of affiliates	218	—	6	9	—	233
Depreciation and amortization	126	58	148	11	—	343
Capital expenditures	105	29	182	17	—	333 [3]
	As of December 31, 2018					
Goodwill and intangible assets, net	974	153	240	—	—	1,367
Total assets	4,012	1,032	3,471	798	—	9,313
	Year Ended December 31, 2017					
Net sales	2,213	668 [1]	3,371 [2]	—	(112)	6,140
Other (charges) gains, net (Note 18)	(2)	(2)	(52)	(3)	—	(59)
Operating profit (loss)	412	189	509	(253)	—	857
Equity in net earnings (loss) of affiliates	171	—	6	6	—	183
Depreciation and amortization	111	41	143	10	—	305
Capital expenditures	78	39	150	14	—	281 [3]

---

[1] Includes intersegment sales of $0 million, $0 million, $2 million for the years ended December 31, 2019, 2018 and 2017, respectively.

[2] Includes intersegment sales of $117 million, $129 million and $110 million for the years ended December 31, 2019, 2018 and 2017, respectively.

[3] Includes an increase in accrued capital expenditures of $20 million, a decrease in accrued capital expenditures of $4 million and an increase in accrued capital expenditures of $14 million for the years ended December 31, 2019, 2018 and 2017, respectively.

Geographical Area Information

The net sales to external customers based on geographic location are as follows:

	Year Ended December 31,		
	2019	2018	2017
	(In $ millions)		
Belgium	259	261	295
Canada	75	115	92
China	859	1,070	833
Germany	2,132	2,335	1,776
Mexico	244	307	257
Singapore	787	997	867
US	1,713	1,769	1,572
Other	228	301	448
Total	6,297	7,155	6,140

Property, plant and equipment, net based on the geographic location of the Company's facilities is as follows:

	As of December 31,	
	2019	2018
	(In $ millions)	
Belgium	55	54
Canada	105	114
China	316	331
Germany	866	903
Mexico	57	144
Singapore	80	83
US	2,095	1,961
Other	139	129
Total	3,713	3,719

27. Revenue Recognition

Disaggregated Revenue

In general, the Company's business segmentation is aligned according to the nature and economic characteristics of its products and customer relationships and provides meaningful disaggregation of each business segment's results of operations.

The Company manages its Engineered Materials business segment through its project management pipeline, which is comprised of a broad range of projects which are solutions-based and are tailored to each customers' unique needs. Projects are identified and selected based on success rate and may involve a number of different polymers per project for use in multiple end-use applications. Therefore, the Company is agnostic toward products and end-use markets for the Engineered Materials business segment.

Within the Acetate Tow business segment, the Company's primary product is acetate tow, which is managed through contracts with a few major tobacco companies and accounts for a significant amount of filters used in cigarette production worldwide.

The Company manages its Acetyl Chain business segment by leveraging its ability to sell chemicals externally to end-use markets or downstream to its emulsion polymers business. Decisions to sell externally and geographically or downstream and along the Acetyl Chain are based on market demand, trade flows and maximizing the value of its chemicals. Therefore, the Company's strategic focus is on executing within this integrated chain model and less on driving product-specific revenue.

Further disaggregation of Net sales by business segment and geographic destination is as follows:

	Year Ended December 31,	
	2019	2018
	(In $ millions)	
Engineered Materials		
North America	735	770
Europe and Africa	1,047	1,216
Asia-Pacific	533	532
South America	71	75
Total	2,386	2,593
Acetate Tow		
North America	125	133
Europe and Africa	258	260
Asia-Pacific	224	217
South America	29	39
Total	636	649
Acetyl Chain		
North America	1,079	1,145
Europe and Africa	1,098	1,236
Asia-Pacific	1,013	1,411
South America	85	121
Total[1]	3,275	3,913

____

[1] Excludes intersegment sales of $117 million and $129 million for the years ended December 31, 2019 and 2018, respectively.

28. Earnings (Loss) Per Share

	Year Ended December 31,		
	2019	2018	2017
	(In $ millions, except share data)		
Amounts attributable to Celanese Corporation			
Earnings (loss) from continuing operations	858	1,212	856
Earnings (loss) from discontinued operations	(6)	(5)	(13)
Net earnings (loss)	852	1,207	843
Weighted average shares - basic	123,925,697	134,305,269	137,902,667
Incremental shares attributable to equity awards[1]	726,062	1,111,589	414,728
Weighted average shares - diluted	124,651,759	135,416,858	138,317,395

____

[1] Excludes 45, 0 and 29 equity award shares for the years ended December 31, 2019, 2018 and 2017, respectively, as their effect would have been antidilutive.

29. Consolidating Guarantor Financial Information

The Senior Notes were issued by Celanese US ("Issuer") and are guaranteed by Celanese Corporation ("Parent Guarantor") and the Subsidiary Guarantors (Note 14). The Issuer and Subsidiary Guarantors are 100% owned subsidiaries of the Parent Guarantor. The Parent Guarantor and Subsidiary Guarantors have guaranteed the Notes fully and unconditionally and jointly and severally.

For cash management purposes, the Company transfers cash between the Parent Guarantor, Issuer, Subsidiary Guarantors and non-guarantors through intercompany financing arrangements, contributions or declaration of dividends between the respective parent and its subsidiaries. The transfer of cash under these activities facilitates the ability of the recipient to make specified third-party payments for principal and interest on the Company's outstanding debt, Common Stock dividends and Common Stock repurchases. The consolidating statements of cash flows present such intercompany financing activities, contributions and dividends consistent with how such activity would be presented in a stand-alone statement of cash flows.

The Company has not presented separate financial information and other disclosures for each of its Subsidiary Guarantors because it believes such financial information and other disclosures would not provide investors with any additional information that would be material in evaluating the sufficiency of the guarantees.

The consolidating financial statements for the Parent Guarantor, the Issuer, the Subsidiary Guarantors and the non-guarantors are as follows:

CELANESE CORPORATION AND SUBSIDIARIES
CONSOLIDATING STATEMENT OF OPERATIONS

	Year Ended December 31, 2019					
	Parent Guarantor	Issuer	Subsidiary Guarantors	Non-Guarantors	Eliminations	Consolidated
	(In $ millions)					
Net sales	—	—	2,298	5,137	(1,138)	6,297
Cost of sales	—	—	(1,795)	(4,036)	1,140	(4,691)
Gross profit	—	—	503	1,101	2	1,606
Selling, general and administrative expenses	—	—	(179)	(304)	—	(483)
Amortization of intangible assets	—	—	(8)	(16)	—	(24)
Research and development expenses	—	—	(27)	(40)	—	(67)
Other (charges) gains, net	—	—	(8)	(195)	—	(203)
Foreign exchange gain (loss), net	—	—	—	7	—	7
Gain (loss) on disposition of businesses and assets, net	—	—	(9)	7	—	(2)
Operating profit (loss)	—	—	272	560	2	834
Equity in net earnings (loss) of affiliates	881	856	551	165	(2,271)	182
Non-operating pension and other postretirement employee benefit (expense) income	—	—	13	(33)	—	(20)
Interest expense	(29)	(39)	(127)	(37)	117	(115)
Refinancing expense	—	(4)	—	—	—	(4)
Interest income	—	63	49	11	(117)	6
Dividend income - equity investments	—	—	—	113	—	113
Other income (expense), net	—	(7)	1	(2)	—	(8)
Earnings (loss) from continuing operations before tax	852	869	759	777	(2,269)	988
Income tax (provision) benefit	—	12	23	(158)	(1)	(124)
Earnings (loss) from continuing operations	852	881	782	619	(2,270)	864
Earnings (loss) from operation of discontinued operations	—	—	(8)	—	—	(8)
Income tax (provision) benefit from discontinued operations	—	—	2	—	—	2
Earnings (loss) from discontinued operations	—	—	(6)	—	—	(6)
Net earnings (loss)	852	881	776	619	(2,270)	858
Net (earnings) loss attributable to noncontrolling interests	—	—	—	(6)	—	(6)
Net earnings (loss) attributable to Celanese Corporation	852	881	776	613	(2,270)	852

CELANESE CORPORATION AND SUBSIDIARIES
CONSOLIDATING STATEMENT OF OPERATIONS

	Year Ended December 31, 2018					
	Parent Guarantor	Issuer	Subsidiary Guarantors	Non-Guarantors	Eliminations	Consolidated
	(In $ millions)					
Net sales	—	—	2,387	5,954	(1,186)	7,155
Cost of sales	—	—	(1,898)	(4,471)	1,186	(5,183)
Gross profit	—	—	489	1,483	—	1,972
Selling, general and administrative expenses	—	—	(213)	(333)	—	(546)
Amortization of intangible assets	—	—	(8)	(16)	—	(24)
Research and development expenses	—	—	(30)	(42)	—	(72)
Other (charges) gains, net	—	—	—	9	—	9
Foreign exchange gain (loss), net	—	(3)	—	3	—	—
Gain (loss) on disposition of businesses and assets, net	—	—	(10)	5	—	(5)
Operating profit (loss)	—	(3)	228	1,109	—	1,334
Equity in net earnings (loss) of affiliates	1,207	1,202	1,033	220	(3,429)	233
Non-operating pension and other postretirement employee benefit (expense) income	—	—	(28)	(34)	—	(62)
Interest expense	—	(30)	(118)	(33)	56	(125)
Refinancing expense	—	(1)	—	—	—	(1)
Interest income	—	45	7	10	(56)	6
Dividend income - equity investments	—	—	—	113	4	117
Other income (expense), net	—	5	1	3	(1)	8
Earnings (loss) from continuing operations before tax	1,207	1,218	1,123	1,388	(3,426)	1,510
Income tax (provision) benefit	—	(11)	(106)	(176)	1	(292)
Earnings (loss) from continuing operations	1,207	1,207	1,017	1,212	(3,425)	1,218
Earnings (loss) from operation of discontinued operations	—	—	3	(8)	—	(5)
Income tax (provision) benefit from discontinued operations	—	—	(1)	1	—	—
Earnings (loss) from discontinued operations	—	—	2	(7)	—	(5)
Net earnings (loss)	1,207	1,207	1,019	1,205	(3,425)	1,213
Net (earnings) loss attributable to noncontrolling interests	—	—	—	(6)	—	(6)
Net earnings (loss) attributable to Celanese Corporation	1,207	1,207	1,019	1,199	(3,425)	1,207

CELANESE CORPORATION AND SUBSIDIARIES
CONSOLIDATING STATEMENT OF OPERATIONS

	Year Ended December 31, 2017					
	Parent Guarantor	Issuer	Subsidiary Guarantors	Non-Guarantors	Eliminations	Consolidated
	(In $ millions)					
Net sales	—	—	2,240	5,013	(1,113)	6,140
Cost of sales	—	—	(1,723)	(4,014)	1,108	(4,629)
Gross profit	—	—	517	999	(5)	1,511
Selling, general and administrative expenses	—	—	(189)	(307)	—	(496)
Amortization of intangible assets	—	—	(4)	(16)	—	(20)
Research and development expenses	—	—	(32)	(41)	—	(73)
Other (charges) gains, net	—	—	(6)	(53)	—	(59)
Foreign exchange gain (loss), net	—	—	—	(1)	—	(1)
Gain (loss) on disposition of businesses and assets, net	—	—	(8)	3	—	(5)
Operating profit (loss)	—	—	278	584	(5)	857
Equity in net earnings (loss) of affiliates	843	867	591	166	(2,284)	183
Non-operating pension and other postretirement employee benefit (expense) income	—	—	60	(16)	—	44
Interest expense	—	(20)	(104)	(30)	32	(122)
Interest income	—	25	4	5	(32)	2
Dividend income - equity investments	—	—	—	111	(3)	108
Other income (expense), net	—	(3)	2	4	—	3
Earnings (loss) from continuing operations before tax	843	869	831	824	(2,292)	1,075
Income tax (provision) benefit	—	(26)	(62)	(125)	—	(213)
Earnings (loss) from continuing operations	843	843	769	699	(2,292)	862
Earnings (loss) from operation of discontinued operations	—	—	(2)	(14)	—	(16)
Income tax (provision) benefit from discontinued operations	—	—	1	2	—	3
Earnings (loss) from discontinued operations	—	—	(1)	(12)	—	(13)
Net earnings (loss)	843	843	768	687	(2,292)	849
Net (earnings) loss attributable to noncontrolling interests	—	—	—	(6)	—	(6)
Net earnings (loss) attributable to Celanese Corporation	843	843	768	681	(2,292)	843

CELANESE CORPORATION AND SUBSIDIARIES
CONSOLIDATING STATEMENT OF COMPREHENSIVE INCOME (LOSS)

	Year Ended December 31, 2019					
	Parent Guarantor	Issuer	Subsidiary Guarantors	Non-Guarantors	Eliminations	Consolidated
	(In $ millions)					
Net earnings (loss)	852	881	776	619	(2,270)	858
Other comprehensive income (loss), net of tax						
Foreign currency translation	(16)	(16)	(39)	(48)	103	(16)
Gain (loss) from cash flow hedges	(30)	(30)	(6)	(4)	40	(30)
Pension and postretirement benefits	(7)	(7)	(6)	(7)	20	(7)
Total other comprehensive income (loss), net of tax	(53)	(53)	(51)	(59)	163	(53)
Total comprehensive income (loss), net of tax	799	828	725	560	(2,107)	805
Comprehensive (income) loss attributable to noncontrolling interests	—	—	—	(6)	—	(6)
Comprehensive income (loss) attributable to Celanese Corporation	799	828	725	554	(2,107)	799

CELANESE CORPORATION AND SUBSIDIARIES
CONSOLIDATING STATEMENT OF COMPREHENSIVE INCOME (LOSS)

	Year Ended December 31, 2018					
	Parent Guarantor	Issuer	Subsidiary Guarantors	Non-Guarantors	Eliminations	Consolidated
	(In $ millions)					
Net earnings (loss)	1,207	1,207	1,019	1,205	(3,425)	1,213
Other comprehensive income (loss), net of tax						
Unrealized gain (loss) on marketable securities	—	—	6	13	(19)	—
Foreign currency translation	(60)	(60)	(90)	(109)	259	(60)
Gain (loss) from cash flow hedges	(10)	(10)	(2)	(1)	13	(10)
Total other comprehensive income (loss), net of tax	(70)	(70)	(86)	(97)	253	(70)
Total comprehensive income (loss), net of tax	1,137	1,137	933	1,108	(3,172)	1,143
Comprehensive (income) loss attributable to noncontrolling interests	—	—	—	(6)	—	(6)
Comprehensive income (loss) attributable to Celanese Corporation	1,137	1,137	933	1,102	(3,172)	1,137

CELANESE CORPORATION AND SUBSIDIARIES
CONSOLIDATING STATEMENT OF COMPREHENSIVE INCOME (LOSS)

	Year Ended December 31, 2017					
	Parent Guarantor	Issuer	Subsidiary Guarantors	Non-Guarantors	Eliminations	Consolidated
	(In $ millions)					
Net earnings (loss)	843	843	768	687	(2,292)	849
Other comprehensive income (loss), net of tax						
Unrealized gain (loss) on marketable securities	(1)	(1)	(1)	(1)	3	(1)
Foreign currency translation	174	174	226	268	(668)	174
Gain (loss) from cash flow hedges	(1)	(1)	(1)	(1)	3	(1)
Pension and postretirement benefits	9	9	7	10	(26)	9
Total other comprehensive income (loss), net of tax	181	181	231	276	(688)	181
Total comprehensive income (loss), net of tax	1,024	1,024	999	963	(2,980)	1,030
Comprehensive (income) loss attributable to noncontrolling interests	—	—	—	(6)	—	(6)
Comprehensive income (loss) attributable to Celanese Corporation	1,024	1,024	999	957	(2,980)	1,024

CELANESE CORPORATION AND SUBSIDIARIES
CONSOLIDATING BALANCE SHEET

	As of December 31, 2019					
	Parent Guarantor	Issuer	Subsidiary Guarantors	Non-Guarantors	Eliminations	Consolidated
	(In $ millions)					
ASSETS						
Current Assets						
Cash and cash equivalents	—	—	16	447	—	463
Trade receivables - third party and affiliates	—	—	122	851	(123)	850
Non-trade receivables, net	56	1,188	1,925	743	(3,581)	331
Inventories, net	—	—	360	725	(47)	1,038
Marketable securities	—	—	24	16	—	40
Other assets	—	36	11	38	(42)	43
Total current assets	56	1,224	2,458	2,820	(3,793)	2,765
Investments in affiliates	4,064	5,217	4,206	841	(13,353)	975
Property, plant and equipment, net	—	—	1,461	2,252	—	3,713
Operating lease right-of-use assets	—	—	50	153	—	203
Deferred income taxes	—	—	—	101	(5)	96
Other assets	—	1,661	195	445	(1,963)	338
Goodwill	—	—	399	675	—	1,074
Intangible assets, net	—	—	125	187	—	312
Total assets	4,120	8,102	8,894	7,474	(19,114)	9,476
LIABILITIES AND EQUITY						
Current Liabilities						
Short-term borrowings and current installments of long-term debt - third party and affiliates	1,596	374	1,089	385	(2,948)	496
Trade payables - third party and affiliates	17	—	333	553	(123)	780
Other liabilities	—	49	188	397	(173)	461
Income taxes payable	—	—	439	80	(502)	17
Total current liabilities	1,613	423	2,049	1,415	(3,746)	1,754
Noncurrent Liabilities						
Long-term debt, net of unamortized deferred financing costs	—	3,565	1,677	101	(1,934)	3,409
Deferred income taxes	—	3	101	158	(5)	257
Uncertain tax positions	—	—	—	169	(4)	165
Benefit obligations	—	—	257	332	—	589
Operating lease liabilities	—	—	40	140	1	181
Other liabilities	—	47	93	118	(35)	223
Total noncurrent liabilities	—	3,615	2,168	1,018	(1,977)	4,824
Total Celanese Corporation stockholders' equity	2,507	4,064	4,677	4,650	(13,391)	2,507
Noncontrolling interests	—	—	—	391	—	391
Total equity	2,507	4,064	4,677	5,041	(13,391)	2,898
Total liabilities and equity	4,120	8,102	8,894	7,474	(19,114)	9,476

CELANESE CORPORATION AND SUBSIDIARIES
CONSOLIDATING BALANCE SHEET

	As of December 31, 2018					
	Parent Guarantor	Issuer	Subsidiary Guarantors	Non-Guarantors	Eliminations	Consolidated
	(In $ millions)					
ASSETS						
Current Assets						
Cash and cash equivalents	—	—	30	409	—	439
Trade receivables - third party and affiliates	—	—	96	1,040	(119)	1,017
Non-trade receivables, net	40	551	797	697	(1,784)	301
Inventories, net	—	—	329	765	(48)	1,046
Marketable securities	—	—	31	—	—	31
Other assets	—	24	10	37	(31)	40
Total current assets	40	575	1,293	2,948	(1,982)	2,874
Investments in affiliates	3,503	4,820	4,678	855	(12,877)	979
Property, plant and equipment, net	—	—	1,289	2,430	—	3,719
Deferred income taxes	—	—	—	86	(2)	84
Other assets	—	1,658	142	461	(1,971)	290
Goodwill	—	—	399	658	—	1,057
Intangible assets, net	—	—	132	178	—	310
Total assets	3,543	7,053	7,933	7,616	(16,832)	9,313
LIABILITIES AND EQUITY						
Current Liabilities						
Short-term borrowings and current installments of long-term debt - third party and affiliates	544	333	465	258	(1,039)	561
Trade payables - third party and affiliates	13	1	342	583	(120)	819
Other liabilities	1	87	267	258	(270)	343
Income taxes payable	—	—	475	88	(507)	56
Total current liabilities	558	421	1,549	1,187	(1,936)	1,779
Noncurrent Liabilities						
Long-term debt, net of unamortized deferred financing costs	—	3,104	1,679	127	(1,940)	2,970
Deferred income taxes	—	15	85	157	(2)	255
Uncertain tax positions	—	—	6	152	—	158
Benefit obligations	—	—	250	314	—	564
Other liabilities	1	10	99	138	(40)	208
Total noncurrent liabilities	1	3,129	2,119	888	(1,982)	4,155
Total Celanese Corporation stockholders' equity	2,984	3,503	4,265	5,146	(12,914)	2,984
Noncontrolling interests	—	—	—	395	—	395
Total equity	2,984	3,503	4,265	5,541	(12,914)	3,379
Total liabilities and equity	3,543	7,053	7,933	7,616	(16,832)	9,313

CELANESE CORPORATION AND SUBSIDIARIES
CONSOLIDATING STATEMENT OF CASH FLOWS

	Year Ended December 31, 2019					
	Parent Guarantor	Issuer	Subsidiary Guarantors	Non-Guarantors	Eliminations	Consolidated
	(In $ millions)					
Net cash provided by (used in) operating activities	1,297	(42)	1,044	716	(1,561)	1,454
Investing Activities						
Capital expenditures on property, plant and equipment	—	—	(246)	(124)	—	(370)
Acquisitions, net of cash acquired	—	—	(31)	(60)	—	(91)
Proceeds from sale of businesses and assets, net	—	—	9	—	(8)	1
Return of capital from subsidiary	—	—	10	—	(10)	—
Contributions to subsidiary	—	—	(222)	(218)	440	—
Intercompany loan receipts (disbursements)	—	—	(536)	—	536	—
Purchases of marketable securities	—	—	—	(16)	—	(16)
Other, net	—	—	—	(25)	8	(17)
Net cash provided by (used in) investing activities	—	—	(1,016)	(443)	966	(493)
Financing Activities						
Net change in short-term borrowings with maturities of 3 months or less	—	160	17	(4)	74	247
Proceeds from short-term borrowings	—	—	—	727	(610)	117
Repayments of short-term borrowings	—	—	—	(91)	—	(91)
Proceeds from long-term debt	—	499	—	—	—	499
Repayments of long-term debt	—	(335)	(1)	(24)	—	(360)
Purchases of treasury stock, including related fees	(996)	—	—	—	—	(996)
Dividends to parent	—	(272)	(251)	(1,038)	1,561	—
Contributions from parent	—	—	218	222	(440)	—
Stock option exercises	(1)	—	—	—	—	(1)
Common stock dividends	(300)	—	—	—	—	(300)
Return of capital to parent	—	—	—	(10)	10	—
(Distributions to) contributions from noncontrolling interests	—	—	—	(10)	—	(10)
Other, net	—	(10)	(25)	(5)	—	(40)
Net cash provided by (used in) financing activities	(1,297)	42	(42)	(233)	595	(935)
Exchange rate effects on cash and cash equivalents	—	—	—	(2)	—	(2)
Net increase (decrease) in cash and cash equivalents	—	—	(14)	38	—	24
Cash and cash equivalents as of beginning of period	—	—	30	409	—	439
Cash and cash equivalents as of end of period	—	—	16	447	—	463

CELANESE CORPORATION AND SUBSIDIARIES
CONSOLIDATING STATEMENT OF CASH FLOWS

	Year Ended December 31, 2018					
	Parent Guarantor	Issuer	Subsidiary Guarantors	Non-Guarantors	Eliminations	Consolidated
	(In $ millions)					
Net cash provided by (used in) operating activities	1,085	560	259	833	(1,179)	1,558
Investing Activities						
Capital expenditures on property, plant and equipment	—	—	(225)	(112)	—	(337)
Acquisitions, net of cash acquired	—	—	(144)	—	—	(144)
Proceeds from sale of businesses and assets, net	—	—	—	13	—	13
Return of capital from subsidiary	—	—	233	—	(233)	—
Contributions to subsidiary	—	—	(25)	—	25	—
Intercompany loan receipts (disbursements)	—	(427)	(66)	(285)	778	—
Other, net	—	—	(8)	(31)	—	(39)
Net cash provided by (used in) investing activities	—	(427)	(235)	(415)	570	(507)
Financing Activities						
Net change in short-term borrowings with maturities of 3 months or less	—	61	18	(51)	(66)	(38)
Proceeds from short-term borrowings	—	—	—	51	—	51
Repayments of short-term borrowings	—	—	—	(78)	—	(78)
Proceeds from long-term debt	—	846	427	—	(712)	561
Repayments of long-term debt	—	(494)	(26)	(16)	—	(536)
Purchases of treasury stock, including related fees	(805)	—	—	—	—	(805)
Dividends to parent	—	(541)	(633)	(5)	1,179	—
Contributions from parent	—	—	—	25	(25)	—
Common stock dividends	(280)	—	—	—	—	(280)
Return of capital to parent	—	—	—	(233)	233	—
(Distributions to) contributions from noncontrolling interests	—	—	—	(23)	—	(23)
Other, net	—	(5)	(10)	(2)	—	(17)
Net cash provided by (used in) financing activities	(1,085)	(133)	(224)	(332)	609	(1,165)
Exchange rate effects on cash and cash equivalents	—	—	—	(23)	—	(23)
Net increase (decrease) in cash and cash equivalents	—	—	(200)	63	—	(137)
Cash and cash equivalents as of beginning of period	—	—	230	346	—	576
Cash and cash equivalents as of end of period	—	—	30	409	—	439

CELANESE CORPORATION AND SUBSIDIARIES
CONSOLIDATING STATEMENT OF CASH FLOWS

	Year Ended December 31, 2017					
	Parent Guarantor	Issuer	Subsidiary Guarantors	Non-Guarantors	Eliminations	Consolidated
	(In $ millions)					
Net cash provided by (used in) operating activities	740	868	425	593	(1,823)	803
Investing Activities						
Capital expenditures on property, plant and equipment	—	—	(176)	(91)	—	(267)
Acquisitions, net of cash acquired	—	(11)	(12)	(274)	28	(269)
Proceeds from sale of businesses and assets, net	—	—	9	20	(28)	1
Return of capital from subsidiary	—	16	241	—	(257)	—
Intercompany loan receipts (disbursements)	—	(530)	(25)	—	555	—
Other, net	—	—	(2)	(12)	—	(14)
Net cash provided by (used in) investing activities	—	(525)	35	(357)	298	(549)
Financing Activities						
Net change in short-term borrowings with maturities of 3 months or less	—	56	15	51	(11)	111
Proceeds from short-term borrowings	—	—	—	182	—	182
Repayments of short-term borrowings	—	—	—	(124)	—	(124)
Proceeds from long-term debt	—	351	530	14	(544)	351
Repayments of long-term debt	—	(6)	(2)	(69)	—	(77)
Purchases of treasury stock, including related fees	(500)	—	—	—	—	(500)
Dividends to parent	—	(741)	(802)	(280)	1,823	—
Stock option exercises	1	—	—	—	—	1
Common stock dividends	(241)	—	—	—	—	(241)
Return of capital to parent	—	—	—	(257)	257	—
(Distributions to) contributions from noncontrolling interests	—	—	—	(27)	—	(27)
Other, net	—	(3)	(22)	(2)	—	(27)
Net cash provided by (used in) financing activities	(740)	(343)	(281)	(512)	1,525	(351)
Exchange rate effects on cash and cash equivalents	—	—	—	35	—	35
Net increase (decrease) in cash and cash equivalents	—	—	179	(241)	—	(62)
Cash and cash equivalents as of beginning of period	—	—	51	587	—	638
Cash and cash equivalents as of end of period	—	—	230	346	—	576

30. Subsequent Events

On January 30, 2020, the Company signed a definitive agreement to acquire Nouryon's redispersible polymer powders business offered under the Elotex® brand, subject to regulatory approval. As part of the acquisition, the Company will acquire all of Nouryon's global production facilities for redispersible polymer powders across Europe and Asia, all products under the Elotex® portfolio, as well as all customer agreements, technology and commercial facilities globally. The acquisition will be funded from cash on hand or from borrowings under the Company's senior unsecured revolving credit facility. The acquired operations will be included in the Acetyl Chain segment. The Company expects the acquisition to close in the second quarter of 2020 and does not expect the acquisition to be material to the Company's 2020 financial position or results of operations.

Exhibit 4.11

DESCRIPTION OF THE REGISTRANT'S SECURITIES REGISTERED PURSUANT TO SECTION 12 OF THE SECURITIES EXCHANGE ACT OF 1934

Celanese Corporation (the "Company") and its subsidiaries have four classes of securities registered under Section 12 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"): (1) the Company's common stock; (2) the 1.125% Senior Notes due 2023 of Celanese US Holdings LLC (the "Issuer") guaranteed by the Company and the other Guarantors (as defined below); (3) the 1.250% Senior Notes due 2025 of the Issuer guaranteed by the Company and the other Guarantors; and (4) the 2.125% Senior Notes due 2027 of the Issuer guaranteed by the Company and the other Guarantors.

DESCRIPTION OF THE COMPANY'S COMMON STOCK

The following is a summary of select provisions of the Company's capital stock, as well as other certain provisions of the Company's Second Amended and Restated Certificate of Incorporation, as amended (the "Charter"), and Sixth Amended and Restated By-laws, as amended (the "By-laws"). The descriptions set forth below are qualified in their entirety by reference to the relevant provisions of the Charter and By-laws, copies of which are filed as exhibits to this Annual Report on Form 10-K and are incorporated by reference herein.

Authorized Capitalization

As of January 30, 2020, the Company's authorized capital stock consisted of (i) 400,000,000 shares of common stock ("Common Stock"), par value $0.0001 per share, of which 168,973,893 shares were issued and 119,555,928 shares were outstanding, and (ii) 100,000,000 shares of preferred stock, par value $0.01 per share, of which none were issued and outstanding.

Common Stock

Voting Rights. Holders of Common Stock are entitled to one vote per share on all matters with respect to which the holders of Common Stock are entitled to vote. The holders of Common Stock do not have cumulative voting rights in the election of directors.

Dividend Rights. Holders of Common Stock are entitled to receive dividends if, as and when dividends are declared from time to time by the Company's board of directors out of funds legally available for that purpose, after payment of dividends required to be paid on outstanding preferred stock, as described below, if any. The Company's senior credit facilities and indentures impose restrictions on its ability to declare dividends with respect to the Company's Common Stock. Any decision to declare and pay dividends in the future will be made at the discretion of the board of directors and will depend on, among other things, results of operations, cash requirements, financial condition, contractual restrictions and factors that the board of directors may deem relevant.

Liquidation Rights. Upon liquidation, dissolution or winding up, the holders of Common Stock will be entitled to receive ratably the assets available for distribution to the stockholders after payment of liabilities and accrued but unpaid dividends and liquidation preferences on any outstanding preferred stock.

Other Matters. The Common Stock has no preemptive rights and, if fully paid, is not subject to further calls or assessment by the Company. There are no redemption or sinking fund provisions applicable to the

Common Stock. All shares of the Company's outstanding Common Stock are fully paid and non-assessable, and the shares of the Company's Common Stock offered.

Preferred Stock

The Company's Charter authorizes the board of directors to establish one or more series of preferred stock and to determine, with respect to any series of preferred stock, the terms and rights of that series, including:

- the designation of the series;
- the number of shares of the series, which the board of directors may, except where otherwise provided in the preferred stock designation, increase (but not above the total number of authorized shares of the class) or decrease (but not below the number of shares then outstanding);
- whether dividends, if any, will be cumulative or non-cumulative and the dividend rate of the series;
- the dates at which dividends, if any, will be payable;
- the redemption rights and price or prices, if any, for shares of the series;
- the terms and amounts of any sinking fund provided for the purchase or redemption of shares of the series;
- the amounts payable on shares of the series in the event of any voluntary or involuntary liquidation, dissolution or winding-up of the affairs of the Company;
- whether the shares of the series will be convertible into shares of any other class or series, or any other security, of the Company or any other corporation, and, if so, the specification of the other class or series or other security, the conversion price or prices or rate or rates, any rate adjustments, the date or dates as of which the shares will be convertible and all other terms and conditions upon which the conversion may be made;
- restrictions on the issuance of shares of the same series or of any other class or series; and
- the voting rights, if any, of the holders of the series.

Anti-Takeover Effects of Certain Provisions of Our Charter and By-laws

Certain provisions of the Company's Charter and By-laws, which are summarized in the following paragraphs, may have an anti-takeover effect and may delay, defer or prevent a tender offer or takeover attempt that a stockholder might consider in its best interest, including those attempts that might result in a premium over the market price for the shares held by stockholders.

Conflicts of Interest

As permitted by Delaware law, the Company's Charter renounces any interest or expectancy that we have in, or right to be offered an opportunity to participate in, business opportunities specified in the Charter. The Company's Charter provides that none of any director who is not employed by us (including any non-employee director who serves as one of our officers in both his director and officer capacities) or his or her affiliates will have any duty to refrain from (i) engaging in a corporate opportunity in the same or similar lines of business in which we or our affiliates now engage or propose to engage or (ii) otherwise competing with us. In addition, in the event that any non-employee director acquires knowledge of a potential transaction or other business opportunity which may be a corporate opportunity for himself or his affiliates and for us or our affiliates, such non-employee director will have no duty to communicate or offer such transaction or business opportunity to us and may take any such opportunity for themselves or offer it to another person or entity. The Company's Charter does not renounce our interest in any business opportunity expressly offered to a non-employee director solely in his or her capacity as a director or officer of the Company. No business opportunity offered to any non-employee director will be deemed to be a potential corporate opportunity for us unless we would be permitted to undertake the opportunity

under the Company's Charter, we have sufficient financial resources to undertake the opportunity and the opportunity would be in line with our business.

Removal of Directors

The Company's Charter and By-laws provide that directors may be removed with or without cause and only upon the affirmative vote of holders of at least 80% of the voting power of all the then outstanding shares of stock entitled to vote generally in the election of directors, voting together as a single class. In addition, the Company's Charter also provides that any newly created directorships and any vacancies on the board of directors will be filled only by the affirmative vote of the majority of remaining directors.

No Cumulative Voting

The Delaware General Corporation Law ("DGCL") provides that stockholders are not entitled to the right to cumulate votes in the election of directors unless the charter provides otherwise. The Company's Charter does not expressly provide for cumulative voting.

Calling of Special Meetings of Stockholders; Stockholder Action by Written Consent

The Company's Charter provides that a special meeting of stockholders may be called at any time only by the chairman of the board of directors, the board or a committee of the board of directors which has been granted such authority by the board.

The DGCL permits stockholder action by written consent unless otherwise provided by a company's charter. The Company's Charter precludes stockholder action by written consent.

Advance Notice Requirements for Stockholder Proposals and Director Nominations

The Company's By-laws provide that stockholders seeking to nominate candidates for election as directors or to bring business before an annual meeting of stockholders must provide timely notice of their proposal in writing to the corporate secretary.

Generally, to be timely, a stockholder's notice must be received at the Company's principal executive offices not less than 90 days nor more than 120 days prior to the first anniversary date on which the proxy materials for the previous year's annual meeting were first mailed. The Company's By-laws also specify requirements as to the form and content of a stockholder's notice. These provisions may impede stockholders' ability to bring matters before an annual meeting of stockholders or make nominations for directors at an annual meeting of stockholders.

Proxy Access

The Company's By-laws provide that a stockholder, or a group of up to 20 stockholders, that has continuously owned at least three percent of the outstanding common stock for three years, may nominate and include in the Company's annual meeting proxy materials a number of director nominees not to exceed the greater of two or 20% of the number of the Company's directors then serving on the Board of Directors (rounded down to the nearest whole number), provided that the stockholder(s) and the nominee(s) satisfy the requirements specified in the By-laws. Such nominations are subject to additional eligibility, procedural and disclosure requirements set forth in the By-laws, including the requirement that the Company must receive notice of such nominations not less than 90 days nor more than 120 days prior to the anniversary date of the immediately preceding annual meeting of stockholders.

Supermajority Provisions

Under the DGCL, the affirmative vote of a majority of the outstanding shares entitled to vote is required to amend a corporation's certificate of incorporation, and the affirmative vote of the majority of the shares entitled to vote, present in person or represented by proxy at any meeting at which a quorum is present, is required to amend a corporation's by-laws, unless the certificate of incorporation or by-laws (in the case of amendments to the by-laws) requires a greater percentage. The Company's Charter provides that the following provisions in the Charter and By-laws may be amended only by a vote of at least 80% of the voting power of all of the outstanding shares of our stock entitled to vote in the election of directors, voting together as a single class:

- the removal of directors;
- the filling of vacancies on the board of directors and newly created directorships;
- the advance notice requirements for stockholder proposals and director nominations;
- the ability to call a special meeting of stockholders being vested solely in the chairman of the board of directors, the board of directors, or a committee of the board of directors (if duly authorized to call special meetings);
- the provisions regarding stockholder action by written consent; and
- the amendment provision requiring that the above provisions be amended only with an 80% supermajority vote.

In addition, the Company's Charter grants the board of directors the authority to amend and repeal the By-laws without a stockholder vote in any manner not inconsistent with the laws of the State of Delaware or the Company's Charter.

Exclusive Forum

The Company's By-laws provides that a state court located within the State of Delaware (or if no state court located in Delaware has jurisdiction, then the federal court for the District of Delaware) will be the sole and exclusive forum for any derivative action or proceeding brought on our behalf, any action asserting a claim of breach of fiduciary duty owed by any of our directors or officers to us or our stockholders, any action asserting a claim against us or any of our directors or officers arising pursuant to any provision of the DGCL or our Certificate of Incorporation or By-laws (as either may be amended from time to time) or any action asserting a claim against us or any of our directors or officers governed by the internal affairs doctrine, unless the Company consents in writing to another jurisdiction.

Limitations on Liability and Indemnification of Officers and Directors

The DGCL authorizes corporations to limit or eliminate the personal liability of directors to corporations and their stockholders for monetary damages for breaches of directors' fiduciary duties. the Company's Charter includes a provision that eliminates the personal liability of directors for monetary damages for actions taken as a director, except for liability:

- for breach of duty of loyalty;
- for acts or omissions not in good faith or involving intentional misconduct or knowing violation of law;
- under Section 174 of the DGCL (unlawful dividends or stock repurchases and redemptions); or
- for transactions from which the director derived improper personal benefit.

The Company's Charter and By-laws provide that the Company must indemnify its directors and officers to the fullest extent authorized by the DGCL. The Company is also required to advance certain expenses (including attorneys' fees and disbursements and court costs) incurred by officers and directors in

defending a covered proceeding and expressly authorize to carry directors' and officers' insurance providing indemnification for directors, officers and certain employees for some liabilities. We believe that these indemnification provisions and insurance are useful to attract and retain qualified directors and executive officers.

The limitation of liability and indemnification provisions in the Company's Charter and By-laws may discourage stockholders from bringing a lawsuit against directors for breach of their fiduciary duty. These provisions may also have the effect of reducing the likelihood of derivative litigation against directors and officers, even though such an action, if successful, might otherwise benefit the Company and its stockholders. In addition, your investment may be adversely affected to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions.

There is currently no pending material litigation or proceeding involving any of the Company's directors, officers or employees for which indemnification is sought.

Delaware Anti-takeover Statute

Section 203 of the DGCL applies to the Company. Under certain circumstances, Section 203 limits the ability of an interested stockholder to effect various business combinations with the Company for a three-year period following the time that such stockholder becomes an interested stockholder. For purposes of Section 203, a "business combination" is broadly defined to include mergers, asset sales and other transactions resulting in a financial benefit to the interested stockholder. An "interested stockholder" is a person who, together with affiliates and associates, owns, or within the immediately preceding three years did own, 15% or more of the Company's voting stock.

An interested stockholder may not engage in a business combination transaction with the Company within the three-year period following the time that such stockholder became an interested stockholder unless:

- before such time, the board approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction in which the stockholder became an interested stockholder, the interested stockholder owned at least 85% of the Company's voting stock (excluding shares owned by officers, directors or certain employee stock purchase plans); or
- at or subsequent to such time the business combination is approved by the board and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least $66^{2}/_{3}$% of the outstanding voting stock which is not owned by the interested stockholder.

Transfer Agent and Registrar

Computershare Trust Company, N.A. is the transfer agent and registrar for the Company's Common Stock.

Listing

The Company's Common Stock is listed on the NYSE under the symbol "CE."

Authorized but Unissued Capital Stock

The DGCL does not require stockholder approval for any issuance of authorized shares. However, the listing requirements of the NYSE, which would apply so long as the Company's Common Stock is listed on the NYSE, require stockholder approval of certain issuances equal to or exceeding 20% of the then-

outstanding voting power or then outstanding number of shares of Common Stock. These additional shares may be used for a variety of corporate purposes, including future public offerings, to raise additional capital or to facilitate acquisitions.

One of the effects of the existence of unissued and unreserved common stock may be to enable the Company's board of directors to issue shares to persons friendly to current management, which issuance could render more difficult or discourage an attempt to obtain control of the Company by means of a merger, tender offer, proxy contest or otherwise, and thereby protect the continuity of management and possibly deprive the stockholders of opportunities to sell their shares of common stock at prices higher than prevailing market prices.

DESCRIPTION OF THE COMPANY'S 1.125% SENIOR NOTES DUE 2023, 1.250% SENIOR NOTES DUE 2025 AND 2.125% SENIOR NOTES DUE 2027

The following summary of our 1.125% Senior Notes due 2023 (the "2023 Notes"), our 1.250% Senior Notes due 2025 (the "2025 Notes") and our 2.125% Senior Notes due 2027 (the "2027 Notes" and, together with the 2025 Notes and the 2023 Notes, the "Notes") is based on, subject to, and qualified in its entirety by the Indenture dated as of May 6, 2011 (the "Base Indenture"), by and among the Issuer, the Guarantors (as defined below) and Wells Fargo Bank, National Association, as trustee (the "Trustee"), as supplemented in respect of the 2023 Notes by the sixth supplemental indenture thereto, dated as of September 26, 2016, by and among the Issuer, the Guarantors, the Trustee, and Deutsche Bank Trust Company Americas, as paying agent (the "Paying Agent") and as registrar and transfer agent (the "Transfer Agent"), as supplemented in respect of the 2025 Notes by the seventh supplemental indenture thereto dated as of December 11, 2017, by and among the Issuer, the Guarantors, the Trustee, the Paying Agent, and the Transfer Agent, and as supplemented in respect of the 2027 Notes by the eighth supplemental indenture thereto dated as of November 5, 2018, by and among the Issuer, the Guarantors, the Trustee, the Paying Agent, and the Transfer Agent (the Base Indenture, as supplemented, the "Indenture"), which are incorporated by reference as exhibits to the Annual Report on Form 10-K of which this Exhibit 4.11 is a part. The following description of the particular terms of the Notes is a summary, does not purport to be complete, and is qualified in its entirety by reference to all provisions of the Indenture and the Notes. We encourage you to read the Indenture for additional information. References to the "Company," "we," "us," "our" and similar words refer to Celanese Corporation and not to any of its subsidiaries. The 2023 Notes, the 2025 Notes and the 2030 Notes are traded on The New York Stock Exchange under the trading symbols "CE /23," "CE /25 and "CE /27," respectively.

Principal, Maturity and Interest

As of January 30, 2020, the Issuer had outstanding €750,000,000 aggregate principal amount of the 2023 Notes, €300,000,000 aggregate principal amount of the 2025 Notes and €500,000,000 aggregate principal amount of the 2027 Notes.

The 2023 Notes will mature on September 26, 2023, the 2025 Notes will mature on February 11, 2025 and the 2027 Notes will mature on March 1, 2027. The Indenture governing the notes provides for the issuance of additional notes of the same class and series, subject to compliance with the covenants contained in the Indenture. The Notes were issued in denominations of €100,000 and integral multiples of €1,000 in excess thereof.

Interest on the 2023 Notes accrues at the rate of 1.125% per annum and is payable annually in arrears on September 26; interest on the 2025 Notes accrues at the rate of 1.250% per annum and is payable annually in arrears on February 11; interest on the 2027 Notes accrues at the rate of 2.125% per annum

and is payable annually in arrears on March 1. The Issuer will make each interest payment to the holders of record of the Notes on the immediately preceding September 11, January 27 or February 15, as applicable. The rights of holders of beneficial interests of Notes to receive the payments of interest on such Notes are subject to the applicable procedures of Euroclear and Clearstream.

Interest on the Notes will accrue from the date of original issuance or, if interest has already been paid, from the date it was most recently paid. Interest will be computed on the basis of the actual number of days in the period for which interest is being calculated and the actual number of days from and including the last date on which interest was paid on the Notes (or September 26, 2016, December 11, 2017 or November 5, 2018, as applicable, if no interest has been paid on the Notes), to but excluding the next scheduled interest payment date. This payment convention is referred to as ACTUAL/ACTUAL (ICMA) as defined in the rulebook of the International Capital Markets Association.

Paying Agent and Payments on the Notes

Principal of, premium, if any, and interest on the Notes is payable at the office of the Paying Agent or, at the option of the Issuer, payment of interest may be made by check mailed to the holders of the Notes at their respective addresses set forth in the register of holders; *provided* that all payments of principal, premium, if any, and interest with respect to the Notes represented by one or more global notes deposited with, or on behalf of, a common depositary, and registered in the name of the nominee of the common depositary for the accounts of Clearstream and Euroclear are made through the facilities of the common depositary. The Issuer may change the paying agent without prior notice to the holders and the Issuer or any of its Subsidiaries may act as paying agent. The Issuer has undertaken to maintain a paying agent in a member state of the European Union that, to the extent permitted by law, will not be obliged to withhold or deduct tax pursuant to the European Union Directive 2003/48/EC regarding the taxation of savings income in relation to the Notes.

Registrar and Transfer Agent for the Notes

Deutsche Bank Trust Company Americas is the registrar and transfer agent for the Notes. The Issuer may change the registrar and the transfer agent without prior notice to the holders, and the Issuer or any of its Subsidiaries may act as the registrar or the transfer agent.

Transfer and Exchange

A holder may transfer or exchange Notes in accordance with the Indenture. The Transfer Agent may require a holder to furnish appropriate endorsements and transfer documents in connection with a transfer of Notes. Holders will be required to pay all taxes due on transfer. The Issuer is not required to transfer or exchange any Note selected for redemption or repurchase. Also, the Issuer is not required to transfer or exchange any Note for a period of 15 days before a selection of Notes to be redeemed or repurchased.

Transfers of book-entry interests in the Notes between participants in Euroclear or participants in Clearstream will be effected by Euroclear and Clearstream pursuant to customary procedures and subject to the applicable rules and procedures established by Euroclear or Clearstream and their respective participants.

Guarantees

The Notes are guaranteed by the Company and by each direct and indirect Subsidiary that guarantees the Issuer’s obligations under the Credit Agreement (the “Subsidiary Guarantors”), subject to the provisions

regarding the release and discharge of Guarantees described herein. The Guarantors jointly and severally guarantee the Issuer's obligations under the Indenture and the Notes on a senior unsecured, full and unconditional basis. The obligations of each Guarantor (other than a company that is a direct or indirect parent of the Issuer) under its Guarantee are limited as necessary to prevent the Guarantee from constituting a fraudulent conveyance or fraudulent transfer under applicable law. By virtue of this limitation, a Guarantor's obligation under its Guarantee could be significantly less than amounts payable with respect to the Notes, or a Guarantor may have effectively no obligation under its Guarantee. In an effort to alleviate the effect of this limitation, each Guarantor that makes a payment or distribution under a Guarantee is entitled to a contribution from each other Guarantor (if any) in an amount pro rata, based on the net assets of each Guarantor.

Each Guarantor may consolidate with or merge into or sell its assets to the Issuer or another Guarantor without limitation, or with, into or to any other Person upon the terms and conditions set forth in the Indenture. See "-Certain Covenants-Merger, Consolidation or Sale of Assets."

A Guarantor (other than a company that is a direct or indirect parent of the Issuer except in the case of clause (a)(i)(B) or (E) below) shall be automatically and unconditionally released and discharged from all of its obligations under its Guarantee of the Notes if (a) (i) (A) all of its assets or Capital Stock is sold or transferred, (B) the Guarantor merges with or into, or consolidates with or amalgamates with, or transfers all or substantially all of its assets to, another Person in compliance with the covenant described under "-Certain Covenants-Merger, Consolidation or Sale of Assets," (C) such Guarantor ceases to be a Subsidiary of the Issuer in connection with any (direct or indirect) sale of Capital Stock or other transaction; or (D) the notes are subject to legal defeasance or the Indenture is satisfied and discharged as provided below under the captions "-Legal Defeasance and Covenant Defeasance" and "-Satisfaction and Discharge;" and (ii) such Guarantor is released from its guarantee of the Credit Agreement or (b) such Guarantor ceases to, or substantially contemporaneously with the release of such Guarantor's obligation under its Guarantee hereunder will cease to, or at such time does not, guarantee the Issuer's obligations under the Credit Agreement; provided that such Guarantor has delivered to the Trustee a certificate of a Responsible Officer and an Opinion of Counsel, each stating that all conditions precedent herein provided for relating to such transaction have been complied with.

Issuance in Euro

All payments of interest and principal, including payments made upon any redemption of the Notes, are payable in euros. If the euro is unavailable to us due to the imposition of exchange controls or other circumstances beyond our control or if the euro is no longer being used by the then member states of the European Union that have adopted the euro as their currency or for the settlement of transactions by public institutions of or within the international banking community, then all payments in respect of the Notes will be made in dollars until the euro is again available to us or so used. The amount payable on any date in euros will be converted into dollars on the basis of the most recently available market exchange rate for euro. Any payment in respect of the Notes so made in dollars will not constitute an event of default under the Notes or the Indenture. Neither the Trustee nor the Paying Agent shall have any responsibility for any calculation or conversion in connection with the foregoing.

Ranking

Senior Debt

The Notes are general unsecured obligations of the Issuer that rank senior in right of payment to all existing and future Indebtedness that is expressly subordinated in right of payment to the Notes. The

Notes rank equally in right of payment with all existing and future liabilities of the Issuer that are not so subordinated and will be effectively subordinated to (a) all of the Issuer's Secured Debt, if any, to the extent of the value of the assets securing such Indebtedness) and (b) liabilities of our Subsidiaries that do not guarantee the Notes. In the event of bankruptcy, liquidation, reorganization or other winding up of the Issuer or the Guarantors or upon a default in payment with respect to, or the acceleration of, any senior secured Indebtedness, the assets of the Issuer and the Guarantors that secure such senior secured Indebtedness will be available to pay obligations on the Notes and the Guarantees only after all Indebtedness under such senior secured Indebtedness has been repaid in full from such assets. We advise you that there may not be sufficient assets remaining to pay amounts due on any or all the Notes and the Guarantees then outstanding.

Liabilities of Subsidiaries versus Notes

Some of the Subsidiaries of the Issuer do not guarantee the Notes, and, as described above under "-Guarantees," Guarantees of Subsidiaries may be released under certain circumstances. In addition, future Subsidiaries of the Issuer may not be required to guarantee the Notes. Claims of creditors of any Subsidiaries that are not Guarantors, including trade creditors and creditors holding indebtedness or guarantees issued by such Subsidiaries, and claims of preferred stockholders of such Subsidiaries generally have priority with respect to the assets and earnings of such Subsidiaries over the claims of creditors of the Issuer, including holders of the Notes. Accordingly, the Notes and each Guarantee are effectively subordinated to creditors (including trade creditors) and preferred stockholders, if any, of such Subsidiaries that are not Guarantors.

The Indenture does not impose any limitation on the incurrence of unsecured Indebtedness and preferred stock by the Issuer and certain of its Subsidiaries.

Redemption

Optional Redemption

Each series of Notes may be redeemed, in whole or in part, at the option of the Issuer upon not less than 30 nor more than 60 days' prior notice sent to each holder's registered address, at a redemption price equal to, in the case of the 2023 Notes, 100% of the principal amount of the Notes redeemed *plus* the Applicable Premium as of, and accrued and unpaid interest to the applicable redemption date (subject to the right of holders of record on the relevant record date to receive interest due on the relevant interest payment date), and in the case of the 2025 Notes and 2027 Notes, the greater of:

- 100% of the principal amount of the Notes redeemed; and
- the sum of the present values of the remaining scheduled payments of principal and interest (at the rate in effect on the date of calculation of the redemption price) on the Notes to be redeemed that would be due if such Notes matured on November 11, 2024, with respect to the 2025 Notes or December 1, 2026, with respect to the 2027 Notes (exclusive of interest accrued to the date of redemption), discounted to the date of redemption on an annual basis (ACTUAL/ACTUAL (ICMA)) at the Bund Rate plus 20 basis points (in the case of the 2025 Notes) or 30 basis points (in the case of the 2027 Notes).

In addition, commencing June 26, 2023, with respect to the 2023 Notes (three months prior to the maturity of the 2023 Notes), November 11, 2024, with respect to the 2025 Notes (three months prior to the maturity of the 2025 Notes) and December 1, 2026 with respect to the 2027 Notes (three months prior to the maturity of the 2027 Notes) the Issuer may redeem the applicable series of Notes, in whole or in part, at any time and from time to time, upon not less than 30 nor more than 60 days' prior notice sent to

each holder’s registered address, at a redemption price equal to 100% of the principal amount of the Notes being redeemed plus accrued and unpaid interest to the applicable redemption date (subject to the right of holders of record on the relevant record date to receive interest due on the relevant interest payment date).

The Issuer may also acquire Notes by means other than a redemption, whether by tender offer, open market purchases, negotiated transactions or otherwise, in accordance with applicable securities laws, so long as such acquisition does not otherwise violate the terms of the Indenture.

Mandatory Redemption

The Issuer is not required to make mandatory redemption or sinking fund payments with respect to the Notes.

Redemption for Tax Reasons

If, as a result of any change in, or amendment to, the laws (or any regulations or rulings promulgated under the laws) of the United States, or any change in, or amendments to, an official position regarding the application or interpretation of such laws, regulations or rulings (including by virtue of a holding, judgment or order by a court of competent jurisdiction or a change in published administrative practice) which change or amendment is announced and becomes effective after the date of the prospectus supplement relating to a series of Notes, the Issuer becomes or will become obligated to pay Additional Amounts on such series of Notes as described under the heading “- Payment of Additional Amounts” with respect to such Notes (and such obligation cannot be avoided by taking reasonable measures available to the Issuer), then the Issuer may, at any time at its option, redeem, in whole, but not in part, the Notes of such series on not less than 15 nor more than 60 days prior notice to the holders of such Notes, at a redemption price equal to 100% of their principal amount, together with accrued and unpaid interest (if any) on the Notes being redeemed to, but excluding, the redemption date (subject to the rights of holders of record on the relevant record date to receive interest due on the relevant interest date and Additional Amounts, if any, in respect thereof) and all Additional Amounts, if any, then due and which will become due on the redemption date as a result of the redemption or otherwise; provided, however, that the notice of redemption shall not be given earlier than 90 days before the earliest date on which the Issuer would be obligated to pay such Additional Amounts if a payment in respect of such Notes were then due and unless at the time such notice is given such obligation to pay Additional Amounts remains in effect (or will be in effect at the time of such redemption). Prior to any such notice of redemption, the Issuer will deliver to the Trustee (a) an Officer’s Certificate stating that it is entitled to effect such redemption and that the obligation to pay Additional Amounts cannot be avoided by taking reasonable measures available to it and (b) a written opinion of independent counsel selected by the Issuer to the effect that the Issuer has been or will become obligated to pay Additional Amounts.

The Trustee and paying agent will accept and will be entitled to conclusively rely upon the Officer’s Certificate and opinion of counsel as sufficient evidence of the satisfaction of the conditions precedent described above for the Issuer to exercise its right to redeem such Notes, which determination will be conclusive and binding on the holders.

Payment of Additional Amounts

All payments by the Issuer or any Guarantor on the Notes or any Guarantee will be made free and clear of and without withholding or deduction for or on account of any present or future tax, assessment or other governmental charges and any penalties, interest or additions to tax with respect thereto (each a “tax”)

imposed by the United States, unless the withholding or deduction of such taxes is required by law or the official interpretation or administration thereof.

If any taxes imposed by the United States are required to be withheld or deducted in respect of any payment made under or with respect to any series of Notes or any Guarantee, the Issuer or applicable Guarantor will, subject to the exceptions and limitations set forth below, pay additional amounts ("Additional Amounts") as are necessary in order that the net amounts received in respect of such payments by each beneficial owner who is not a United States person after such withholding or deduction by any applicable withholding agent (including any withholding or deduction in respect of such Additional Amounts) will equal the amounts which would have been received in respect of such payments on any such Note or Guarantee in the absence of such withholding or deduction; provided, however, that the foregoing obligation to pay additional amounts shall not apply:

(a) to any tax to the extent such tax is imposed by reason of the holder (or the beneficial owner for whose benefit such holder holds such Note), or a fiduciary, settlor, beneficiary, member or stockholder of the holder if the holder is an estate, trust, partnership or corporation, or a person holding a power over an estate or trust administered by a fiduciary holder, being considered as:

(i) being or having been engaged in a trade or business in the United States or having or having had a permanent establishment in the United States;

(ii) having or having had any other connection with the United States (other than a connection arising solely as a result of the ownership of such Notes, the receipt of any payment or the enforcement of any rights under such Notes or Guarantee), including being or having been a citizen or resident of the United States;

(iii) being or having been a personal holding company, a passive foreign investment company or a controlled foreign corporation for United States federal income tax purposes or a corporation that has accumulated earnings to avoid United States federal income tax;

(iv) being or having been a "10-percent shareholder" of the Company as defined in section 871(h)(3) of the United States Internal Revenue Code of 1986, as amended (the "Code"); or

(v) being or having been a bank receiving payments on an extension of credit made pursuant to a loan agreement entered into in the ordinary course of its trade or business, as described in section 881(c)(3)(A) of the Code or any successor provisions;

(b) to any holder that is not the sole beneficial owner of such Notes or that is a fiduciary, partnership or limited liability company, but only to the extent that a beneficial owner with respect to the holder, a beneficiary or settlor with respect to the fiduciary, or a beneficial owner or member of the partnership or limited liability company would not have been entitled to the payment of an additional amount had the beneficiary, settlor, beneficial owner or member received directly its beneficial or distributive share of the payment;

(c) to any tax to the extent such tax would not have been imposed but for the failure of the holder or the beneficial owner to comply with certification, identification or other information reporting requirements concerning the nationality, residence, identity or connection with the United States of the holder or beneficial owner of such Notes, if compliance is required by statute, by regulation of the United States or any taxing authority therein or by an applicable income tax treaty to which the United States is a

party as a precondition to exemption from, or reduction of, such tax, but only to the extent that the holder or beneficial owner is legally eligible to provide such certification or other evidence;

(d) to any tax that is imposed otherwise than by withholding or deduction in respect of a payment on such Notes or Guarantee;

(e) to any estate, inheritance, gift, sales, transfer, wealth or similar tax;

(f) to any withholding or deduction that is imposed on a payment to a holder or beneficial owner and that is required to be made pursuant to any law implementing or complying with, or introduced in order to conform to, any European Union Directive on the taxation of savings;

(g) to any tax required to be withheld by any paying agent from any payment of principal of or interest on such Note, if such payment can be made without such withholding by at least one other paying agent;

(h) to any tax to the extent such tax would not have been imposed or levied but for the presentation by the holder or beneficial owner of such Note, where presentation is required, for payment on a date more than 30 days after the date on which payment became due and payable or the date on which payment thereof is duly provided for, whichever occurs later;

(i) to any tax to the extent such tax is imposed or withheld solely by reason of the beneficial owner being a bank (1) purchasing such Notes in the ordinary course of its lending business or (2) that is neither (A) buying such Notes for investment purposes only nor (B) buying such Notes for resale to a third-party that either is not a bank or holding such Notes for investment purposes only;

(j) to any tax imposed under sections 1471 through 1474 of the Code as of the issue date (or any amended or successor provision that is substantively comparable and not materially more onerous to comply with), any current or future regulations or official interpretations thereof, any agreement entered into pursuant to current section 1471(b) of the Code (or any amended or successor version described above) or any fiscal or regulatory legislation, rules or practices adopted pursuant to any intergovernmental agreement (or related laws or official administrative practices) implementing the foregoing; or

(k) in the case of any combination of clauses (a) through (j).

The Notes are subject in all cases to any tax, fiscal or other law or regulation or administrative or judicial interpretation applicable to the Notes. Except as specifically provided under this heading "- Payment of Additional Amounts," the Issuer (or any Guarantor, if applicable) will not be required to make any payment for any tax imposed by any government or a political subdivision or taxing authority of or in any government or political subdivision.

The Issuer or applicable Guarantor will use reasonable efforts to obtain certified copies of tax receipts evidencing the payment of any taxes so deducted or withheld, or other evidence reasonably satisfactory to the Trustee, and will provide such copies or other evidence to the Trustee.

The foregoing obligations will survive any termination, defeasance or discharge of the Indenture and will apply *mutatis mutandis* to any successor to the Issuer or any Guarantor.

Repurchase at the Option of Holders

Change of Control Offer

If a Change of Control Event occurs with respect to a series of Notes, each holder of such Notes will have the right to require the Issuer to repurchase all or any part (equal to €100,000 or an integral multiple of €1,000 in excess thereof) of that holder's Notes of such series pursuant to a Change of Control Offer on the terms set forth in the Indenture. In the Change of Control Offer, the Issuer will offer a Change of Control Payment in cash equal to 101% of the aggregate principal amount of the Notes repurchased plus accrued and unpaid interest on the Notes repurchased, to the date of purchase. Within 30 days following any Change of Control Event, the Issuer will send a notice to each holder of the relevant series of Notes describing the transaction or transactions that constitute the Change of Control and offering to repurchase such Notes on the Change of Control Payment Date specified in the notice, which date will be no earlier than 30 days and no later than 60 days from the date such notice is sent, pursuant to the procedures required by the Indenture and described in such notice. The Issuer will comply with the requirements of Rule 14e-1 under the Exchange Act and any other securities laws and regulations thereunder to the extent those laws and regulations are applicable in connection with the repurchase of such Notes as a result of a Change of Control Event. To the extent that the provisions of any securities laws or regulations conflict with the Change of Control provisions of the Indenture, the Issuer will comply with the applicable securities laws and regulations and will not be deemed to have breached its obligations under the Change of Control provisions of the Indenture by virtue of such conflict.

On the Change of Control Payment Date, the Issuer will, to the extent lawful:

(a) accept for payment all Notes of such series or portions of Notes of such series properly tendered pursuant to the Change of Control Offer;

(b) deposit with the Paying Agent an amount equal to the Change of Control Payment in respect of all Notes of such series or portions of Notes of such series properly tendered; and

(c) deliver or cause to be delivered to the Trustee the Notes of such series properly accepted together with an officers' certificate stating the aggregate principal amount of Notes of such series or portions of Notes of such series being purchased by the Issuer.

The Paying Agent will promptly distribute to each holder of such Notes properly tendered the Change of Control Payment for such Notes, and the Trustee will promptly authenticate and mail (or cause to be transferred by book entry) to each holder a new Note equal in principal amount to any unpurchased portion of the Notes surrendered, if any; *provided* that each new Note will be in a principal amount of €1,000 or an integral multiple of €1,000 in excess thereof.

The provisions described above that require the Issuer to make a Change of Control Offer following a Change of Control Event will be applicable whether or not any other provisions of the Indenture are applicable. Except as described above with respect to a Change of Control Event, the Indenture contains no provisions that permit the holders of the Notes to require that the Issuer repurchase or redeem the Notes in the event of a takeover, recapitalization or similar transaction.

The Issuer will not be required to make a Change of Control Offer upon a Change of Control Event if (1) a third party makes the Change of Control Offer in the manner, at the times and otherwise in compliance with the requirements set forth in the Indenture applicable to a Change of Control Offer made by the Issuer and purchases all Notes of the relevant series properly tendered and not withdrawn under the

Change of Control Offer or (2) notice of redemption has been given pursuant to the Indenture as described above under the caption "-Optional Redemption," unless and until there is a default in the payment of the applicable redemption price. Notwithstanding anything to the contrary contained herein, a Change of Control Offer may be made in advance of a Change of Control Event or conditional upon the occurrence of a Change of Control Event, if a definitive agreement is in place for the Change of Control at the time the Change of Control Offer is made and such Change of Control Offer is otherwise made in compliance with the provisions of this covenant.

The definition of Change of Control includes a phrase relating to the direct or indirect sale, lease, transfer, conveyance or other disposition of "all or substantially all" of the properties or assets of the Issuer and its Subsidiaries taken as a whole. Although there is a limited body of case law interpreting the phrase "substantially all," there is no precise established definition of the phrase under applicable law. Accordingly, the ability of a holder of Notes to require the Issuer to repurchase its Notes as a result of a sale, lease, transfer, conveyance or other disposition of less than all of the assets of the Issuer and its Subsidiaries taken as a whole to another Person or group may be uncertain.

Selection and Notice

If less than all of the Notes of a series are to be redeemed at any time, the Transfer Agent will select the relevant Notes for redemption or purchase on a *pro rata* basis or by lot in minimum denominations of €100,000 and integral multiples of €1,000 in excess thereof based on a method that most nearly approximates *pro rata* or by lot selection as is practicable in accordance with Clearstream and Euroclear guidelines, unless otherwise required by law or applicable stock exchange or depositary requirements.

The Transfer Agent will promptly notify the Issuer in writing of the Notes selected for redemption or purchase and, in the case of any series of Notes selected for partial redemption or purchase, the principal amount thereof to be redeemed or purchased. No Notes having principal of less than minimum denominations of €100,000 and integral multiples of €1,000 in excess thereof shall be redeemed in part; except that if all of the Notes of a series held by a holder are to be redeemed or purchased, the entire outstanding amount of the Notes of such series held by the holder shall be redeemed or purchased. Except as provided in the preceding sentence, provisions of the Indenture that apply to the Notes of a series called for redemption or purchase also apply to portions of the Notes of such series called for redemption or purchase.

Notices of redemption will be sent at least 30 but not more than 60 days before the redemption date to each holder of Notes to be redeemed at its registered address, except that redemption notices may be sent more than 60 days prior to a redemption date if the notice is issued in connection with a defeasance of Notes or a satisfaction and discharge of the Indenture with respect to a series of Notes. Notices of redemption may not be conditional.

If any Note is to be redeemed in part only, the notice of redemption that relates to that Note will state the portion of the principal amount of that Note that is to be redeemed. A new Note in principal amount equal to the unredeemed portion of the original Note will be issued in the name of the holder of Notes upon cancellation of the original Note. However, no Notes of less than minimum denominations of €100,000 and integral multiples of €1,000 in excess thereof will be redeemed in part. Notes called for redemption become due on the date fixed for redemption. On and after the redemption date, interest ceases to accrue on Notes or portions of them called for redemption if funds sufficient to pay the redemption price have been deposited with a paying agent.

Certain Covenants

Liens

The Issuer will not, and will not permit any Subsidiary to, create, incur, issue, assume or guarantee any Indebtedness secured by a Lien (other than Permitted Liens) upon any Principal Property or Capital Stock of any Subsidiary that directly owns any Principal Property without in any such case making or causing to be made effective provision whereby the Notes (together with, if the Issuer shall so determine, any other Indebtedness of the Company or such Subsidiary then existing or thereafter created which is not subordinate to the Notes) shall be secured equally and ratably with (or prior to) such Indebtedness, so long as such Indebtedness shall be so secured, unless after giving effect thereto, the aggregate amount (without duplication) of all such Indebtedness plus all Attributable Debt of the Issuer and its Subsidiaries in respect of any Sale and Leaseback Transaction would not exceed 15% of Consolidated Net Tangible Assets.

Sale / Lease-Back Transactions

The Issuer will not, and will not permit any of its Subsidiaries to, enter into any Sale and Lease-Back Transaction with respect to any Principal Property unless,

(a) the Issuer or such Subsidiary would be entitled to create, incur, issue, assume or guarantee Indebtedness secured by a Lien pursuant to the provisions described under “Certain Covenants-Liens” on the Principal Property to be leased in an amount equal to the Attributable Debt with respect to such Sale and Leaseback Transaction without equally and ratably securing the Notes;

(b) the Issuer or such Subsidiary shall apply, within 180 days of the effective date of any such arrangement, an amount not less than the greater of (i) the net proceeds of the sale of such Principal Property or (ii) the fair market value (as determined by the Board of Directors) of such Principal Property to either the prepayment or retirement (other than any mandatory prepayment or retirement) of Indebtedness incurred or assumed by the Issuer or such Subsidiary (other than Indebtedness owned by Issuer or any of its Subsidiaries) which by its terms matures at or is extendible or renewable at the option of the obligor to a date more than twelve months after the date of the creation of such Indebtedness, or to the acquisition, construction or improvement of a manufacturing plant or manufacturing facility; or

(c) the Attributable Debt of the Issuer or such Subsidiary in respect of such Sale and Lease-Back Transaction and all other Sale and Lease-Back Transactions entered into after the Issue Date (other than any such Sale and Lease-Back Transaction as would be permitted as described in clauses (a) and (b) of this covenant, plus the aggregate principal amount of Indebtedness secured by Liens then outstanding (not including any such Indebtedness secured by Permitted Liens) which do not equally and ratably secure the Notes (or secure the Notes on a basis that is prior to other Indebtedness secured thereby) would not exceed 15% of Consolidated Net Tangible Assets.

Merger, Consolidation or Sale of Assets

Consolidation, Merger or Sale of Assets of the Issuer

The Issuer may not, directly or indirectly: (a) consolidate or merge with or into or wind up into another Person (whether or not the Issuer is the surviving Person); or (b) sell, assign, transfer, convey or otherwise dispose of all or substantially all of its properties or assets, in one or more related transactions, to another Person; unless:

(i) either: (1) the Issuer is the surviving Person; or (2) the Person formed by or surviving any such consolidation or merger (if other than the Issuer) or to which such sale, assignment, transfer, conveyance or other disposition has been made is a corporation, limited liability company or limited partnership organized or existing under the laws of the jurisdiction of organization of the Issuer or the United States, any state of the United States, the District of Columbia or any territory thereof (the Issuer or such Person, as the case may be, hereinafter referred to as the "Successor Company");

(ii) the Successor Company (if other than the Issuer) expressly assumes all the obligations of the Issuer the Indenture and all debt securities issued thereunder pursuant to agreements reasonably satisfactory to the Trustee;

(iii) immediately after such transaction no Default or Event of Default exists;

(iv) each Guarantor, unless it is the other party to the transactions described above, in which case clause (ii) shall apply, shall have confirmed in writing that its Guarantee shall apply to such Person's obligations under the Notes and the Indenture; and

(v) the Issuer shall have delivered to the Trustee a certificate from a Responsible Officer and an opinion of counsel, each stating that such consolidation, merger or transfer and such amendment or supplement (if any) comply with the Indenture.

The Successor Company will succeed to, and be substituted for, the Issuer under the Indenture and the Notes. Notwithstanding the foregoing clauses (iii) and (iv), (x) any Subsidiary may consolidate with, merge into or transfer all or part of its properties and assets to the Issuer or to another Subsidiary and (y) the Issuer may merge with an Affiliate incorporated solely for the purpose of reincorporating the Issuer in a (or another) state of the United States, so long as the amount of Indebtedness of the Issuer and its Subsidiaries is not increased thereby.

Consolidation, Merger or Sale of Assets by a Guarantor

Subject to the provisions described under "-Guarantees-Release," no Guarantor shall consolidate or merge with or into or wind up into (whether or not such Guarantor is the surviving Person), or sell, assign, transfer, lease, convey or otherwise dispose of all or substantially all of its properties or assets in one or more related transactions to, any Person, unless:

(a) such Guarantor is the surviving Person or the Person formed by or surviving any such consolidation or merger (if other than such Guarantor) or to which such sale, assignment, transfer, lease, conveyance or other disposition will have been made is a corporation, limited liability company or limited partnership organized or existing under the laws of the United States, any state thereof, the District of Columbia or any territory thereof (such Guarantor or such Person, as the case may be, being herein called the "Successor Guarantor");

(b) the Successor Guarantor (if other than such Guarantor) expressly assumes all the obligations of such Guarantor under the Indenture pursuant to supplemental indentures or other documents or instruments in form reasonably satisfactory to the Trustee;

(c) immediately after such transaction no Default or Event of Default exists; and

(d) the Issuer shall have delivered to the Trustee a certificate from a Responsible Officer and an Opinion of Counsel, each stating that such consolidation, merger or transfer and such amendment or supplement (if any) comply with the Indenture.

The Successor Guarantor will succeed to, and be substituted for, such Guarantor under the Indenture. Notwithstanding the foregoing, (i) a Guarantor may merge with an Affiliate incorporated solely for the purpose of reincorporating such Guarantor in another state of the United States, the District of Columbia or any territory thereof, so long as the amount of Indebtedness of the Guarantor is not increased thereby, (ii) any Guarantor may merge into or transfer all or part of its properties and assets to the Issuer or another Guarantor and (iii) a transfer of assets or Capital Stock of any Guarantor shall be permitted (including all or substantially all the assets of any Guarantor). Notwithstanding anything to the contrary herein, except as expressly permitted under the Indenture no Guarantor shall be permitted to consolidate with, merge into or transfer all or part of its properties and assets to the Company.

Additional Guarantees

The Issuer will cause each Subsidiary that guarantees any Indebtedness of the Issuer or any of the Guarantors under the Credit Agreement, in each case, substantially at the same time, to execute and deliver to the Trustee a Guarantee pursuant to which such Subsidiary will unconditionally Guarantee, on a joint and several basis, the full and prompt payment of the principal of, premium, interest and additional amounts, if any, on the Notes and all other obligations under the Indenture on the same terms and conditions as those set forth in the Indenture.

Reports

Whether or not required by the Commission, so long as any Notes are outstanding, the Issuer will electronically file with the Commission by the respective dates specified in the Commission's rules and regulations (each a "Required Filing Date"), unless, in any such case, such filings are not then permitted by the Commission:

(a) all quarterly and annual financial information that would be required to be contained in a filing with the Commission on Forms 10-Q and 10-K if the Issuer were required to file such Forms, including a "Management's Discussion and Analysis of Financial Condition and Results of Operations" and, with respect to the annual information only, a report on the annual financial statements by the Issuer's certified independent accountants; and

(b) all current reports that would be required to be filed with the Commission on Form 8-K if the Issuer were required to file such reports;

If such filings with Commission are not then permitted by the Commission, or such filings are not generally available on the Internet free of charge, the Issuer will, within 15 days of each Required Filing Date, transmit by mail to holders of the Notes, as their names and addresses appear in the note register, without cost to such holders of the Notes, and file with the Trustee copies of the information or reports that the Issuer would be required to file with the Commission pursuant to the first paragraph if such filing were then permitted.

So long as the Parent Guarantor complies with the requirements of Rule 3-10 of Regulation S-X promulgated by the Commission (or any successor provision), the reports, information and other documents required to be filed and furnished to holders of the Notes pursuant to this covenant may, at the option of the Issuer, be filed by and be those of the Company rather than the Issuer.

The availability of the foregoing reports on the Commission's EDGAR service (or successor thereto) shall be deemed to satisfy the Issuer's delivery obligations to the Trustee and holders.

Delivery of such reports, information and documents to the Trustee is for informational purposes only, and the Trustee's receipt of such shall not constitute constructive notice of any information contained therein or determinable from information contained therein, including the Issuer's compliance with any of its covenants hereunder (as to which the Trustee is entitled to rely exclusively on Officer's Certificates).

Events of Default and Remedies

Under the Indenture, an "Event of Default" with respect to Notes of a particular series is defined as any of the following:

(a) the Issuer defaults in payment when due and payable, upon redemption, acceleration or otherwise, of principal of, or premium, if any, on such Notes;

(b) the Issuer defaults in the payment when due of interest on or with respect to such Notes and such default continues for a period of 30 days;

(c) the Issuer defaults in the performance of, or breaches any covenant, warranty or other agreement contained in the Indenture (other than a default in the performance or breach of a covenant, warranty or agreement which is specifically dealt with in clauses (a) or (b) above) and such default or breach continues for a period of 60 days after the notice specified below;

(d) a default under any mortgage, indenture or instrument under which there is issued or by which there is secured or evidenced any Indebtedness for money borrowed by the Issuer or any Subsidiary (other than Indebtedness under a Qualified Securitization Financing), in the case of the 2023 Notes, or any Subsidiary Guarantor (other than Indebtedness under a Qualified Securitization Financing), in the case of the 2025 Notes and the 2027 Notes, or the payment of which is guaranteed by the Issuer or any Subsidiary (other than Indebtedness under a Qualified Securitization Financing) (other than Indebtedness owed to the Issuer or a Subsidiary), in the case of the 2023 Notes, or any Subsidiary Guarantor (other than Indebtedness under a Qualified Securitization Financing) (other than Indebtedness owed to the Issuer or a Subsidiary), in the case of the 2025 Notes and the 2027 Notes, whether such Indebtedness or guarantee existed prior to the issuance of such Notes or was created after the issuance of such Notes, if (i) such default either (1) results from the failure to pay any such Indebtedness at its stated final maturity (after giving effect to any applicable grace periods) or (2) relates to an obligation other than the obligation to pay principal of any such Indebtedness at its stated final maturity and results in the holder or holders of such Indebtedness causing such Indebtedness to become due prior to its stated maturity and (ii) the principal amount of such Indebtedness, together with the principal amount of any other such Indebtedness in default for failure to pay principal at stated final maturity (after giving effect to any applicable grace periods), or the maturity of which has been so accelerated, aggregate $100 million or more at any one time outstanding;

(e) certain events of bankruptcy affecting the Issuer or any Significant Subsidiary, in the case of the 2023 Notes, or affecting the Issuer or any Guarantor that is a Significant Subsidiary, in the case of the 2025 Notes and 2027 Notes;

(f) in the case of the 2023 Notes, the Issuer or any Significant Subsidiary fails to pay final judgments (other than any judgments covered by insurance policies issued by reputable and creditworthy insurance companies) aggregating in excess of $100 million, which final judgments remain unpaid,

undischarged and unstayed for a period of more than 60 days after such judgment becomes final, and an enforcement proceeding has been commenced by any creditor upon such judgment or decree which is not promptly stayed; or

(g) any Guarantee of a Significant Subsidiary with respect to such series of Notes fails to be in full force and effect (except as contemplated by the terms thereof) or any Guarantor (other than the Company) denies or disaffirms its obligations under its Guarantee and such Default continues for 10 days.

A default under one series of Notes or other debt securities issued under the Indenture will not necessarily be a default under another series of Notes or other debt securities issued under the Indenture. The Trustee may withhold notice to the holders of a series of Notes of any Default or Event of Default (except in any payment on the Notes of such series) if the Trustee considers it in the interest of the holders of the Notes of that series to do so.

If an Event of Default (other than an Event of Default specified in clause (e) above with respect to the Issuer) for a series of Notes shall occur and be continuing, the Trustee or the holders of at least 25% in principal amount of outstanding Notes of such series may declare the principal of and accrued interest on such Notes to be due and payable by notice in writing to the Issuer and the Trustee specifying the respective Event of Default and that it is a "notice of acceleration," and the same shall become immediately due and payable. Notwithstanding the foregoing, if an Event of Default specified in clause (e) above with respect to the Issuer occurs and is continuing, then all unpaid principal of, and premium, if any, and accrued and unpaid interest on all of the outstanding Notes of such series shall ipso facto become and be immediately due and payable without any declaration or other act on the part of the Trustee or any holder of the Notes.

The Indenture provides that, at any time after a declaration of acceleration with respect to a series of Notes as described in the preceding paragraph, the holders of a majority in principal amount of the outstanding Notes of such series may rescind and cancel such declaration and its consequences:

(a) if the rescission would not conflict with any judgment or decree;

(b) if all existing Events of Default have been cured or waived except nonpayment of principal or interest that has become due solely because of the acceleration;

(c) to the extent the payment of such interest is lawful, interest on overdue installments of interest and overdue principal, which has become due otherwise than by such declaration of acceleration, has been paid;

(d) if the Issuer has paid the Trustee its reasonable compensation and reimbursed the Trustee for its expenses, disbursements and advances; and

(e) in the event of the cure or waiver of an Event of Default of the type described in clause (5) of the description above of Events of Default, the Trustee shall have received an Officers' Certificate and an opinion of counsel that such Event of Default has been cured or waived.

No such rescission shall affect any subsequent Default or impair any right consequent thereto.

The holders of a majority in principal amount of the Notes of a series may waive any existing Default or Event of Default under the Indenture with respect to such series, and its consequences, except a default in the payment of the principal of or interest on such Notes.

In the event of any Event of Default specified in clause (e) of the first paragraph above, such Event of Default and all consequences thereof (excluding, however, any resulting payment default) will be annulled, waived and rescinded, automatically and without any action by the Trustee or the holders of such Notes, if within 20 days after such Event of Default arose the Issuer delivers an Officers' Certificate to the Trustee stating that (x) the Indebtedness or guarantee that is the basis for such Event of Default has been discharged or (y) the holders thereof have rescinded or waived the acceleration, notice or action (as the case may be) giving rise to such Event of Default or (z) the default that is the basis for such Event of Default has been cured, it being understood that in no event shall an acceleration of the principal amount of such Notes as described above be annulled, waived or rescinded upon the happening of any such events.

Holders of the Notes of any series may not enforce the Indenture or the Notes of that series except as provided in the Indenture and under the Trust Indenture Act of 1939, as amended. Subject to the provisions of the Indenture relating to the duties of the Trustee, the Trustee will be under no obligation to exercise any of its rights or powers under the Indenture at the request, order or direction of any of the holders of the Notes of any series, unless such holders have offered to the Trustee reasonable indemnity. Subject to all provisions of the Indenture and applicable law, the holders of a majority in aggregate principal amount of the then outstanding Notes of a series have the right to direct the time, method and place of conducting any proceeding for any remedy available to the Trustee or exercising any trust or power conferred on the Trustee relating to such series.

The Issuer is required to deliver to the Trustee annually a statement regarding compliance with the Indenture. Upon becoming aware of any Default or Event of Default, the Issuer is required to deliver to the Trustee a statement specifying such Default or Event of Default.

No Personal Liability of Directors, Officers, Employees and Stockholders

No director, officer, employee, incorporator or stockholder of the Issuer or any Guarantor or any direct or indirect parent entity, as such, will have any liability for any obligations of the Issuer or any Guarantor under the Notes, the Indenture, any Guarantee or for any claim based on, in respect of, or by reason of, such obligations or their creation. Each holder of Notes by accepting a Note has waived and released all such liability. The waiver and release were part of the consideration for issuance of the Notes. The waiver may not be effective to waive liabilities under the federal securities laws.

Legal Defeasance and Covenant Defeasance

The Issuer may, at its option and at any time, elect to have all of its obligations discharged with respect to the outstanding Notes of a series (Legal Defeasance) except for:

(a) the rights of holders of outstanding Notes of such series to receive payments in respect of the principal of, or interest or premium, if any, on such Notes when such payments are due from the trust referred to below;

(b) the Issuer's obligations with respect to the Notes of such series concerning issuing temporary Notes, registration of Notes, mutilated, destroyed, lost or stolen Notes and the maintenance of an office or agency for payment and money for security payments held in trust;

(c) the rights, powers, trusts, duties and immunities of the Trustee, and the Issuer's obligations in connection therewith; and

(d) the Legal Defeasance provisions of the Indenture.

In addition, the Issuer may, at its option and at any time, elect to have the obligations of the Issuer with respect to a series of Notes released with respect to certain covenants that are described in the Indenture (Covenant Defeasance) and thereafter any omission to comply with those covenants will not constitute a Default or Event of Default with respect to the Notes of such series. In the event Covenant Defeasance occurs, certain events (not including nonpayment, bankruptcy, receivership, rehabilitation and insolvency events of the Issuer but not its Subsidiaries) described under “-Events of Default and Remedies” will no longer constitute an Event of Default with respect to the Notes of such series.

In order to exercise either Legal Defeasance or Covenant Defeasance with respect to a series of Notes:

(a) the Issuer must irrevocably deposit with the Trustee, in trust, for the benefit of the holders of the Notes of the relevant series, cash in euros, Euro-Denominated Designated Government Obligations, or a combination of cash in euros and Euro-Denominated Designated Government Obligations, in amounts as will be sufficient, in the opinion of a nationally recognized firm of independent public accountants, to pay the principal of, or interest and premium, if any, on the outstanding Notes of such series on the stated maturity or on the applicable redemption date, as the case may be, and the Issuer must specify whether such Notes are being defeased to maturity or to a particular redemption date;

(b) in the case of Legal Defeasance, the Issuer has delivered to the Trustee an opinion of counsel confirming that (i) the Issuer has received from, or there has been published by, the Internal Revenue Service a ruling or (ii) since the Issue Date, there has been a change in the applicable federal income tax law, in either case to the effect that, and based thereon such opinion of counsel will confirm that, the holders of the respective outstanding Notes of such series will not recognize income, gain or loss for federal income tax purposes as a result of such Legal Defeasance and will be subject to federal income tax on the same amounts, in the same manner and at the same times as would have been the case if such Legal Defeasance had not occurred;

(c) in the case of Covenant Defeasance, the Issuer has delivered to the Trustee an opinion of counsel confirming that the holders of the respective outstanding Notes of such series will not recognize income, gain or loss for federal income tax purposes as a result of such Covenant Defeasance and will be subject to federal income tax on the same amounts, in the same manner and at the same times as would have been the case if such Covenant Defeasance had not occurred;

(d) no Default or Event of Default has occurred and is continuing on the date of such deposit (other than a Default or Event of Default resulting from the borrowing of funds to be applied to such deposit and the granting of Liens in connection therewith);

(e) such Legal Defeasance or Covenant Defeasance will not result in a breach or violation of, or constitute a default under any material agreement or instrument (other than the Indenture) to which the Issuer or any of its Subsidiaries is a party or by which the Issuer or any of its Subsidiaries is bound;

(f) the Issuer must deliver to the Trustee an Officers’ Certificate stating that the deposit was not made by the Issuer with the intent of preferring the holders of Notes of such series over the other creditors of the Issuer with the intent of defeating, hindering, delaying or defrauding creditors of the Issuer or others; and

(g) the Issuer must deliver to the Trustee an Officers' Certificate and an opinion of counsel, each stating that all conditions precedent relating to the Legal Defeasance or the Covenant Defeasance have been complied with.

Amendment, Supplement and Waiver

Except as provided below, with respect to a series of Notes the Indenture or the Notes of such series may be amended or supplemented with the consent of the holders of at least a majority in principal amount of the Notes of each series at the time outstanding that is affected voting as a single class (including, without limitation, consents obtained in connection with a purchase of, or tender offer or exchange offer for, such Notes), and with respect to any series of Notes any existing default or compliance with any provision of the Indenture or the Notes of such series may be waived with the consent of the holders of a majority in principal amount of each series of Notes at the time outstanding that is affected voting as a single class (including, without limitation, consents obtained in connection with a purchase of, or tender offer or exchange offer for, such Notes).

Without the consent of each holder affected, an amendment or waiver of the Indenture may not (with respect to any Notes held by a non-consenting holder):

(a) reduce the principal amount of Notes of any series whose holders must consent to an amendment, supplement or waiver;

(b) reduce the principal of or change the fixed maturity of the Note of any series or alter the provisions with respect to the redemption of the Notes of any series (other than provisions relating to the covenant described above under the caption "-Repurchase at the Option of Holders-Change of Control Offer");

(c) reduce the rate of or change the time for payment of interest on any Note of any series;

(d) waive a Default or Event of Default in the payment of principal of, or interest or premium, if any, on the Notes of any series (except a rescission of acceleration of the Notes of a series by the holders of at least a majority in aggregate principal amount of the Notes of such series and a waiver of the payment default that resulted from such acceleration);

(e) make any Note payable in money other than that stated in such Notes;

(f) make any change in the provisions of the Indenture relating to waivers of past Defaults or the rights of holders of Notes to receive payments of principal of, or interest or premium, if any, on the Notes issued thereunder;

(g) waive a redemption payment with respect to any Note of any series (other than a payment required by the covenant described above under the caption "-Change in Control Offer");

(h) modify the subsidiary Guarantees in any manner adverse to the holders of the Notes of any series; or

(i) make any change in the preceding amendment and waiver provisions.

Notwithstanding the preceding, without the consent of any holder of Notes, with respect to any series of Notes the Issuer and the Trustee may amend or supplement the Indenture or the Notes of such series:

(a) to cure any ambiguity, defect or inconsistency;

(b) to provide for uncertificated Notes in addition to or in place of certificated Notes;

(c) to provide for the assumption of the Issuer's obligations to holders of Notes of such series in the case of a merger or consolidation or sale of all or substantially all of the assets of the Issuer and its Subsidiaries;

(d) to make any change that would provide any additional rights or benefits to the holders of Notes of such series or that does not adversely affect the legal rights under the Indenture of any such holder;

(e) to comply with requirements of the Commission in order to effect or maintain the qualification of the Indenture under the Trust Indenture Act;

(f) to add a Guarantee of such Notes; or

(g) to conform the text of any provision of the Indenture, the Notes or Guarantees with respect to such series of Notes to any provision of the description of the Notes set forth in the relevant prospectus supplement relating to such series of Notes to the extent such provision was intended to be a verbatim recitation of such provision, which intent shall be conclusively evidenced by an officers' certificate to that effect.

Satisfaction and Discharge

The Indenture will be discharged and will cease to be of further effect with respect to a series of Notes when:

(a) either:

(i) all Notes of such series that have been authenticated, except lost, stolen or destroyed Notes of such series that have been replaced or paid and Notes of such series for whose payment money has been deposited in trust and thereafter repaid to the Issuer, have been delivered to the Trustee for cancellation; or

(ii) all outstanding Notes of such series that have not been delivered to the Trustee for cancellation have become due and payable by reason of the sending of a notice of redemption or otherwise or will become due and payable by reason of the sending of a notice of redemption or otherwise within one year and the Issuer has irrevocably deposited or caused to be deposited with the Trustee as trust funds in trust solely for the benefit of the holders, cash in euros, Euro-Denominated Designated Government Obligations, or a combination of cash in euros and Euro-Denominated Designated Government Obligations, in amounts as will be sufficient (with respect to the 2027 Notes, in the opinion of a nationally recognized firm of independent accountants) without consideration of any reinvestment of interest, to pay and discharge the entire Indebtedness on the Notes of such series not delivered to the Trustee for cancellation for principal, premium, if any, and accrued interest to the date of maturity or redemption;

(b) the Issuer has paid or caused to be paid all sums payable by them under the Indenture with respect to such series of Notes; and

(c) the Issuer has delivered irrevocable instructions to the Trustee under the Indenture to apply the deposited money toward the payment of the Notes of such series at maturity or the redemption date, as the case may be.

In addition, the Issuer must deliver an Officers' Certificate and an opinion of counsel to the Trustee stating that all conditions precedent to satisfaction and discharge have been satisfied.

Concerning the Trustee

If the Trustee becomes a creditor of the Issuer, the Indenture limits its right to obtain payment of claims in certain cases, or to realize on certain property received in respect of any such claim as security or otherwise. The Trustee will be permitted to engage in other transactions; however, if it acquires any conflicting interest it must eliminate such conflict within 90 days, apply to the Commission for permission to continue or resign.

The holders of a majority in principal amount of the then outstanding Notes of a series have the right to direct the time, method and place of conducting any proceeding for exercising any remedy available to the Trustee with respect to such series of Notes, subject to certain exceptions. The Indenture provides that in case an Event of Default occurs and is continuing, the Trustee will be required, in the exercise of its power, to use the degree of care of a prudent man in the conduct of his own affairs. Subject to such provisions, the Trustee will be under no obligation to exercise any of its rights or powers under the Indenture at the request of any holder of Notes, unless such holder has offered to the Trustee security and indemnity satisfactory to it against any loss, liability or expense.

Notices

Notices to holders of the Notes will be sent by mail or email to the registered holders, or otherwise in accordance with the procedures of the applicable depositary.

Governing Law

The Indenture, the Notes and the Guarantees will be governed by, and construed in accordance with, the laws of the State of New York.

Certain Definitions

Set forth below are certain defined terms used in the Indenture. Reference is made to the Indenture for a full disclosure of all such terms, as well as any other capitalized terms used herein for which no definition is provided.

"*Affiliate*" of any specified Person means any other Person directly or indirectly controlling or controlled by or under direct or indirect common control with such specified Person. For purposes of this definition, "control" (including, with correlative meanings, the terms "controlling," "controlled by" and "under common control with"), as used with respect to any Person, shall mean the possession, directly or indirectly, of the power to direct or cause the direction of the management or policies of such Person, whether through the ownership of voting securities, by agreement or otherwise.

"*Applicable Premium*" means with respect to any Note on the applicable Redemption Date, the greater of:

(a) 1.0% of the then outstanding principal amount of the Note; and

(b) the excess of:

(i) the present value at such redemption date of (1) 100% of the aggregate principal amount of such Note plus (2) all required interest payments due on the Notes through September 26,2023 (excluding accrued but unpaid interest through the Redemption Date), computed by the Issuer using a discount rate equal to the Bund Rate as of such redemption date plus 25 basis points; over

(ii) the then outstanding principal amount of such Note.

Prior to the applicable redemption date, the Issuer shall calculate the Applicable Premium and shall deliver such calculation to the Trustee. The Trustee will have no responsibility for the calculation of the Applicable Premium.

"*Attributable Debt*" in respect of a Sale and Lease-Back Transaction means, as of any particular time, the present value (discounted at the rate of interest implicit in the terms of the lease involved in such Sale and Lease-Back Transaction, as determined in good faith by the Issuer) of the obligation of the lessee thereunder for rental payments (excluding, however, any amounts required to be paid by such lessee, whether or not designated as rent or additional rent, on account of maintenance and repairs, insurance, taxes, assessments, water rates or similar charges or any amounts required to be paid by such lessee thereunder contingent upon the amount of sales, maintenance and repairs, insurance, taxes, assessments, water rates or similar charges) during the remaining term of such lease (including any period for which such lease has been extended or may, at the option of the lessor, be extended).

"*Board of Directors*" means:

(a) with respect to a corporation, the board of directors of the corporation;

(b) with respect to a partnership (including a société en commandite par actions), the Board of Directors of the general partner or manager of the partnership; and

(c) with respect to any other Person, the board or committee of such Person serving a similar function.

Unless otherwise specified, "Board of Directors" refers to the Board of Directors of the Company.

"*Bund Rate*" means, with respect to any redemption date, the rate per annum equal to the annual equivalent yield to maturity of the Comparable German Bund Issue, assuming a price for the Comparable German Bund Issue (expressed as a percentage of its principal amount) equal to the Comparable German Bund Price for such redemption date.

"*Capital Stock*" means:

(a) in the case of a corporation, corporate stock;

(b) in the case of an association or business entity, any and all shares, interests, participations, rights or other equivalents (however designated) of corporate stock;

(c) in the case of a partnership or limited liability company, partnership or membership interests (whether general or limited); and

(d) any other interest or participation that confers on a Person the right to receive a share of the profits and losses of, or distributions of assets of, the issuing Person.

"*business day*" means any day, other than a Saturday or Sunday, that is neither a legal holiday nor a day on which commercial banks are authorized or required by law, regulation or executive order to close in New York or the place of payment, provided such day is also a London banking day and is a day on which the Trans-European Automated Real-time Gross Settlement Express Transfer (TARGET) System, or any successor thereto, operates.

"*Change of Control*" means the occurrence of any of the following:

(a) the sale, lease or transfer, in one or a series of related transactions, of all or substantially all of the assets of the Issuer and its Subsidiaries, taken as a whole, to any Person or group (within the meaning of Section 13(d)(3) or Section 14(d)(2) of the Exchange Act, or any successor provision) other than the Company or any Subsidiary of the Company; or

(b) the Issuer or any of its Subsidiaries becomes aware of (by way of a report or any other filing pursuant to Section 13(d) of the Exchange Act, proxy, vote, written notice or otherwise) the acquisition by any Person or group (within the meaning of Section 13(d)(3) or Section 14(d)(2) of the Exchange Act, or any successor provision), including any group acting for the purpose of acquiring, holding or disposing of securities (within the meaning of Rule 13d-5(b)(1) under the Exchange Act, but excluding any Subsidiary of the Company) in a single transaction or in a related series of transactions, by way of merger, consolidation or other business combination or purchase of beneficial ownership (within the meaning of Rule 13d-3 under the Exchange Act, or any successor provision) of 50% or more of the total voting power of the Voting Stock of the Issuer or any of its direct or indirect parent entity.

"*Change of Control Event*" means the occurrence of both a Change of Control and a Rating Decline.

"*Clearstream*" means Clearstream Banking, *société anonyme*.

"*Commission*" means the Securities and Exchange Commission.

"*Comparable German Bund Issue*" means that *German Bundesanleihe* security selected by the Quotation Agent as having a maturity comparable to the remaining term of the Notes to be redeemed that would be utilized, at the time of selection and in accordance with customary financial practice, in pricing new issues of corporate notes of comparable maturity to the remaining term of the Notes.

"*Comparable German Bund Price*" means, with respect to any redemption date, (a) the average of four Reference German Bund Dealer Quotations for such redemption date, after excluding the highest and lowest such Reference German Bund Dealer Quotations, or (b) if the Quotation Agent obtains fewer than four such Reference German Bund Dealer Quotations, the average of all such quotations.

"*Consolidated Net Tangible Assets*" means, at any particular time, Consolidated Tangible Assets at such time after deducting therefrom all current liabilities, except for (i) notes and loans payable, and (ii) current maturities of the principal component of obligations in respect of capitalized leases, all as set forth on the most recent consolidated balance sheet of the Company and its consolidated Subsidiaries and computed in accordance with GAAP.

"*Consolidated Tangible Assets*" means, at any particular time, the aggregate amount of all assets (less applicable reserves and other properly deductible items) after deducting therefrom all goodwill, trade

names, trademarks, patents, unamortized debt discount and expenses (to the extent included in said aggregate amount of assets) and other like intangibles, as set forth on the most recent consolidated balance sheet of the Company and its consolidated Subsidiaries and computed in accordance with GAAP.

"*Credit Agreement*" means that certain Credit Agreement, dated as of July 15, 2016, among the Company, the Issuer, Celanese Americas LLC, Celanese Europe B.V., Celanese Holdings Luxembourg S.à.r.l., Elwood C.V., certain Subsidiaries of the Issuer from time to time party thereto as borrowers, each lender from time to time party thereto, Bank of America, N.A., as administrative agent, a swing line lender and an L/C issuer and the other swing line lenders and L/C issuers party thereto, including any related notes, guarantees, instruments and agreements executed in connection therewith, and in each case as amended, restated, supplemented, modified, renewed, refunded, replaced or refinanced from time to time in one or more agreements or indentures (in each case with the same or new lenders or institutional investors), including any agreement or indenture extending the maturity thereof or otherwise restructuring all or any portion of the Indebtedness thereunder or increasing the amount loaned or issued thereunder or altering the maturity thereof.

"*Default*" means any event that is, or with the passage of time or the giving of notice or both would be, an Event of Default.

"*Equity Interests*" means Capital Stock and all warrants, options or other rights to acquire Capital Stock (but excluding any debt security that is convertible into, or exchangeable for, Capital Stock).

"*Euro-Denominated Designated Government Obligations*" means direct non-callable and nonredeemable obligations denominated in euros (in each case, with respect to the issuer thereof) of any member state of the European Union that is a member of the European Union provided that such member state has a long term government debt rating of "A1'' or higher by Moody's or A+ or higher by Standard & Poor's or the equivalent rating category of another internationally recognized rating agency.

"*Euroclear*" means Euroclear Bank S.A./N.V., or its successor, as operator of the Euroclear System.

"*Exchange Act*" means the Securities Exchange Act of 1934, as amended, and the rules and regulations of the Commission promulgated thereunder.

"*GAAP*" means generally accepted accounting principles in the United States set forth in the Financial Accounting Standards Board Accounting Standards Codification or such other principles as may be approved by a significant segment of the accounting profession in the United States, that are applicable to the circumstances as of the date of determination, consistently applied. For purposes of this description of the Notes, the term "consolidated" with respect to any Person means such Person consolidated with its Subsidiaries.

"*Gradation*" means a gradation within a Rating Category or a change to another Rating Category, which shall include: (a) "+" and "-" in the case of S&P's current Rating Categories (e.g., a decline from BB+ to BB would constitute a decrease of one gradation), (b) 1, 2 and 3 in the case of Moody's current Rating Categories (e.g., a decline from Ba1 to Ba2 would constitute a decrease of one gradation), or (c) the equivalent in respect of successor Rating Categories of S&P or Moody's or Rating Categories used by Rating Agencies other than S&P and Moody's.

"*guarantee*" means a guarantee other than by endorsement of negotiable instruments for collection in the ordinary course of business, direct or indirect, in any manner including, without limitation, through letters

of credit or reimbursement agreements in respect thereof, of all or any part of any Indebtedness or other obligations.

"*Guarantee*" means any guarantee of the obligations of the Issuer under the Indenture and the Notes by a Guarantor in accordance with the provisions of the Indenture. When used as a verb, "Guarantee" shall have a corresponding meaning.

"*Guarantor*" means any Person that incurs a Guarantee of the Notes; *provided* that upon the release and discharge of such Person from its Guarantee in accordance with the Indenture, such Person shall cease to be a Guarantor.

"*Indebtedness*" means any indebtedness for borrowed money.

"*Investment Grade Rating*" means a rating equal to or higher than BBB- (or the equivalent) by S&P and Baa3 (or the equivalent) by Moody's, or the equivalent thereof under any new ratings system if the ratings system of any such agency shall be modified after the date of each supplemental indenture relating to the Notes or an equivalent rating by any other Rating Agency.

"*Investments*" means, with respect to any Person, all direct or indirect investments by such Person in other Persons (including Affiliates) in the forms of loans (including guarantees or other obligations), advances or capital contributions (excluding accounts receivable, trade credit, advances to customers, commission, travel and similar advances to officers and employees, in each case made in the ordinary course of business), purchases or other acquisitions for consideration of Indebtedness, Equity Interests or other securities issued by any other Person and investments that are required by GAAP to be classified on the balance sheet (excluding the footnotes) of such Person in the same manner as the other investments included in this definition to the extent such transactions involve the transfer of cash or other property.

"*Issue Date*" means September 26, 2016, with respect to the 2023 Notes, December 11, 2017, with respect to the 2025 Notes, and November 5, 2018, with respect to the 2027 Notes.

"*Joint Venture*" means any Person that is not a Wholly-Owned Subsidiary of the Issuer or any Subsidiary of the Issuer in which the Issuer or such Subsidiary makes an Investment.

"*Lien*" means any mortgage, security interest, pledge or lien.

"*Moody's*" means Moody's Investors Service, Inc. and its successors.

"*Non-Recourse Indebtedness*" means, with respect to any Joint Venture, any Indebtedness of such Joint Venture or its Subsidiaries that is, by its terms, recourse only to (i) the assets of, and/or Capital Stock in, such Joint Venture and its Subsidiaries and/or (ii) the assets of any Subsidiary that owns Capital Stock in such Joint Venture and owns no material assets other than (x) Capital Stock and other Investments in such Joint Venture and (y) cash and cash equivalents, and that is neither guaranteed by the Issuer or any of its Subsidiaries (other than such Joint Venture and its Subsidiaries) or would become the obligation of the Issuer or any of its Subsidiaries (other than such Joint Venture and its Subsidiaries) upon a default thereunder, other than (i) recourse for fraud, misrepresentation, misapplication of cash, waste, environmental claims and liabilities, prohibited transfers, violations of single purpose entity covenants and other circumstances customarily excluded by institutional lenders from exculpation provisions and/or included in separate guaranty or indemnification agreements in non-recourse financings, and (ii) the existence of a guarantee that does not constitute a guarantee of payment of principal, interest or premium on Indebtedness.

“*Officer*” means the Chairman of the Board, the Chief Executive Officer, the President, any Executive Vice President, Senior Vice President or Vice President, the Treasurer, any Assistant Treasurer, the Secretary or any Assistant Secretary of the Issuer.

“*Officers’ Certificate*” means a certificate signed on behalf of the Issuer by two Officers of the Issuer, one of whom is the principal executive officer, the principal financial officer, the treasurer or the principal accounting officer of the Issuer, that meets the requirements set forth in the Indenture.

“*Permitted Liens*” means the following types of Liens:

(a) Liens on such property, Capital Stock or Indebtedness existing as of the Issue Date;

(b) Liens on such property or Capital Stock or Indebtedness of, any Person, which Liens are existing at the time such Person is merged into or consolidated with the Issuer or any Subsidiary;

(c) Liens in favor of any governmental body to secure progress, advance or other payments pursuant to any contract or provision of any statute;

(d) Liens on such property, Capital Stock or Indebtedness existing at the time of acquisition thereof (including acquisition through merger or consolidation);

(e) Liens on such property, Capital Stock or Indebtedness to secure the payment of all or any part of the purchase price or improvement or construction cost thereof or to secure any Indebtedness incurred prior to, at the time of, or within 180 days after, the acquisition of such property Capital Stock or Indebtedness, the completion of any construction or the commencement of full operation, for the purpose of financing all or any part of the purchase price or construction cost thereof;

(f) Liens on any property of, or Capital Stock in, any Joint Venture (or any Subsidiary of a Joint Venture), or on any property of any Subsidiary of the Issuer that owns Capital Stock in such Joint Venture and owns no material assets other than (i) Capital Stock and other Investments in such Joint Venture and (ii) cash and cash equivalents, in each case, securing Non-Recourse Indebtedness of such Joint Venture;

(g) Liens incurred in connection with a Sale and Leaseback Transaction satisfying the provisions under “Certain Covenants-Limitations on Sale and Leaseback Transactions”; and

(h) any extension, renewal or replacement (or successive extensions, renewals or replacements), as a whole or in part, of any Liens permitted by clauses (a) through (g); provided that such extension, renewal or replacement Lien shall be limited to all or a part of the same such property or shares of stock or Indebtedness that secured the Lien extended, renewed or replaced (plus improvements on such property).

“*Person*” means any individual, corporation, partnership, joint venture, association, joint-stock company, trust, unincorporated organization, limited liability company or government or other entity.

“*Principal Property*” means any single parcel of real estate, any single manufacturing plant or any single warehouse, in each case owned by the Issuer or any of its Subsidiaries which is located within the U.S., the net book value of which on the date as of which the determination is being made exceeds 1% of Consolidated Net Tangible Assets, other than any such single parcel of real estate, any single

manufacturing plant or any single warehouse that, in the opinion of the Board of Directors, is not of material importance to the business conducted by the Issuer and its Subsidiaries as a whole.

"*Qualified Securitization Financing*" means any Securitization Financing of a Securitization Subsidiary that meets the following conditions: (a) the Board of Directors shall have determined in good faith that such Qualified Securitization Financing (including financing terms, covenants, termination events and other provisions) is in the aggregate economically fair and reasonable to the Issuer and the Securitization Subsidiary, (b) all sales of Securitization Assets and related assets to the Securitization Subsidiary are made at fair market value (as determined in good faith by the Issuer) and (c) the financing terms, covenants, termination events and other provisions thereof shall be market terms (as determined in good faith by the Issuer) and may include Standard Securitization Undertakings. The grant of a security interest in any Securitization Assets of the Issuer or any of its Subsidiaries (other than a Securitization Subsidiary) to secure Indebtedness under the Credit Agreement and any Refinancing Indebtedness with respect thereto shall not be deemed a Qualified Securitization Financing.

"*Quotation Agent*" means a Reference German Bund Dealer appointed by the Issuer.

"*Rating Agency*" means each of (a) S&P and Moody's or (b) if either S&P or Moody's or both of them are not making ratings of the Notes publicly available, a nationally recognized United States rating agency or agencies, as the case may be, selected by the Issuer, which will be substituted for S&P or Moody's or both, as the case may be.

"*Rating Category*" means (a) with respect to S&P, any of the following categories (any of which may include a "+" or "-"): AAA, AA, A, BBB, BB, B, CCC, CC, C, R, SD and D (or equivalent successor categories); (b) with respect to Moody's, any of the following categories (any of which may include a "1", "2" or "3"): Aaa, Aa, A, Baa, Ba, B, Caa, Ca, and C (or equivalent successor categories); and (c) the equivalent of any such categories of S&P or Moody's used by another Rating Agency, if applicable.

"*Rating Decline*" means that at any time within the earlier of (a) 90 days after the date of public notice of a Change of Control, or of the Issuers' or the Company's intention or the intention of any Person to effect a Change of Control, and (b) the occurrence of the Change of Control (which period shall in either event be extended so long as the rating of the Notes is under publicly announced consideration for possible downgrade by a Rating Agency which announcement is made prior to the date referred to in clause (b)), the rating of the Notes is decreased by either Rating Agency by one or more Gradations and the rating by both Rating Agencies on the Notes following such downgrade is not an Investment Grade Rating.

"*Reference German Bund Dealer*" means any dealer of *German Bundesanleihe* securities selected by the Issuer in good faith.

"*Reference German Bund Dealer Quotations*" means, with respect to each Reference German Bund Dealer and any redemption date, the average, as determined by the Issuer, of the bid and asked prices for the Comparable German Bund Issue (expressed in each case as a percentage of its principal amount) quoted in writing to the Quotation Agent by such Reference German Bund Dealer at 3:30 p.m., Frankfurt, Germany time, on the third business day preceding such redemption date.

"*Responsible Officer*" of any Person means any executive officer or financial officer of such Person and any other officer or similar official thereof responsible for the administration of the obligations of such Person in respect of the Indenture.

“*Sale and Lease-Back Transaction*” means the leasing by the Issuer or any of its Subsidiaries of any Principal Property, whether owned on the Issue Date or acquired thereafter (except for temporary leases for a term, including any renewal term, of up to three years and except for leases between the Issuer and any of its Subsidiaries or between its Subsidiaries), which Principal Property has been or is to be sold or transferred by the Issuer or such Subsidiary to any party with the intention of taking back a lease of such Principal Property.

“*S&P*” means Standard & Poor’s Financial Services LLC, a subsidiary of S&P Global, Inc. and any successor to its rating agency business.

“*Secured Debt*” means any Indebtedness secured by a Lien.

“*Securities Act*” means the Securities Act of 1933, as amended, and the rules and regulations of the Commission promulgated thereunder.

“*Securitization Assets*” means any accounts receivable, inventory, royalty or revenue streams from sales of inventory subject to a Qualified Securitization Financing.

“*Securitization Financing*” means any transaction or series of transactions that may be entered into by the Issuer or any of its Subsidiaries pursuant to which the Issuer or any of its Subsidiaries may sell, convey or otherwise transfer to (a) a Securitization Subsidiary (in the case of a transfer by the Issuer or any of its Subsidiaries) or (b) any other Person (in the case of a transfer by a Securitization Subsidiary), or may grant a security interest in, any Securitization Assets (whether now existing or arising in the future) of the Issuer or any of its Subsidiaries, and any assets related thereto including all collateral securing such Securitization Assets, all contracts and all guarantees or other obligations in respect of such Securitization Assets, proceeds of such Securitization Assets and other assets which are customarily transferred or in respect of which security interests are customarily granted in connection with asset securitization transactions involving Securitization Assets and any obligations in respect of any Swap Contract entered into by the Issuer or any such Subsidiary in connection with such Securitization Assets.

“*Securitization Repurchase Obligation*” means any obligation of a seller of Securitization Assets in a Qualified Securitization Financing to repurchase Securitization Assets arising as a result of a breach of a representation, warranty or covenant or otherwise, including as a result of a receivable or portion thereof becoming subject to any asserted defense, dispute, off-set or counterclaim of any kind as a result of any action taken by, any failure to take action by or any other event relating to the seller.

“*Securitization Subsidiary*” means a Wholly Owned Subsidiary of the Issuer (or another Person formed for the purposes of engaging in a Qualified Securitization Financing in which the Issuer or any Subsidiary of the Issuer makes an Investment and to which the Company or any Subsidiary of the Issuer transfers Securitization Assets and related assets) which engages in no activities other than in connection with the financing of Securitization Assets of the Issuer or its Subsidiaries, all proceeds thereof and all rights (contractual and other), collateral and other assets relating thereto, and any business or activities incidental or related to such business, and which is designated by the Board of Directors or such other Person (as provided below) as a Securitization Subsidiary and (a) no portion of the Indebtedness or any other obligations (contingent or otherwise) of which (i) is guaranteed by the Issuer or any other Subsidiary of the Issuer (excluding guarantees of obligations (other than the principal of, and interest on, Indebtedness) pursuant to Standard Securitization Undertakings), (ii) is recourse to or obligates the Company or any other Subsidiary of the Issuer in any way other than pursuant to Standard Securitization Undertakings or (iii) subjects any property or asset of the Issuer or any other Subsidiary of the Issuer, directly or indirectly, contingently or otherwise, to the satisfaction thereof, other than pursuant to

Standard Securitization Undertakings, (b) with which neither the Issuer nor any other Subsidiary of the Issuer has any material contract, agreement, arrangement or understanding (other than Standard Securitization Undertakings) other than on terms which the Issuer reasonably believes to be no less favorable to the Issuer or such Subsidiary than those that might be obtained at the time from Persons that are not Affiliates of the Company and (c) to which neither the Issuer nor any other Subsidiary of the Issuer has any obligation to maintain or preserve such entity's financial condition or cause such entity to achieve certain levels of operating results. Any such designation by the Board of Directors or such other Person shall be evidenced to the Trustee by filing with the Trustee a certified copy of the resolution of the Board of Directors or such other Person giving effect to such designation and an Officers' Certificate certifying that such designation complied with the foregoing conditions.

"*Significant Subsidiary*" means any Subsidiary that would be a "significant subsidiary" as defined in Article 1, Rule 1-02 of Regulation S-X, promulgated pursuant to the Securities Act, as such Regulation is in effect on the date hereof.

"*Standard Securitization Undertakings*" means representations, warranties, covenants and indemnities entered into by Company or any Subsidiary thereof which Company has determined in good faith to be customary in a Securitization Financing, including those relating to the servicing of the assets of a Securitization Subsidiary, it being understood that any Securitization Repurchase Obligation shall be deemed to be a Standard Securitization Undertaking.

"*Subsidiary*" means, with respect to any specified Person:

(a) any corporation, association or other business entity, of which more than 50% of the total voting power of shares of Capital Stock entitled (without regard to the occurrence of any contingency) to vote in the election of directors, managers or trustees thereof is at the time owned or controlled, directly or indirectly, by that Person or one or more of the other Subsidiaries of that Person (or a combination thereof); and

(b) any partnership, joint venture, limited liability company or similar entity of which (i) more than 50% of the capital accounts, distribution rights, total equity and voting interests or general or limited partnership interests, as applicable, are owned or controlled, directly or indirectly, by such Person or one or more of the other Subsidiaries of that Person or a combination thereof whether in the form of membership, general, special or limited partnership or otherwise and (ii) such Person or any Subsidiary of such Person is a controlling general partner or otherwise controls such entity.

"*Swap Contract*" means any and all rate swap transactions, basis swaps, credit derivative transactions, forward rate transactions, commodity swaps, commodity options, forward commodity contracts, equity or equity index swaps or options, bond or bond price or bond index swaps or options or forward bond or forward bond price or forward bond index transactions, interest rate options, forward foreign exchange transactions, cap transactions, floor transactions, collar transactions, currency swap transactions, cross-currency rate swap transactions, currency options, spot contracts, or any other similar transactions or any combination of any of the foregoing (including any options to enter into any of the foregoing), whether or not any such transaction is governed by or subject to any master agreement.

"*United States Dollar Equivalent*" means with respect to any monetary amount in a currency other than United States dollars, at any time of determination thereof, the amount of United States dollars obtained by translating such other currency involved in such computation into United States dollars at the spot rate for the purchase of United States dollars with the applicable other currency as published in the Financial Times on the date that is two business days prior to such determination.

“*United States*” means the United States of America, the states of the United States, and the District of Columbia.

“*United States person*” means any individual who is a citizen or resident of the United States for United States federal income tax purposes, a corporation, partnership or other entity created or organized in or under the laws of the United States, any state of the United States or the District of Columbia, an estate the income of which is subject to United States federal income taxation regardless of its source, or a trust, if (a) a court within the United States is able to exercise primary jurisdiction over its administration and one or more United States persons have the authority to control all of its substantial decisions or (b) it has a valid election in place under applicable United States Treasury regulations to be treated as a domestic trust.

“*Voting Stock*” of any Person as of any date means the Capital Stock of such Person that is at the time entitled to vote in the election of the Board of Directors of such Person.

“*Wholly Owned Subsidiary*” of any Person means a Subsidiary of such Person, 100% of the outstanding Capital Stock or other ownership interests of which (other than directors’ qualifying shares or nominee or other similar shares required pursuant to applicable law) shall at the time be owned by such Person or by one or more Wholly Owned Subsidiaries of such Person or by such Person and one or more Wholly Owned Subsidiaries of such Person.

AMENDMENT NUMBER THREE

to the

CELANESE CORPORATION DEFERRED COMPENSATION PLAN

WHEREAS, Celanese Corporation (the "Company") previously adopted the Celanese Corporation Deferred Compensation Plan (the "Plan") effective January 1, 2008;

WHEREAS, Section 12.2 of the Plan provides that the Company may amend the Plan at any time;

WHEREAS, the Company is in the process of transitioning the Plan to a third party administrator;

WHEREAS, the Compensation and Management Development Committee of the Company's Board of Directors has determined that the amendments set forth below would facilitate the transition and align the Plan to the service provider’s electronic platform; and

WHEREAS, the Compensation and Management Development Committee of the Company's Board of Directors has directed that the Plan's administrative committee prepare and sign such amendment.

NOW, THEREFORE, the Plan is amended as follows:

1. Section 2.2(a) of the Plan is hereby amended and restated in its entirety as follows:

   As a condition to participation, each Director or selected Employee shall complete, execute and return to the Committee an Election Form by the deadline(s) established by the Committee in accordance with the applicable provisions of this Plan. In addition, the Committee shall establish from time to time such other enrollment requirements as it determines, in its sole discretion, are necessary.

2. Section 3.7(b) of the Plan is hereby amended by designating the existing provisions thereof as subsection 3.7(b)(i) and by adding the following new subsection 3.7(b)(ii) at the end thereof:

   (ii) Effective with respect to Company Contribution Amounts credited for any period beginning on or after January 1, 2020, a Participant shall be vested in the portion of his or her Account Balance attributable to any Company Contribution Amounts, plus amounts credited or debited on such amounts pursuant to Section 3.8, on each January 1 following the date as of which such Company Contribution Amount was credited to the Participant’s Account Balance, in accordance with the following schedule; provided, however, that the Participant must be in the service of the Company on such January 1 to

receive vesting credit:

Time Elapsed Following Crediting of Company Contribution Amount	Vested Percentage
Prior to the second January 1 following the year for which the Company Contribution Amount is credited	0%
On or after the second January 1 following the year for which the Company Contribution Amount is credited and prior to the third January 1 following the year for which the Company Contribution Amount is credited	33%
On or after the third January 1 following the year for which the Company Contribution Amount is credited and prior to the fourth January 1 following the year for which the Company Contribution Amount is credited	67%
On or after the fourth January 1 following the year for which the Company Contribution Amount is credited	100%

A new vesting schedule shall apply to all Company Contribution Amounts credited to the Participant's Account Balance for each Plan Year.

3. The following new paragraph is added to Section 4.1:

Notwithstanding the foregoing, for purposes of and in connection with each election to defer an Annual Deferral Amount and/or Restricted Stock Unit Amount with respect to compensation earned on or after January 1, 2020, a Participant may elect separate Scheduled Distributions with respect to his or her (i) deferred Base Salary, (ii) deferred Bonus, (iii) deferred Director Fees, (iv) and/or deferred Restricted Stock Units (each a "Voluntary Contribution Source"). A Participant may make a separate Scheduled Distribution election pursuant to this Section 4.1 with respect to each Voluntary Contribution Source for each Plan Year. If a Participant makes a Scheduled Distribution election with respect to a Voluntary Contribution Source for a Plan Year, such election will apply to the entire amount of such Voluntary Contribution Source for such Plan Year; a Participant may not elect a Scheduled Distribution for a Voluntary Contribution Source for a Plan Year that is less than 100% of the amount of such Voluntary Contribution Source for such Plan Year. Each such Scheduled Distribution election with respect to a Voluntary Contribution Source for a Plan Year shall be treated as a separate Scheduled Distribution for purpose of this Section 4.1 and shall otherwise be subject to the requirements of the Plan applicable to Scheduled Distributions. A Scheduled Distribution with respect to a Voluntary Contribution Source for a Plan Year must be elected at the same time as the election to defer such Voluntary Contribution Source pursuant to Section 3.2 in accordance with procedures established by the Committee from time to time.

4. Article 6 of the Plan is hereby amended by adding the following new Section 6.3 at the end thereof:

6.3 With respect to deferrals of compensation earned on or after January 1, 2020, a Participant may elect a different Retirement Benefit form of payment under Section 6.1 (either lump sum or annual installment) for each source of contributions comprising his or her Retirement Benefit separately (each a "Contribution Source"). For purposes of this subsection, the Contribution Sources are: (i) deferred Base Salary, (ii) deferred Bonus, (iii) deferred Director Fees, (iv) deferred Restricted Stock Units, and (v) Company Contributions. A Participant may make a separate Retirement Benefit form of payment election pursuant to this Section 6.3 with respect to each Contribution Source for each Plan Year. Only one Retirement Benefit form of payment election may be made pursuant to this Section 6.3 with respect to a Contribution Source for a Plan Year; a Participant may not elect more than one Retirement Benefit form of payment pursuant to this Section 6.3 with respect to a Contribution Source for a Plan Year. Each Retirement Benefit form of payment for a Contribution Source for a Plan Year shall be treated as a separate Retirement Benefit payment and shall otherwise be subject to the requirements of the Plan applicable to Retirement Benefit payments. A Participant's right to change the Retirement Benefit form of payment pursuant to Section 6.2 shall be applied separately with respect to each Contribution Source for a Plan Year.

IN WITNESS WHEREOF, this Amendment Number Three is executed this _31st_ day of

__October_, 2019.

CELANESE CORPORATION DEFERRED COMPENSATION PLAN COMMITTEE

For the Committee

By: /s/ Jose Motta
Jose Motta, Chair

ATTEST: /s/ James R. Peacock III

Exhibit 10.12(c)

CHANGE IN CONTROL AGREEMENT

This CHANGE IN CONTROL AGREEMENT (the "***Agreement***") is entered into on **[insert date], 2019** (the "***Effective Date***") by and between Celanese Corporation (the "***Company***") and **[insert name]** (the "***Executive***").

The Company considers it essential to foster the continued employment of key management personnel. The Board of Directors of the Company (the "***Board***") believes that it is in the best interests of the Company and its stockholders to assure the Company will have the continued dedication of Executive, notwithstanding the possibility, threat or occurrence of a Change in Control. The Board believes it is imperative to diminish the inevitable distraction of Executive by virtue of the personal uncertainties and risks created by a pending or threatened Change in Control and to encourage Executive's full attention and dedication to the Company currently and in the event of any threatened or pending Change in Control. The Company also requests, and the Executive desires to give the Company, certain assurances with regard to the protection of Confidential Information and Intellectual Property of the Company and its Affiliates. Therefore, the Company and the Executive have entered into this Agreement.

In consideration of the premises and mutual covenants contained herein and for other good and valuable consideration, the parties agree as follows:

1. **Definitions:**

a. ***"Affiliate"*** shall mean, when used with respect to any person or entity, any other person or entity which controls, is controlled by or is under common control with the specified person or entity. As used in the immediately preceding sentence, the term "control" (with correlative meanings for "controlled by" and "under common control with") shall mean, with respect to any entity, the ownership, directly or indirectly, of fifty percent (50%) or more of the outstanding equity interests in such entity.

b. ***"Beneficial Owner"*** shall have the meaning given such term in Rule 13d-3 of the General Rules and Regulations under the Securities Exchange Act of 1934, as amended (the "***Exchange Act***").

c. ***"Cause"*** shall mean (i) Executive's willful failure to perform Executive's duties hereunder (other than as a result of total or partial incapacity due to physical or mental illness) for a period of thirty (30) days following written notice by the Company to Executive of such failure, (ii) conviction of, or a plea of nolo contendere to, (x) a felony under the laws of the United States or any state thereof or any similar criminal act in a jurisdiction outside the United States or (y) a crime involving moral turpitude, (iii) Executive's willful malfeasance or willful misconduct which is demonstrably injurious to the Company or its Affiliates, (iv) any act of fraud by Executive, (v) any material violation of the Company's code of conduct, (vi) any material violation of the Company's policies concerning harassment or discrimination, (vii) Executive's conduct that causes material harm to the business reputation of the Company or its Affiliates, or (viii) Executive's breach of the provisions of Sections 7 (Confidentiality; Intellectual Property) or 8 (Non-Competition; Non-Solicitation) of this Agreement.

d. A “***Change In Control”*** will be deemed to have occurred for purposes hereof, upon any one of the following events: (a) any person (within the meaning of Sections 13(d) and 14(d) of the Exchange Act), other than the Company (including its subsidiaries, directors, and executive officers) has become the Beneficial Owner of thirty percent (30%) or more of the combined voting power of the Company’s then outstanding common stock or equivalent in voting power of any class or classes of the Company’s outstanding securities ordinarily entitled to vote in elections of directors (“***Voting Securities”***) (other than as a result of an issuance of securities by the Company approved by Incumbent Directors, or open market purchases approved by Incumbent Directors at the time the purchases are made); (b) individuals who constitute the Board as of the Effective Date (the “***Incumbent Directors”***) have ceased for any reason to constitute at least a majority thereof, provided that any person becoming a director after the Effective Date whose election, or nomination for election by the Company’s stockholders, was approved by a majority of the directors comprising the Incumbent Board, either by a specific vote or by approval of the proxy statement of the Company in which such person is named as a nominee for director without objection to such nomination shall be an Incumbent Director; provided, however, that no individual initially elected or nominated as a director of the Company as a result of an actual or threatened election contest with respect to the election or removal of directors (“***Election Contest”***) or other actual or threatened solicitation of proxies or consents by or on behalf of any Person other than the Board (“***Proxy Contest”***), including by reason of any agreement intended to avoid or settle any Election Contest or Proxy Contest, shall be deemed an Incumbent Director; (c) the stockholders of the Company approve a reorganization, merger, consolidation, statutory share exchange or similar form of corporate transaction, or the sale or other disposition of all or substantially all of the Company’s assets (a “***Transaction”***), unless immediately following such Transaction, (i) all or substantially all of the Persons who were the Beneficial Owners of the Voting Securities outstanding immediately prior to such Transaction are the Beneficial Owners of more than 50% of the combined voting power of the then outstanding voting securities entitled to vote generally in the election of directors of the entity resulting from such Transaction (including, without limitation, an entity which as a result of such Transaction owns the Company or all or substantially all of the Company’s assets or stock either directly or through one or more subsidiaries, the “***Surviving Entity”***) in substantially the same proportions as their ownership, immediately prior to such Transaction, of the Voting Securities, (ii) no Person is the Beneficial Owner of 30% or more of the combined voting power of the then outstanding voting securities entitled to vote generally in the election of directors of the Surviving Entity, and (iii) at least a majority of the members of the board of directors of the Surviving Entity are Incumbent Directors; or (d) approval by the Company’s stockholders of a complete liquidation and dissolution of the Company.

However, if in any circumstance in which the foregoing definition would be operative and with respect to which the income tax under Section 409A of the Code would apply or be imposed, but where such tax would not apply or be imposed if the meaning of the term “Change in Control” met the requirements of Section 409A(a)(2)(A)(v) of the Code, then the term “Change in Control” herein shall mean, but only for the transaction so affected, a “change in control event” within the meaning of Treas. Reg. §1.409A-3(i)(5).

e. ***“Change In Control Protection Period”*** shall mean that period commencing on the date that the Company or a third party publicly announces an event that, if consummated,

would constitute a Change In Control and ending (i) on the date that the circumstances giving rise to the announcement of the event are abandoned or withdrawn, or (ii) if such transaction is consummated, two years after the Change In Control.

f. ***"COBRA"*** shall mean those provisions of the Consolidated Omnibus Budget Reconciliation Act of 1986, as amended, related to continuation of group health and dental plan coverage as set forth in Code section 4980B.

g. "***Code"*** shall mean the Internal Revenue Code of 1986, as amended from time to time.

h. ***"Competitive Business"*** shall mean businesses that compete with products and services offered by the Company in those countries where the Company or any of its Affiliates manufactures, produces, sells, leases, rents, licenses or otherwise provides its products or services during the two (2) years preceding the Termination Date (including, without limitation, businesses which the Company or its Affiliates have specific plans to conduct in the future that were disclosed or made available to Executive), provided that, if Executive's duties were limited to particular product lines or businesses during such period, the Competitive Business shall be limited to those product lines or businesses in those countries for which the Executive had such responsibility.

i. ***"Confidential Information"*** shall mean any non-public, proprietary or confidential information, including without limitation trade secrets, know-how, research and development, software, databases, inventions, processes, formulae, technology, designs and other intellectual property, information concerning finances, investments, profits, pricing, costs, products, services, vendors, customers, clients, partners, investors, personnel, compensation, benefits, recruiting, training, advertising, sales, marketing, promotions, government and regulatory activities and approvals concerning the past, current or future business, activities and operations of the Company, its Affiliates and/or any third party that has disclosed or provided any of same to the Company or its Affiliates on a confidential basis. "Confidential Information" also includes any information designated as a trade secret or proprietary information by operation of law or otherwise, but shall not be limited by such designation. "Confidential Information" shall not include any information that is (i) generally known to the industry or the public other than as a result of Executive's breach of this covenant; (ii) made legitimately available to Executive by a third party without breach of any confidentiality obligation; or (iii) required by law to be disclosed; provided that Executive shall give prompt written notice to the Company of such requirement, disclose no more information than is so required, and cooperate with any attempts by the Company to obtain a protective order or similar treatment.

j. ***"Controlled Group"*** shall mean all corporations or business entities that are, along with the Company, members of a controlled group of corporations or businesses, as defined in Code Sections 414(b) and 414(c), except that the language "at least 50 percent" is used instead of "at least 80 percent" in applying the rules of Code Sections 414(b) and 414(c).

k. ***"Fiscal Year"*** shall mean the fiscal year of the Company.

l. ***"Good Reason"*** shall mean any of the following conditions which occurs without the consent of the Executive: (i) a material diminution in the Executive's base salary or annual bonus opportunity; (ii) a material diminution in the Executive's authority, duties, or responsibilities (including status, offices, titles and reporting requirements); (iii) a material change in the geographic location at which the Executive must perform his duties; (iv) failure of the Company to pay compensation or benefits when due, or (v) any other action or inaction that constitutes a material breach by the Company of this Agreement. The conditions described above will not constitute "Good Reason" unless the Executive provides written notice to the Company of the existence of the condition described above within ninety (90) days after the initial existence of such condition. In addition, the conditions described above will not constitute "Good Reason" unless the Company fails to remedy the condition within a period of thirty (30) days after receipt of the notice described in the preceding sentence. If the Company fails to remedy the condition within the period referred to in the preceding sentence, Executive may terminate his employment with the Company for "Good Reason" within in the next thirty (30) days following the expiration of the cure period.

m. ***"Notice of Termination"*** shall mean a notice which shall indicate the general reasons for the termination employment and the circumstances claimed to provide a basis for termination of employment or other Separation of Service under the provision so indicated.

n. ***"Person"*** shall mean any person, firm, partnership, joint venture, association, corporation or other business organization, entity or enterprise whatsoever.

o. ***"Specified Employee"*** shall have the meaning and shall be determined in the manner set forth in the Celanese Americas Supplemental Retirement Pension Plan.

p. ***"Restricted Period"*** shall be (i) one year from the Termination Date in the event of a Separation from Service that occurs during the Service Term (as defined hereinafter) other than in the case of an involuntary Separation from Service without Cause, (ii) in the case of an involuntary Separation from Service without Cause during the Service Term, an amount of time in whole months equal to the number of months' salary the Company agrees to provide to Executive in severance, whether paid over time or in a lump sum; and (iii) eighteen (18) months from the Termination Date in the event of a Separation from Service following a Change In Control where Executive receives the Change In Control Payment (as defined hereinafter).

q. ***"Separation from Service"*** shall mean an event after which the Executive shall no longer provide services to the members of the Controlled Group, whether voluntarily or involuntarily as determined by the Committee (as hereafter defined) in accordance with Treas. Reg. §1.409A-1(h)(1). A Separation from Service shall occur when Executive has experienced a termination of employment from the members of the Controlled Group. Executive shall be considered to have experienced a termination of employment when the facts and circumstances indicate that the Executive and the Company reasonably anticipate that either (i) no further services will be performed for the members of the Controlled Group after a certain date, or (ii) that the level of bona fide services the Executive will perform for the members of the Controlled Group after such date (whether as an employee or as an independent contractor) will permanently decrease to no more than 20% of the average level of bona fide services performed by such Executive (whether

as an employee or an independent contractor) over the immediately preceding 36-month period (or the full period of services to the members of the Controlled Group if the Executive has been providing services to the members of the Controlled Group less than 36 months). If Executive is on military leave, sick leave, or other bona fide leave of absence, the employment relationship between the Executive and the members of the Controlled Group shall be treated as continuing intact, provided that the period of such leave does not exceed 6 months, or if longer, so long as the Executive retains a right to reemployment with the members of the Controlled Group under an applicable statute or by contract. If the period of a military leave, sick leave, or other bona fide leave of absence exceeds 6 months and the Executive does not retain a right to reemployment under an applicable statute or by contract, the employment relationship shall be considered to be terminated for purposes of this Agreement as of the first day immediately following the end of such 6-month period. In applying the provisions of this paragraph, a leave of absence shall be considered a bona fide leave of absence only if there is a reasonable expectation that the Executive will return to perform services for any members of the Controlled Group.

Notwithstanding the foregoing provisions, if Executive provides services for the Company as both an employee and as a non-employee director, to the extent permitted by Treas. Reg. §1.409A-1(h)(5) the services provided by such Executive as a non-employee director shall not be taken into account in determining whether the Executive has experienced a Separation from Service.

r. ***"Target Bonus"*** shall mean the target bonus for Executive under any annual bonus plan in effect from time to time as determined by the Compensation Committee (the "***Committee"***) or the Board.

s. ***"Termination Date"*** shall mean the date upon which a Separation from Service with respect to an Executive occurs.

2. **Term of Change In Control Agreement**.

a. This Agreement shall be for an initial term (the "***Initial Term"***) of two years and shall continue to renew for consecutive two year terms thereafter (a "***Renewal Term"***), unless either party shall give written notice to the other (a "***Notice of Non-Renewal"***) that such agreement shall not renew at least ninety (90) days prior to the expiration of the Initial Term or Renewal Term then in effect. Notwithstanding the foregoing, the Company may not give a Notice of Non-Renewal during the Change In Control Protection Period.

b. This Agreement, except those provisions which shall survive under Section 11(k), shall terminate upon the termination of Executive's employment for any reason other than the termination of Executive's employment during the Change In Control Protection Period (x) by the Company without Cause or (y) by the Executive with Good Reason. No payment under this Agreement will be due to Executive upon termination of Executive's employment for any reason other than as specified in (x) or (y) above.

3. **Executive's Incumbent Position**.

a. Unless notified otherwise by the Chief Executive Officer of the Company or the Board, Executive shall serve as **[insert officer position]** ("***Executive's Incumbent Position")***. In such position, Executive shall have such duties and authority as shall be determined from time to time by the Chief Executive Officer and the Board. If requested, Executive shall also serve as a member of the Board without additional compensation. The period during which the Executive shall be employed by the Company shall be called the "***Service Term***."

b. Except as provided in Section 5, (i) either Company or Executive may terminate the employment relationship at any time, with or without Cause or Good Reason, (ii) this Agreement shall not be construed as giving the Executive any right to be retained in the employ of the Company or its Affiliates, (iii) the Company may at any time terminate the Executive free from any liability of any claim under this Agreement, except as expressly provided herein; and (iv) the Company may demote Executive at any time in its absolute and sole discretion without liability to the Executive.

c. During the Service Term, Executive will devote Executive's full business time and best efforts to the performance of Executive's duties hereunder and will not engage in any other business, profession or occupation for compensation or otherwise which would conflict or interfere with the rendition of such services either directly or indirectly, without the prior written consent of the Board; provided that nothing herein shall preclude Executive, (i) subject to the prior approval of the Board, from accepting appointment to or continuing to serve on any board of directors or trustees of any business corporation or any charitable organization or (ii) from participating in charitable activities or managing personal investments; provided in each case, and in the aggregate, that such activities do not conflict or interfere with the performance of Executive's duties hereunder or conflict with Sections 7 or 8. Executive shall promote the goodwill of the Company with its employees, customers, stockholders, vendors, and the general public. During the Service Term, reasonable business expenses incurred by Executive in the performance of Executive's duties hereunder and to support the goodwill and business relationships of the Company shall be reimbursed by the Company in accordance with Company policies.

4. **Obligations of the Company upon Change In Control with Respect to Long-Term Incentive Awards and Deferred Compensation**.

The effect of a change in control on any long-term incentive awards (cash or equity) or deferred compensation previously granted to the Executive under the 2008 Deferred Compensation Plan, 2004 Stock Incentive Plan or the 2009 and 2018 Global Incentive Plans, as amended (the "***Long-Term Incentive Awards"***), shall be governed by the terms and conditions of the applicable individual award agreements or deferral agreements and the Celanese Corporation 2008 Deferred Compensation Plan, the 2004 Stock Incentive Plan or the 2009 and 2018 Global Incentive Plans, as amended (collectively, the "***Long-Term Incentive Award Agreements"***), and shall not be governed by this Agreement.

5. **Termination of Employment Connected with a Change In Control**.

a. Upon Executive's Separation from Service during the Change In Control Protection Period, Executive shall receive the Change In Control Payment if and only if the following conditions occur:

(i) The Change In Control is consummated;

(ii) Executive is employed in the Executive Incumbent Position or some substantially equivalent or higher position for the Company as of the commencement of the Change In Control Protection Period;

(iii) Executive's employment is terminated either by the Company without Cause or by the Executive with Good Reason such that a Separation from Service occurs;

(iv) Within fifty-three (53) days after both conditions in Sections 5(a)(i) and 5(a)(iii), or at the expiration of twenty-one (21) days following the presentation of the release, Executive executes a release of all claims, known or unknown, against the Company, its Affiliates, and their respective agents in a form satisfactory to the Company similar to that attached hereto as Exhibit A and does not timely revoke such release before the expiration of seven days following his or her execution of the release; and

(v) Within fifty-three (53) days after both conditions in Sections 5(a)(i) and 5(a)(iii), Executive reaffirms in writing in a manner satisfactory to the Company his or her obligations under Sections 7 and 8 of this Agreement.

b. The "***Change In Control Payment***" shall be equal to two (2) times the sum of (i) Executive's then current annualized base salary; and (ii) the higher of (x) Executive's Target Bonus in effect on the last day of the Fiscal Year that ended immediately prior to the year in which the Termination Date occurs, or (y) the average of the cash bonuses paid by the Company to Executive for the three Fiscal Years preceding the Termination Date.

c. If the Executive is a Specified Employee on the Executive's Termination Date, the Change In Control Payment shall be paid in a single lump sum to Executive six (6) months and one day after the Executive's Termination Date, together with interest at the rate provided in Section 1274(b)(2)(B) of the Code. If the Executive is not a Specified Employee on the Executive's Termination Date, the Severance Payment shall be paid in a single lump sum to the Executive within thirty (30) days of the Executive's Termination Date.

d. Provided that (i) all of the conditions in Section 5(a) are met, (ii) Executive makes a timely COBRA election, and (iii) Executive has complied in all material respects with regard to the obligations of Sections 7 and 8 of this Agreement, if the Executive timely remits to the Company the applicable "COBRA" premiums for such coverage, the Company will continue to provide group health and dental coverage under the Company's medical plan for Executive and his or her dependents during the Restricted Period; and will reimburse Executive for all premiums paid by Executive for such continued coverage. Such reimbursements will be made within thirty

(30) days after Executive's payment of such premiums (or submission of a request for reimbursement and satisfactory proof of such payment) but in no event later than on or before the last day of the Executive's tax year following the tax year in which the expense was incurred. The amount of COBRA premiums and health and dental expenses eligible for reimbursement during Executive's tax year may not affect the COBRA premiums and health and dental expenses eligible for reimbursement in any other tax year.

e. Adjustment to Payments.

(i) Anything in this Agreement to the contrary notwithstanding, in the event it shall be determined that any economic benefit or payment or distribution by the Company to or for the benefit of the Executive, whether paid or payable or distributed or distributable pursuant to the terms of this Agreement or otherwise (including, but not limited to, any economic benefit received by the Executive by reason of the acceleration of rights under the various option and restricted stock unit plans of the Company) ("***Covered Payments***"), would be subject to the excise tax imposed by Section 4999 of the Code or any interest or penalties with respect to such excise tax (such excise tax, together with any such interest and penalties, are hereinafter collectively referred to as the "***Excise Tax***"), the Covered Payments shall be reduced (but not below zero) if and to the extent that such reduction would result in the Executive retaining a larger amount, on an after-tax basis (taking into account federal, state and local income taxes and the imposition of the Excise Tax), than if the Executive received all of the Covered Payments. The Company shall reduce or eliminate the Covered Payments, by first reducing or eliminating the portion of the Covered Payments which are not payable in cash and then by reducing or eliminating cash payments, in each case in reverse order beginning with payments or benefits which are to be paid the farthest in time from the determination.

(ii) All determinations required to be made under subsection (e)(i), including whether and when an adjustment to any Covered Payments is required and, if applicable, which Covered Payments are to be so adjusted, shall be made by a public accounting firm appointed by the Company or tax counsel selected by such accounting firm (the "***Accountants***"). All fees and expenses of the Accountants shall be borne solely by the Company. Any determination by the Accountants shall be binding upon the Company and Executive.

f. Notwithstanding any provision of this Agreement to the contrary, if Executive is a Specified Employee and if any payment under this Agreement provides for a "deferral of compensation" within the meaning of Treasury Regulation §1.409A-1(b) and if such payment would otherwise occur before the date that is six (6) months after the Executive's Termination Date, then such payment shall be delayed and shall occur on the date that is six (6) months and one (1) day after the Termination Date (or, if earlier, the date of the Executive's death), together with interest at the rate provided in Section 1274(b)(2)(B) of the Code.

6. **Exclusivity of Benefits**. Executive acknowledges that this Agreement supercedes and replaces all prior agreements or understandings Executive may have with the Company with respect to compensation or benefits that may become payable in connection with or as a result of a change in control of the Company, whether or not such change in control constitutes a Change In Control, including any provisions contained in any employment agreement, offer letter or change

in control agreement, except with respect to any Long-Term Incentive Awards which shall be governed by the terms of the Long-Term Incentive Award Agreements. This Agreement also describes all payments and benefits that the Company shall be obligated to provide to Executive upon Executive's Separation from Service during a Change In Control Protection Period and shall constitute Executive's agreement to waive any rights to payment under the Celanese Americas Separation Pay Plan, any similar or successor plan adopted by the Company, and any other term of employment contained in any employment agreement, offer letter, change in control agreement or otherwise (other than benefits to which he/she may be entitled, if any: (i) under any Celanese plan qualified under Section 401(a) of the Internal Revenue Code, including the Celanese Americas Retirement Pension Plan and Celanese Americas Retirement Savings Plan; and (ii) under the 2008 Celanese Deferred Compensation Plan) to the extent that the circumstances giving right to such right to payment would constitute a Separation of Service during a Change In Control Protection Period.

7. **Confidentiality; Intellectual Property**.

a. Confidentiality.

(i) Based upon the assurances given by the Executive in this Agreement, the Company will provide Executive with access to its Confidential Information. Executive hereby reaffirms that all Confidential Information received by Executive prior to the termination of this Agreement is the exclusive property of the Company and Executive releases any individual claim to the Confidential Information.

(ii) Executive will not at any time (whether during or after Executive's employment with the Company) (x) retain or use for the benefit, purposes or account of Executive or any other Person; or (y) disclose, divulge, reveal, communicate, share, make available, transfer or provide access to any Person outside the Company (other than its professional advisers who are bound by confidentiality obligations), any Confidential Information without the prior written authorization of the Board.

(iii) Upon termination of Executive's employment with the Company for any reason, Executive shall (x) cease and not thereafter commence use of any Confidential Information or intellectual property (including without limitation, any patent, invention, copyright, trade secret, trademark, trade name, logo, domain name or other source indicator) owned or used by the Company or its Affiliates; (y) immediately destroy, delete, or return to the Company, at the Company's option, all originals and copies in any form or medium (including memoranda, books, papers, plans, computer files, letters and other data) in Executive's possession or control (including any of the foregoing stored or located in Executive's office, home, laptop or other computer, whether or not Company property) that contain Confidential Information or otherwise relate to the business of the Company or its Affiliates, except that Executive may retain only those portions of any personal notes, notebooks and diaries that do not contain any Confidential Information; and (z) notify and fully cooperate with the Company regarding the delivery or destruction of any other Confidential Information of which Executive is or becomes aware.

(iv) If Executive has previously entered into any confidentiality or non-disclosure agreements with any former employer, Executive hereby represents and warrants that such confidentiality and/or non-disclosure agreement or agreements have been fully disclosed and provided to the Company prior to commencing employment with the Company.

b. Intellectual Property.

(i) If Executive has created, invented, designed, developed, contributed to or improved any works of authorship, inventions, intellectual property, materials, documents or other work product (including without limitation, research, reports, software, databases, systems, applications, presentations, textual works, content, or audiovisual materials) ("***Works***"), either alone or with third parties, prior to Executive's employment by the Company, that are relevant to or implicated by such employment ("***Prior Works***"), Executive hereby grants the Company a perpetual, non-exclusive, royalty-free, worldwide, assignable, sublicensable license under all rights and intellectual property rights (including rights under patent, industrial property, copyright, trademark, trade secret, unfair competition and related laws) therein for all purposes in connection with the Company's current and future business. A list of all such Works as of the date hereof is attached hereto as ***Exhibit B***.

(ii) If Executive creates, invents, designs, develops, contributes to or improves any Works, either alone or with third parties, at any time during Executive's employment by the Company and within the scope of such employment and/or with the use of any of the Company resources ("***Company Works***"), Executive shall promptly and fully disclose same to the Company and hereby irrevocably assigns, transfers and conveys, to the maximum extent permitted by applicable law, all rights and intellectual property rights therein (including rights under patent, industrial property, copyright, trademark, trade secret, unfair competition and related laws) to the Company to the extent ownership of any such rights does not vest originally in the Company.

(iii) Executive agrees to keep and maintain adequate and current written records (in the form of notes, sketches, drawings, and any other form or media requested by the Company) of all Company Works. The records will be available to and remain the sole property and intellectual property of the Company at all times.

(iv) Executive shall take all requested actions and execute all requested documents (including any licenses or assignments required by a government contract) at the Company's expense (but without further remuneration) to assist the Company in validating, maintaining, protecting, enforcing, perfecting, recording, patenting or registering any of the Company's rights in the Prior Works and Company Works. If the Company is unable for any other reason to secure Executive's signature on any document for this purpose, then Executive hereby irrevocably designates and appoints the Company and its duly authorized officers and agents as Executive's agent and attorney in fact, to act for and in Executive's behalf and stead to execute any documents and to do all other lawfully permitted acts in connection with the foregoing.

(v) Executive shall not improperly use for the benefit of, bring to any premises of, divulge, disclose, communicate, reveal, transfer or provide access to, or share with the Company any confidential, proprietary or non-public information or intellectual property relating

to a former employer or other third party without the prior written permission of such third party. Executive hereby indemnifies, holds harmless and agrees to defend the Company and its officers, directors, partners, employees, agents and representatives from any breach of the foregoing covenant. Executive shall comply with all relevant policies and guidelines of the Company, including regarding the protection of confidential information and intellectual property and potential conflicts of interest. Executive acknowledges that the Company may amend any such policies and guidelines from time to time, and that Executive remains at all times bound by their most current version.

c. In the event Executive leaves the employ of the Company, Executive hereby grants consent to notification by the Company to any subsequent employer about Executive's rights and obligations under this Agreement.

8. **Non-Competition; Non-Solicitation**.

a. Executive acknowledges and recognizes the highly competitive nature of the businesses of the Company and its Affiliates and accordingly agrees as follows:

(i) During the Service Term and for the Restricted Period, Executive will not, whether on Executive's own behalf or on behalf of or in conjunction with any Person, directly or indirectly solicit or assist in soliciting in competition with the Company or its Affiliates, the business of any customer, prospective customer, client or prospective client:

(A) with whom Executive had personal contact or dealings on behalf of the Company or its Affiliates during the one year period preceding the termination of Executive's employment;

(B) with whom employees directly or indirectly reporting to Executive have had personal contact or dealings on behalf of the Company or its Affiliates during the one-year immediately preceding the termination of Executive's employment; or

(C) for whom Executive had direct or indirect responsibility during the one year period immediately preceding the termination of Executive's employment.

(ii) During the Restricted Period, Executive will not directly or indirectly:

(A) engage in any Competitive Business;

(B) enter the employ of, or render any services to, any Person (or any division or controlled or controlling affiliate of any Person) who or which engages in a Competitive Business;

(C) acquire a financial interest in, or otherwise become actively involved with, any Competitive Business, directly or indirectly, as an individual, partner, stockholder, officer, director, principal, agent, trustee or consultant; or

(D) interfere with, or attempt to interfere with, business relationships (whether formed before, on or after the date of this Agreement) between the Company or any of its Affiliates and customers, clients, suppliers partners, members or investors of the Company or its Affiliates.

(iii) Notwithstanding anything to the contrary in this Agreement, Executive may directly or indirectly own, solely as an investment, securities of any Person engaged in the business of the Company or its Affiliates which are publicly traded on a national or regional stock exchange or on the over-the-counter market if Executive (i) is not a controlling Person of, or a member of a group which controls, such Person and (ii) does not, directly or indirectly, own 5% or more of any class of securities of such Person.

(iv) During the Restricted Period, Executive will not, whether on Executive's own behalf or on behalf of or in conjunction with any Person, directly or indirectly:

(A) solicit, interview, encourage, or take any other action that would tend to influence in any manner any employee of the Company or its Affiliates to leave the employment of the Company or its Affiliates (other than as a result of a general advertisement of employment made by Executive's subsequent employer or business, not directed at any such employee); or

(B) hire any such employee who was employed by the Company or its Affiliates as of the Termination Date or who left the employment of the Company or its Affiliates coincident with, or within one year prior to or after, the Termination Date.

(v) During the Restricted Period, Executive will not, directly or indirectly, solicit or encourage any consultant then under contract with the Company or its Affiliates to cease to work with the Company or its Affiliates.

b. It is expressly understood and agreed that although Executive and the Company consider the restrictions contained in this Section 8 to be reasonable, if a final judicial determination is made by a court of competent jurisdiction that the time or territory or any other restriction contained in this Agreement is an unenforceable restriction against Executive, the provisions of this Agreement shall not be rendered void but shall be deemed amended to apply as to such maximum time and territory and to such maximum extent as such court may judicially determine or indicate to be enforceable. Alternatively, if any court of competent jurisdiction finds that any restriction contained in this Agreement is unenforceable, and such restriction cannot be amended so as to make it enforceable, such finding shall not affect the enforceability of any of the other restrictions contained herein.

c. Prior to the commencement thereof, Executive will provide written notice to the Company of any employment or other activity that would potentially violate the provisions of Sections 7 or 8 and, if Executive wishes to do so, Executive may ask the Board to modify or waive the protections of this Section 8, but nothing in this Agreement shall limit in any manner the Board's absolute discretion not to do so.

9. **Enforcement of Promises Concerning the Protection of the Company's Confidential Information and Goodwill**. Executive acknowledges and agrees that the Company's remedies at law for a breach or threatened breach of any of the provisions of Section 7 or Section 8 would be inadequate and the Company would suffer irreparable damages as a result of such breach or threatened breach. In recognition of this fact, Executive agrees that, in the event of such a breach in or threatened breach, in addition to any remedies at law, the Company, without posting any bond, shall be entitled to obtain equitable relief in the form of specific performance, temporary restraining order, temporary or permanent injunction or any other equitable remedy which may then be available. In addition, and without limiting the Company's ability to obtain such equitable relief, Executive shall not be entitled to any Change In Control Payment if Executive materially violates the provisions of Sections 7 or 8 and, to the extent that such payments have already been made, Executive shall repay all Change In Control Payments immediately upon demand by the Company.

10. **Section 409A Acknowledgement and Release**. Executive understands that payments under this Agreement are potentially subject to Section 409A of the Code and that if this Agreement does not satisfy an exception to Code Section 409A or does not comply with the requirements of Section 409A and the applicable guidance thereunder, then Executive may incur adverse tax consequences under Section 409A. Executive acknowledges and agrees that (a) Executive is solely responsible for all obligations arising as a result of the tax consequences associated with payments under this Agreement including, without limitation, any taxes, interest or penalties associated with Section 409A, (b) Executive is not relying upon any written or oral statement or representation by the Company or any Affiliate thereof, or any of their respective employees, directors, officers, attorneys or agents (collectively, the "***Company Parties***") regarding the tax effects associated with the execution of this Agreement and the payment under this Agreement, and (c) in deciding to enter into this Agreement, Executive is relying on his or her own judgment and the judgment of the professionals of his or her choice with whom Executive has consulted. Executive hereby releases, acquits and forever discharges the Company Parties from all actions, causes of actions, suits, debts, obligations, liabilities, claims, damages, losses, costs and expenses of any nature whatsoever, known or unknown, on account of, arising out of, or in any way related to the tax effects associated with the execution of this Agreement and any payment hereunder.

11. **Miscellaneous**.

a. Governing Law; Jurisdiction; Venue. This Agreement shall be governed by and construed in accordance with the laws of the State of Texas, without regard to conflicts of laws principles thereof. Any action concerning or relating to this Agreement shall be filed only in the federal and state courts sitting in Dallas County, Texas.

b. Entire Agreement; Amendments. This Agreement contains the entire understanding of the parties with respect to any Change In Control or the subject matter of this Agreement, provided however, that the effects of a change in control pursuant to the Long-Term Incentive Award Agreements shall be governed by the terms of such agreements and shall not be affected by this Agreement.

c. No Waiver. The failure of a party to insist upon strict adherence to any term of this Agreement, or any term of any agreement with any other employee, on any occasion shall

not be considered a waiver of such party's rights or deprive such party of the right thereafter to insist upon strict adherence to that term or any other term of this Agreement.

d. Severability. In the event that any one or more of the provisions of this Agreement shall be or become invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions of this Agreement shall not be affected thereby.

e. Assignment. This Agreement, and all of Executive's rights and duties hereunder, shall not be assignable or delegable by Executive. Any purported assignment or delegation by Executive in violation of the foregoing shall be null and void ab initio and of no force and effect. This Agreement may be assigned, in whole or in part, by the Company to a Person which is an Affiliate or a successor in interest to all or a substantial part of the business operations of the Company. Upon such assignment, the rights and obligations of the Company hereunder shall become the rights and obligations of such Affiliate or successor Person.

f. Successors; Binding Agreement. This Agreement shall inure to the benefit of and be binding upon personal or legal representatives, executors, administrators, successors, heirs, distributees, devisees and legatees.

g. Notice. For the purpose of this Agreement, notices and all other communications provided for in the Agreement shall be in writing and shall be deemed to have been duly given when delivered by hand or overnight courier or three days after it has been mailed by United States registered mail, return receipt requested, postage prepaid, addressed to the respective addresses set forth below in this Agreement, or to such other address as either party may have furnished to the other in writing in accordance herewith, except that notice of change of address shall be effective only upon receipt.

If to the Company:

222 West Las Colinas Boulevard, Suite 900N
Irving, Texas 75039
Attention: General Counsel

If to Executive:

Executive's home address as set forth in the personnel records of the Company

h. Cooperation. Executive shall provide Executive's reasonable cooperation in connection with any action or proceeding (or any appeal from any action or proceeding) which relates to events occurring during Executive's employment hereunder.

i. Withholding Taxes. The Company may withhold from any amounts payable under this Agreement such Federal, state and local taxes as may be required to be withheld pursuant to any applicable law or regulation.

j. Counterparts. This Agreement may be signed in counterparts, each of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument.

k. Survival. The provisions of Sections 1 and 7 through 9 of this Agreement shall survive the termination of this Agreement.

IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement as of the day and year first above written.

EXECUTIVE:		**Celanese Corporation:**	
By:	______________________	By:	______________________
	[Name] Employee ID:		
Date:	______________________	Date:	______________________

EXHIBIT A

FORM OF GENERAL RELEASE AGREEMENT

AGREEMENT AND GENERAL RELEASE

Celanese Corporation and its Affiliates (the “Company”), 222 West Las Colinas Boulevard, Suite 900N, Irving, Texas 75039 and ____________________, his or her heirs, executors, administrators, successors, and assigns (“Executive”), enter into this Agreement and General Release (the “Release”) and agree as follows:

1. Last Day of Employment (Separation Date). The last day of employment with the Company is [Insert Date] (the “Separation Date”).

2. Consideration. In consideration for signing this Release and compliance with the promises made herein, Company and Executive agree:

a. Change In Control Payment. The Company will pay the Change In Control Payment, as defined in the Change In Control Agreement between the Company and Executive dated on or about __________, 20___ (the “CIC Agreement”)[1] and provide the reimbursements set forth in the CIC Agreement. Executive agrees that such payments are the exclusive payments due to Executive arising out of the separation of Executive’s employment.

b. Unused Vacation. The Company will pay to Executive wages for prorated unused vacation as of the Separation Date.

c. Benefits. The Executive shall be entitled to elect to continue group health and dental coverage under COBRA and shall be reimbursed for such premiums as provided in the CIC Agreement. Executive’s rights in any other employee benefit plans of the Company will be as provided in the relevant plan documents.

3. No Consideration Absent Execution of this Agreement. Executive understands and agrees that he/she would not receive the consideration specified in Paragraph “2” above, unless the Executive signs this Agreement and General Release on the signature page without having revoked this Release pursuant to paragraph 14 below and the fulfillment of the promises contained herein.

4. General Release of Claims. Executive knowingly and voluntarily releases and forever discharges the Company and its Affiliates, together with its predecessors, successors and assigns and the current and former employees, officers, directors and agents thereof (collectively, the “Released Parties”), of and from any and all claims, known and unknown, asserted and unasserted, Executive has or may have as of the date of execution of this Release to the full extent permitted by law, in all countries and jurisdictions in which the Released Parties conduct their respective business, including but not limited to the United States of America. Notwithstanding anything to the contrary herein, it is expressly understood and agreed that the terms and conditions of any Long-Term Incentive Awards shall continue to be governed by the applicable Long-Term Incentive Award Agreements and shall not be affected by this Release.

---

[1] **All capitalized terms shall have the same meaning as set forth in the CIC Agreement, unless otherwise stated.**

5. Executive acknowledges and agrees that he/she has been paid all amounts owed to Executive as compensation, whether in the form of salary, bonus, equity compensation, benefits or otherwise. The release in Section 4 of this Release includes, but is not limited to, any alleged violation of the following, as may be amended or in effect:

(a) any action arising under or relating to any federal or state statute or local ordinance, such as:

- Title VII of the Civil Rights Act of 1964;
- The Civil Rights Act of 1991;
- Sections 1981 through 1988 of Title 42 of the United States Code;
- The Employee Retirement Income Security Act of 1974;
- The Immigration Reform and Control Act;
- The Family and Medical Leave Act;
- The Americans with Disabilities Act of 1990;
- The Age Discrimination in Employment Act of 1967;
- The Workers Adjustment and Retraining Notification Act;
- The Occupational Safety and Health Act;
- The Sarbanes-Oxley Act of 2002;
- The Texas Commission on Human Rights Act;
- The Texas Minimum Wage Law;
- Equal Pay Law for Texas; and
- The Vocational Rehabilitation Act.

(b) any other national, federal, state, province, or local civil or human rights law, or any other local, state, province, national or federal law, regulation or ordinance; or any law, regulation or ordinance of a foreign country, including but not limited to the Federal Republic of Germany and the United Kingdom;

(c) any action under public policy, contract, tort, common law or equity, including, but not limited to, claims based on alleged breach of an obligation or duty arising in contract or tort, such as breach of contract, fraud, quantum meruit, invasion of privacy, wrongful discharge, defamation, infliction of emotional distress, assault, battery, malicious prosecution, false imprisonment, harassment, negligence, gross negligence, and strict liability;

(d) any claim for lost, unpaid, or unequal wages, salary, or benefits, including, without limitation, any claim under the Fair Labor Standards Act, the Employee Retirement Income Security Act, the Equal Pay Act, the Texas Minimum Wage Law, the Texas Equal Pay Law, or any other local, state, or federal statute concerning classifications, wages, salary, or benefits, including calculations and deductions relating to same, as well as the employment, labor and benefits laws and regulations in all countries in addition to the United States of America, including but not limited to the United Kingdom and the Federal Republic of Germany; and

(e) any other claim regardless of the forum in which it might be brought, if any, which Executive has, might have, or might claim to have against any of the Released Parties, for any and all injuries, harm, damages, wages, benefits, salary, reimbursements, penalties, costs, losses, expenses, attorneys’ fees, and/or liability or other detriment, if any, whatsoever and whenever incurred, suffered, or claimed by the Executive.

6. **Affirmations**. Executive affirms that he/she has not filed, caused to be filed, or presently is a party to any claim, complaint, or action against the Released Parties in any forum or form, provided that this Release shall not affect the rights or responsibilities of the Equal Employment Opportunity Commission, or any other federal, state, or local authority with similar responsibilities (collectively, the "Commission") to enforce any employment discrimination law, and that this Release shall not shall affect the right of Executive to file a charge of discrimination with the Commission or participate in any investigation. However, Executive waives any right to participate in any payment or benefit arising from any such charge, claim, or investigation.

Executive further affirms that he/she has reported all hours worked as of the date of this Release and has been paid and/or has received all leave (paid or unpaid), compensation, wages, bonuses, commissions, and/or benefits to which he/she may be entitled and that no other leave (paid or unpaid), compensation, wages, bonuses, commissions and/or benefits are due to him/her, except as provided specifically in this Release. Executive furthermore affirms that he/she has no known workplace injuries or occupational diseases and has been provided and/or has not been denied any leave requested under the Family and Medical Leave Act.

Executive reaffirms that he or she will comply fully with Sections 7 through 9 of the CIC Agreement and that, if he or she violates such provisions, all consideration paid hereunder will be immediately due and payable back to the Company.

7. **Governing Law and Interpretation**. This Release shall be governed and conformed in accordance with the laws of the State of Texas, without regard to its conflict of laws provision. In the event the Executive or Company breaches any provision of this Release, Executive and Company affirm that either may institute an action to specifically enforce any term or terms of this Release. Should any provision of this Release be declared illegal or unenforceable by any court of competent jurisdiction and cannot be modified to be enforceable, excluding the general release language, such provision shall immediately become null and void, leaving the remainder of this Release in full force and effect.

8. **Non-admission of Wrongdoing**. The parties agree that neither this Release nor the furnishing of the consideration for this Release shall be deemed or construed at anytime for any purpose as an admission by Company of any liability or unlawful conduct of any kind.

9. **Neutral Reference**. If contacted by another organization, the Company will only provide dates of employment and position.

10. **Non-Disparagement**. Executive agrees not to disparage, or make disparaging remarks or send any disparaging communications concerning, the Company, its reputation, its business, and/or its directors, officers and managers. Likewise the Company's senior management agrees not to disparage, or make any disparaging remark or send any disparaging communication concerning Executive, his reputation and/or his business.

11. **Future Cooperation after Separation Date**. After separation, Executive agrees to make reasonable efforts to assist Company including but not limited to: assisting with transition duties, assisting with issues that arise after separation of employment and assisting with the defense or prosecution of any lawsuit or claim. This includes but is not limited to providing deposition testimony, attending hearings and testifying on behalf of the Company. The Company will reimburse Executive for reasonable time

and expenses in connection with any future cooperation after the separation date. Time and expenses can include loss of pay or using vacation time at a future employer. The Company shall reimburse the Executive within thirty (30) days of remittance by Executive to the Company of such time and expenses incurred, but in no event later than the end of the Executive's tax year following the tax year in which the Executive incurs such time and expenses and such reimbursement obligation shall remain in effect for five years and the amount of expenses eligible for reimbursement hereunder during Executive's tax year will not affect the expenses eligible for reimbursement in any other tax year. Notwithstanding the preceding sentence, if Executive is a Specified Employee on the Executive's Termination Date, the reimbursement shall not be made until after six (6) months and one day following Executive's Termination Date.

12. **Injunctive Relief**. Executive agrees and acknowledges that the Company will be irreparably harmed by any breach, or threatened breach by him/her of this Agreement and that monetary damages would be grossly inadequate. Accordingly, he/she agrees that in the event of a breach, or threatened breach by him/her of this Agreement the Company shall be entitled to apply for immediate injunctive or other preliminary or equitable relief, as appropriate, in addition to all other remedies at law or equity.

13. **Review Period**. Executive is hereby advised he/she has until [Insert Date], twenty-one (21) calendar days, to review this Release and to consult with an attorney prior to execution of this Release. Executive agrees that any modifications, material or otherwise, made to this Release do not restart or affect in any manner the original twenty-one (21) calendar day consideration period.

14. **Revocation Period and Effective Date**. In the event that Executive elects to sign and return to the Company a copy of this Agreement, he/she has a period of seven (7) days (the "Revocation Period") following the date of such execution to revoke this Release, after which time this agreement will become effective (the "Effective Date") if not previously revoked. In order for the revocation to be effective, written notice must be received by the Company no later than close of business on the seventh day after the Executive signs this Release at which time the Revocation Period shall expire.

15. **Amendment**. This Release may not be modified, altered or changed except upon express written consent of both parties wherein specific reference is made to this Release.

16. **Entire Agreement**. This Release sets forth the entire agreement between the parties hereto, and fully supersedes any prior obligation of the Company to the Executive. Executive acknowledges that he/she has not relied on any representations, promises, or agreements of any kind made to him/her in connection with his/her decision to accept this Release, except for those set forth in this Release.

17. HAVING ELECTED TO EXECUTE THIS AGREEMENT AND GENERAL RELEASE, TO FULFILL THE PROMISES AND TO RECEIVE THE SUMS AND BENEFITS IN SECTION 2 ABOVE, EXECUTIVE FREELY AND KNOWINGLY, AND AFTER DUE CONSIDERATION, ENTERS INTO THIS RELEASE INTENDING TO WAIVE, SETTLE AND RELEASE ALL CLAIMS HE/SHE HAS OR MIGHT HAVE AGAINST COMPANY.

IN WITNESS WHEREOF, the parties hereto knowingly and voluntarily executed this Release as of the date set forth below.

EXECUTIVE:		**Celanese Corporation:**	
By:	______________________	By:	______________________
Date:	______________________	Date:	______________________

EXHIBIT B

[List of Works]

Schedule of Executive Officers

Lori J. Ryerkerk
Scott A. Richardson
Todd L. Elliott
Shannon L. Jurecka
A. Lynne Puckett

Exhibit 10.15

CELANESE AMERICAS
SUPPLEMENTAL RETIREMENT PENSION PLAN

AMENDED AND RESTATED
EFFECTIVE JANUARY 1, 2009

CELANESE AMERICAS
SUPPLEMENTAL RETIREMENT PENSION PLAN

AMENDED AND RESTATED
EFFECTIVE JANUARY 1, 2009

TABLE OF CONTENTS

Article		Page
	Preamble	1
I.	Purpose	2
II.	Definitions	3
III.	Retirement Benefits	9
IV.	Death Benefits	12
V.	Retirement Benefit Payments	15
VI.	Funding	18
VII.	Administration	20
VIII.	Amendment and Termination	23
IX.	Miscellaneous Provisions	25
	Schedule A	30

CELANESE AMERICAS
SUPPLEMENTAL RETIREMENT PENSION PLAN

WHEREAS, Celanese Corporation of America, a predecessor to Celanese Americas Corporation, previously adopted this unfunded, non-qualified "excess benefit plan" (within the meaning of section 3(36) of the Employee Retirement Income Security Act of 1974, as amended ("ERISA")) for certain of its employees, in order to supplement the benefits payable to those employees under its qualified defined benefit plan; and

WHEREAS, Celanese Americas Corporation has amended and restated this Plan in the past and now wishes to again amend and restate the Plan, effective January 1, 2009, as follows:

ARTICLE I

PURPOSE

1.1 Celanese Americas Corporation, desiring to provide systematically for the payment of supplemental benefits to a select group of management or highly compensated employees within the meaning of ERISA who participate in the Celanese Americas Retire-ment Pension Plan and whose benefits under the Celanese Americas Retirement Pension Plan are limited by certain provi-sions of applicable law, herewith continues this unfunded, non-qualified plan known as the Celanese Americas Supplemental Retirement Pension Plan.

ARTICLE II

DEFINITIONS

Except where otherwise clearly indicated by context, the masculine shall include the feminine and the singular shall include the plural, and vice-versa.

2.1 "Actuary" shall mean the enrolled actuary engaged to perform actuarial services for the Qualified Retirement Plan.

2.2 "Beneficiary" shall mean the person designated by a Participant to receive benefits under the Qualified Retirement Plan after his death.

2.3 "Benefit Commencement Date" means the first day of the calendar month following the later of (i) the date of the Participant's Separation from Service, (ii) the date on which the Participant attains age 55 or (iii) December 31, 2008.

2.4 "Benefits Committee" shall mean the persons ap-pointed by the Board of Direc-tors to supervise the adminis-tration of the Qualified Retirement Plan.

2.5 "Board of Directors" shall mean the board of directors of the Company.

2.6 "Change in Control" has the meaning set forth in the Celanese Corporation Deferred Compensation Plan (effective January 1, 2008).

2.7 "Code" shall mean the Internal Revenue Code of 1986, as amended from time to time.

2.8 "Company" shall mean Celanese Americas Corporation and its successors.

2.9 "Employee" shall mean each individual employed by a Participating Company who is also a member of a select group of management or highly compensated employees but shall not include any individual hired by a Participating Company on or after January 1, 2001.

2.10 "Participant" shall mean each Employee of a Participating Company who meets the eligibility requirements set forth in Section 3.1.

2.11 "Participating Company" shall mean the Company and each other organization which is designated by the Board of Directors to adopt the Qualified Retirement Plan by action of its board of directors or other governing body, and which does adopt the Qualified Retire-ment Plan.

For the purpose of determining whether a Participant has experienced a Separation from Service, the term "Participating Company" shall mean:

(a) The entity for which the Participant performs services and with respect to which the legally binding right to compensation deferred under this Plan arises; and

(b) All other entities with which the entity described above would be aggregated and treated as a single employer under Code Section 414(b) (controlled group of corporations) and Code Section 414(c) (a group of trades or businesses, whether or not incorporated, under common control), as applicable. In order to identify the group of entities described in the preceding sentence, the Benefits Committee shall use an ownership threshold of at least 50% as a substitute for the 80% minimum ownership threshold that appears in, and otherwise must be used when applying, the applicable provisions of (A) Code Section 1563 for determining a controlled group of corporations under Code Section 414(b), and (B) Treasury Regulation Section 1.414(c)-2 for determining the trades or businesses that are under common control under Code Section 414(c).

2.12 "Plan" shall mean the Celanese Americas Supplemental Retirement Pension Plan, as set forth herein and as hereafter amended from time to time.

2.13 "Qualified Retirement Plan" shall mean the Celanese Americas Retirement Pension Plan, the qualified defined benefit plan maintained by the Company.

2.14 "Qualified Retirement Plan Benefits" shall mean the bene-fits payable under the Qualified Retirement Plan to a Participant who has met all of the conditions for and is eligible to receive early, normal, or late retirement benefits from the Qualified Retirement Plan. The amount of a Partici-pant's Qualified Retirement Plan Benefits shall be calculated by the Actuary in accordance with the terms of the Qualified Retirement Plan and shall be expressed in the form of a single life annuity.

2.15 "Qualified Retirement Plan Survivor Benefits" shall mean the benefits payable to a surviving Spouse or Benefi-ciary under the Qualified Retirement Plan after the death of a Participant. The amount of a Spouse's or Beneficiary's Qualified Retirement Plan Survivor Benefits shall be calculated by the Actuary in accor-dance with the terms of the Qualified Re-tirement Plan and shall be expressed in the form of a 50% joint and survivor annuity.

2.16 "Section 409A" means Code Section 409A and the regulations and other guidance promulgated thereunder.

2.17 "Separation from Service" means a termination of the services provided by a Participant to his Participating Company, whether voluntarily or involuntarily, other than by reason of death, as determined by the Benefits Committee in accordance with Treasury Regulation Section 1.409A-1(h). For a Participant who provides services to a Participating Company as an Employee, a Separation from Service shall occur when such Participant has experienced a termination of employment with such Participating Company. A Participant shall be considered to have experienced a termination of employment when the facts and circumstances indicate that the

Participant and his Participating Company reasonably anticipate that either (i) no further services will be performed for the Participating Company after a certain date, or (ii) that the level of bona fide services the Participant will perform for the Participating Company after such date (whether as an Employee or as an independent contractor) will permanently decrease to no more than 20% of the average level of bona fide services performed by such Participant (whether as an Employee or an independent contractor) over the immediately preceding 36-month period (or the full period of services to the Participating Company if the Participant has been providing services to the Participating Company less than 36 months). If a Participant is on military leave, sick leave, or other bona fide leave of absence, the employment relationship between the Participant and the Participating Company shall be treated as continuing intact, provided that the period of such leave does not exceed 6 months, or if longer, so long as the Participant retains a right to reemployment with the Participating Company under an applicable statute or by contract. If the period of a military leave, sick leave, or other bona fide leave of absence exceeds 6 months and the Participant does not retain a right to reemployment under an applicable statute or by contract, the employment relationship shall be considered to be terminated for purposes of this Plan as of the first day immediately following the end of such 6-month period. In applying the provisions of this paragraph, a leave of absence shall be considered a bona fide leave of absence only if there is a reasonable expectation that the Participant will return to perform services for the Participating Company.

Notwithstanding the foregoing provisions, if a Participant provides services for a Participating Company as both an Employee and as a member of the Board of Directors (a "Director"), to the extent permitted by Treasury Regulation Section 1.409A-1(h)(5) the services provided by such Participant as a Director shall not be taken into account in determining whether the Participant has experienced a Separation from Service as an Employee, and the services provided

by such Participant as an Employee shall not be taken into account in determining whether the Participant has experienced a Separation from Service as a Director.

2.18 "Specified Employee" shall, for the period described in the last sentence of this paragraph, mean a Participant who at any time during the 12-month period ending on the immediately preceding December 31 (the "Determination Period") met the definition of "key employee" as defined and determined under Internal Revenue Code Section 416(i) and the regulations thereunder because the Participant was: (i) an officer of a Participating Company or a Controlled Group Member with Key Employee Compensation of at least $130,000 (as adjusted pursuant to Code Section 416(i)(1)(A)); (ii) a 5% owner of a Participating Company; or (iii) a 1% owner of a Participating Company with Key Employee Compensation of at least $150,000. For purposes of (i) above, only an employee of the Participating Company or a Controlled Group Member who, based solely on the nature of his respective duties, was an officer of the Participating Company or a Controlled Group Member during the Determination Period and whose Key Employee Compensation during the Determination Period, when ranked with all other such officers of the Participating Company and Controlled Group Members, was one of the fifty highest compensated officers during the Determination Period, shall be considered an officer of the Participating Company or a Controlled Group Member, as the case may be, during such Determination Period. If a Participant was a key employee during a Determination Period pursuant to the foregoing provisions, the Participant shall be considered a "Specified Employee" for the 12-month period commencing on the April 1 immediately following such Determination Period

For purposes of this Section 2.17, the determination of which Participants are "key employees" pursuant to the preceding paragraph shall, in accordance with Treasury Regulation Section 1.415(c)-2(g)(5)(ii), be made by excluding all compensation of employees of

the Participating Company and its Controlled Group Members who were "nonresident aliens" (as such term is defined in Treasury Regulation Section 1.409A-1(j)) during the applicable Determination Period provided that such exclusion is made in all of the Participating Company's and its Control Group Members' other nonqualified deferred compensation plans and arrangements under which Specified Employees are determined. In addition, for purposes of this Section 2.17, the term "Key Employee Compensation" means, in accordance with Treasury Regulation Section 1.415(c)-2(d)(4), compensation received from the Participating Company and any Controlled Group Members that is required to be reported under Code Sections 6041, 6051 and 6052 (i.e. Box 1 compensation) but, except as provided in the immediately preceding sentence, determined without regard to any rules that limit remuneration included in wages based on the nature or location of the employment or the services performed, increased by amounts excluded from compensation in lieu of benefits under a cash or deferred arrangement under Code Section 401(k), a cafeteria plan under Code Section 125 or a salary reduction agreement under Code Section 132(f)(4). The term "Controlled Group Member" for purposes of this Section 2.17 means a member of a controlled group of corporations under Code Section 414(b) or of a group of trades or businesses under common control under Code Section 414(c) of which the Participating Company is also a member.

2.19 "Spouse" shall mean the person to whom a Participant is married on any date of reference.

ARTICLE III

RETIREMENT BENEFITS

3.1 Conditions. An Employee shall be entitled to benefits from this Plan if:

(a) he has Qualified Retirement Plan Benefits;

(b) his Qualified Retirement Plan Benefits are limited by:

(1) Code section 401(a)(17), which limits the amount of compensation that may be taken into account in calculating a Participant's benefits under the Qualified Retirement Plan, and/or;

(2) Code section 415, which limits the annual amount of benefits that a Par-tici-pant may receive from the Qualified Retire-ment Plan; and

(c) he is not entitled to receive benefits from the Celanese Americas Corporation Executive Pension Plan.

An Employee who is entitled to vested benefits from the Qualified Retirement Plan but is not entitled to early, normal or late retirement benefits under the Qualified Retirement Plan at the time of the Employee's Separation from Service shall still be eligible for benefits under this Plan. Further, a former employee of Hoechst-Roussel Vet Company who would have otherwise satisfied the conditions of this Section 3.1 as of March 31, 2000, will be eligible for benefits under Schedule A of this Plan. Notwithstanding any other provision of the Plan, no individual hired by a Participating Company on or after January 1, 2001 is eligible to participate in the Plan.

3.2 Amount of Benefits. Except as provided in Schedule A, the annual amount of the benefits payable to a Participant who is entitled to benefits from this Plan shall be equal to:

(a) the annual amount of the benefits that would be payable to the Participant under the Qualified Retirement Plan as of the Participant's Benefit Commencement Date if the limitations of Code sections 401(a)(17) and 415 were disregarded, which amount shall be calculated by the Actuary using the Qualified Retirement Plan's benefit formula;

minus

b) the annual amount of the Participant's Qualified Retirement Plan Benefits payable as of the Participant's Benefit Commencement Date.

In the event a Participant is a Disabled Accruing Participant under the Qualified Retirement Plan following the Participant's Benefit Commencement Date, the annual benefit amount calculated under this Section 3.2 shall be increased by the Actuary as of January 1 immediately following the Participant's Benefit Commencement Date to reflect the additional disability service credited to the Participant under the Qualified Retirement Plan through the end of the calendar year following the Participant's Benefit Commencement Date, and shall likewise be increased as of each January 1 thereafter to reflect any such additional service credited since the immediately preceding January 1. Each such increase shall be equal to the annual benefit calculated under Section 3.2(a) and (b) based solely on the additional disability service credited during the calendar year immediately preceding the January 1 adjustment date. This annual benefit increase shall be calculated and paid effective as of the January 1 adjustment date taking into account the factors described in Section 3.3 and the form of payment of the Participant’s benefit under this Plan.

3.3 Relevant Factors.

(a) In calculating the amount described in Sections 3.2(a) and 3.2(b) or in Schedule A, the Actuary shall take into account all pertinent pro-visions of the Qualified

Retirement Plan, including applicable conversion and reduction factors. The only provisions of the Qualified Retirement Plan to be disregarded in calculating the amount described in Section 3.2(a) or Schedule A are those setting forth the limitations of Code sections 401(a)(17) and 415.

(b) The amount described in Sections 3.2(a) and 3.2(b)shall be expressed in the form of a single life annuity. Further, the amount described in Section 3.2(b) shall be calculated as if the Participant's Qualified Retirement Plan Benefits are commencing on the Participant's Benefit Commencement Date even if the Participant has not elected to commence his Qualified Retirement Plan Benefits on that date.

(c) Any base salary or bonus otherwise payable to a Participant that is deferred under a plan providing for the deferral of compensation that is maintained by the Company or its subsidiaries, whether such plan is qualified under Code Section 401(a) or nonqualified, shall nonetheless be counted as earnings for the purpose of calculating the Participant's benefit accrual under the Plan for that Plan year.

3.4 Notice. A Participant who is entitled to benefits from this Plan shall receive a notice setting forth the amount of the benefits payable to him, as determined under Section 3.2 or Schedule A.

ARTICLE IV

DEATH BENEFITS

4.1 Conditions. Except as provided in Schedule A, if a Participant dies, leaving a surviving Spouse or Beneficiary who is entitled to Qualified Retirement Plan Survivor Benefits, the surviving Spouse or Beneficiary shall be entitled to benefits from this Plan to the extent set forth in Section 4.2 or 4.3.

4.2 Pre-Retirement Surviving Spouse's Benefits.

(a) In the event of the death of a Participant who:

(1) has been credited with at least one hour of service after August 22, 1984,

(2) has a surviving Spouse,

(3) has a vested accrued benefit, and

(4) dies before beginning to receive benefits from the Plan,

his surviving Spouse shall receive a surviving Spouse's benefit.

(b) The surviving Spouse's benefit shall be an annual pension, payable monthly, in the form of a single life annuity commencing on the first day of the month coinciding with or next following the date the deceased Participant would have attained age 55 (or the first day of the calendar month following the date of his death, if later), equal to the benefit such Spouse would have received if the Participant:

(1) had terminated employment on the earlier of (A) the date of his death or (B) his actual termination date,

(2) had survived to the benefit commencement date described in the preceding sentence,

(3) had then begun to receive an immediate joint and 50% survivor annuity with his Spouse as the beneficiary, and

(4) had died on the following day.

In the event that the Actuary determines that the value of the Spouse's benefit does not exceed $15,000, then notwithstanding the foregoing, the benefit shall be paid to the Spouse in a single lump sum payment on the first day of the calendar month following the date of the Participant's death. However, the preceding sentence shall not apply unless the Spouse's benefit under this Plan and his or her interest in all other plans, agreements, methods, programs or arrangements that must be aggregated under Treasury Regulation Section 1.409A-1(c)(2) do not exceed $15,000 on an aggregated basis, and all such other interests are terminated and liquidated in their entirety at the same time as the lump sum payment under this paragraph.

4.3 Death After Commencement of Benefits.

Upon the death of a Participant after his Separation from Service and the commencement of his benefits (or the deemed commencement of benefits for a Specified Employee whose commencement is delayed by Section 5.1), his Beneficiary shall be entitled to receive any amount(s) which may be payable under the form of benefit in effect or under any annuity contract which has been distributed to provide the benefits to which the Participant was entitled hereunder. Such benefits shall commence on the first day of the calendar month following the Participant's death.

4.4 Relevant Factors.

(a) In calculating the amount described in Section 4.2, the Actuary shall take into account all pertinent provisions of the Qualified Retirement Plan, including applicable conversion and reduction factors.

(b) The amount described in Section 4.2 shall be expressed in the form of a 50% joint and survivor annuity.

4.5 Notice. A surviving Spouse or Beneficiary who is entitled to benefits from this Plan shall receive a notice setting forth the amount of the benefits payable to him, as determined under Section 4.2 or 4.3.

ARTICLE V

RETIREMENT BENEFIT PAYMENTS

5.1 Commencement of Benefits. Except as provided in Schedule A, retirement benefits payable from this Plan to a Participant shall commence on the Participant's Benefit Commencement Date. However, if a Participant is a Specified Employee on the date of the Participant's Separation from Service, payment of the Participant's benefit shall not commence until the later of (i) the Benefit Commencement Date or (ii) the first day of the seventh (7th) calendar month following the calendar month of the Participant's Separation from Service (provided that if the Participant dies prior to such first day of the seventh calendar month and a survivor benefit is payable to the Participant's Beneficiary, such survivor benefit shall commence on the first day of the calendar month after the Participant's death). In the event the payment date in (ii) applies, (A) the benefit payments that the Participant would otherwise have received had payments started on the Benefit Commencement Date shall be accumulated and paid to the Participant in a single lump sum payment on the date set forth in (ii) (unless the Participant dies prior to such first day of the seventh calendar month, in which case the lump sum shall be paid to the Participant's Beneficiary on the first day of the calendar month after the Participant's death) and (B) such lump sum payment shall be increased for earnings at the prorated annual rate of 8.25% for the period beginning on the Participant's Benefit Commencement Date and continuing through the date on which the lump sum payment is made to the Participant or the Participant's Beneficiary.

5.2 Form of Benefits. Except as provided in Schedule A, a Participant may elect to receive his retirement benefits payable from this Plan in any form of life annuity available under the Qualified Retirement Plan, using the conversion factors applicable under the Qualified

Retirement Plan, provided that such respective forms of life annuities are actuarially equivalent using reasonable actuarial assumptions as required by Treasury Regulation Section 1.409A-2(b)(2)(ii). An election under this Plan may be made without regard to the form in which such Participant's benefit under the Qualified Retirement Plan is payable. In addition, such Participant's election may be made without regard to the restrictions regarding spousal consent and the timing of benefit elections applicable to the election of form of payment under the Qualified Retirement Plan. The Participant's election with respect to form of payment under this Plan must be made in accordance with procedures adopted by the Benefits Committee.

If a Participant fails to elect the form of annuity available under this Section 5.2 prior to the Participant's Benefit Commencement Date, the Participant shall be treated as if an election was made to receive retirement benefits in the form of the single life annuity provided under the Qualified Retirement Plan if the Participant is not married on his Benefit Commencement Date and a 50% joint and survivor annuity provided under the Qualified Retirement Plan if the Participant is married on his Benefit Commencement Date.

A Participant may (in accordance with the provisions of Treasury Regulation Section 1.409A-2(b)(2)(ii)) make an election to change the life annuity form of payment which the Participant previously elected (or, if the Participant made no such election, the default form of payment, which shall be considered the previously-elected life annuity for purposes of this paragraph), from one type of life annuity to another type of life annuity that has the same scheduled date for the first annuity payment. An election to make such a change may only be made, however, if (i) the election is made before any annuity payment has been made under the Plan, and (ii) the newly-elected life annuity is the actuarial equivalent of the previously-elected life annuity within the meaning of Treasury Regulation Section 1.409A-2(b)(2)(ii) (with such

actuarial equivalence being determined by applying reasonable actuarial methods and assumptions). The newly-elected life annuity must be one of the life annuity forms of distribution available under the Qualified Retirement Plan at the time of the Participant's election to change to the new life annuity. The amount of the monthly payment under the newly-elected life annuity will be determined using reasonable actuarial methods and assumptions, as required under Treasury Regulation Section 1.409A-2(b)(2)(ii) (including the requirement that term certain features and Social Security leveling features not be disregarded in determining actuarial equivalence). Any election made by the Participant pursuant to the provisions of this paragraph shall be made in accordance with procedures established by the Benefits Committee.

5.3 Cashouts. In the event that the Actuary determines that the value of the Participant's benefit does not exceed $15,000 at the Participant's Separation from Service, then notwithstanding anything herein to the contrary, the Participant's benefit shall be paid in a single lump sum payment on the Participant’s Benefit Commencement Date (subject, however, to the payment delay in Section 5.1 if the Participant is a Specified Employee). The provisions of this Section 5.3 shall not apply unless the Participant's benefit under this Plan and his interest in all other plans, agreements, methods, programs or arrangements that must be aggregated under Treasury Regulation Section 1.409A-1(c)(2) do not exceed $15,000 on an aggregated basis, and all such other interests are terminated and liquidated in their entirety at the same time as the lump sum payment under this Section 5.3.

ARTICLE VI

FUNDING

6.1 Unfunded Plan. The Plan has been, is, and shall continue to be an unfunded plan. The Participating Companies have not and shall not save, set aside, or earmark any monies or other property for the purpose of paying benefits that may later become payable hereunder to a Participant or his sur-viving Spouse or Beneficiary.

6.2 Payment from General Assets. The benefits payable under the Plan shall be paid from the general assets of the Participating Companies when benefit payments are due and owing. Nothing contained in this Plan shall constitute a guarantee by the Participating Companies or by any other entity or person that the assets of the Participating Companies will be sufficient to pay benefits hereunder.

6.3 Interest and Rights. No Participant, surviving Spouse, or Beneficiary shall have any interest in the assets of the Participating Companies because he is entitled to receive benefits under this Plan. A Participant, surviving Spouse, or Beneficiary shall have only the rights of a general unsecured creditor of the Participating Companies with respect to his benefits.

6.4 Change in Control. Upon a Change in Control the Company shall, as soon as practicable but in no event later than the effective date of the Change in Control, contribute to that certain irrevocable grantor trust established by the Company on March 16, 2005 to assist with the payment of benefits under the Plan (the "Trust") such amount that is sufficient to fund the Trust for 100% of the accrued benefit liabilities under the Plan. Notwithstanding the foregoing, no assets shall be transferred to the Trust for any Participant who is an "applicable covered employee" (as such term is defined in Code Section 409A(b)(3)(D)) during (i) any period during which the Celanese Americas Retirement Pension Plan, the Celanese Americas

Pension Plan for Meredosia Union Employees or any successor plan is in "at-risk" status (as such term is defined in Code Section 430(i)), (ii) any period the Company or any Participating Company is a debtor in a case under Title 11 of the United States Code or similar Federal or State law or (iii) the twelve month period beginning on the date which is six months prior to the date of termination of the Celanese Americas Retirement Pension Plan, the Celanese Americas Pension Plan for Meredosia Union Employees or any successor plan where, as of the date of such termination, such plan is not sufficient for benefit liabilities (within the meaning of Section 4041 of the Employee Retirement Income Security Act of 1984, as amended). In addition, no assets shall be transferred to the Trust if such transfer would violate any of the restrictions under Code Section 409A(b).

ARTICLE VII

ADMINISTRATION

7.1 Plan Administrator. The Benefits Committee shall be the administrator of the Plan and shall control and manage the operation of the Plan.

7.2 Duties and Powers of Benefits Committee.

(a) The Benefits Committee shall have all powers necessary to administer the Plan in accordance with its terms and applicable law, and shall also have discretionary authority to determine eligibility for benefits and to construe the terms of the Plan. Any construction, interpretation, or application of the Plan by the Benefits Committee shall be final, con-clusive, and binding on all persons.

(b) To the extent applicable, the Benefits Com-mittee shall have the same specific duties and powers with respect to this Plan as it has with respect to the Qualified Retirement Plan. Similarly, the Bene-fits Committee shall be subject to the same limits on its responsibilities with respect to this Plan as it is with respect to the Qualified Retirement Plan.

7.3 Claims Procedure.

(a) In the event that the Benefits Committee denies, in whole or in part, a claim for benefits by a Participant or his beneficiary, the Benefits Committee shall furnish notice of the adverse determination to the claimant, setting forth (l) the specific reasons for the adverse determination, (2) specific reference to the pertinent Plan provisions on which the adverse determination is based, (3) a description of any additional information necessary for the claimant to perfect the claim and an explanation of why such information is necessary, and (4) a description of the Plan's review procedures and the time limits applicable to such procedures, including a statement of the claimant's right to bring a civil action under section 502(a) of ERISA

following an adverse benefit determination on review.

(b) The notice described in Subsection (a) shall be forwarded to the claimant within 90 days of the Benefits Committee's receipt of the claim; provided, however, that in special circumstances the Benefits Committee may extend the response period for up to an additional 90 days, in which event it shall notify the claimant in writing of the extension before the expiration of the initial 90 day period, and shall specify the reason or reasons for the extension.

(c) Within 60 days of receipt of a notice of an adverse determination, a claimant or his duly authorized representative may petition the Benefits Committee in writing for a full and fair review of the adverse determination. The claimant or his duly authorized representative shall have the opportunity to review relevant documents and to submit issues and comments in writing to the Benefits Committee. The Benefits Committee shall review the adverse determination and shall communicate its decision and the reasons therefor to the claimant in writing within 60 days of receipt of the petition setting forth (l) the specific reasons for the adverse determination, (2) specific reference to the pertinent Plan provisions on which the adverse determination is based, (3) a statement that the claimant is entitled to receive, upon request and free of charge, reasonable access to, and copies of, all documents, records and other information relevant to the claimant's claim for benefits, and (4) a statement describing any voluntary appeal procedures offered by the Plan and claimant's right to obtain information regarding such procedures and a statement of the claimant's right to bring an action under section 502(a) of ERISA. However, in special circumstances the Benefits Committee may extend the response period for up to an additional 60 days, in which event it shall notify the claimant in writing prior to the commencement of the extension.

(d) If for any reason the written notice of the adverse benefit determination described in Subsection (a) is not furnished within 90 days of the Benefits Committee's receipt of a claim for benefits, the claim shall be deemed to be denied. Likewise, if for any reason the written decision on review described in Subsection (c) is not furnished within the time prescribed, the claim shall be deemed to be denied on review.

ARTICLE VIII

AMENDMENT AND TERMINATION

8.1 Power of Amendment and Termination.

(a) It is the intention of each Participating Company that this Plan will be permanent. However, each Participating Company reserves the right to terminate its participation in this Plan at any time by action of its board of directors or other governing body. Furthermore, the Plan may be amended or terminated at any time by written action of the Board of Directors. The Plan also may be amended by the Benefits Committee, provided such amendment either (1) does not increase the cost to the Participating Companies by more than $250,000 annually, as determined by an enrolled actuary selected by the Benefits Committee; or (2) is required as a result of any business acquisition or divestiture approved by the Board of Directors.

(b) Each amendment to the Plan shall be in writing and shall be binding on each Participating Company. No amendment shall have the effect of retroactively depriving Par-ticipants of benefits already accrued under the Plan.

(c) Any amendment or termination of the Plan shall become effective as of the date designated by the Board of Directors, or, if appropriate, the Benefits Committee. No benefit payments under the Plan shall be accelerated as a result of termination unless the Board of Directors approves such acceleration and, except for the benefits set forth on Schedule A, the acceleration is permitted by and it complies with the applicable requirements and limitations of Treasury Regulation Section 1.409A-3(j)(4)(ix).

(d) Notwithstanding anything herein to the contrary, following the occurrence of a Change in Control, there shall be no modification to or revocation of the

provisions of Section 6.4 without the written consent of the Board of Directors serving immediately prior to the Change in Control, except for amendments necessary to comply with applicable law.

8.2 Automatic Termination. The Plan shall automati-cally terminate when the Qualified Retirement Plan terminates if it is not terminated before then.

ARTICLE IX

MISCELLANEOUS PROVISIONS

9.1 Effective Date. The effective date of this amended and restated Plan shall be January 1, 2009.

9.2 Plan Year. The plan year of the Plan shall be the calendar year (January 1st through December 31st).

9.3 No Employment Rights. Neither the action of the Company in establishing the Plan, nor any provisions of the Plan, nor any action taken by the Participating Companies or the Benefits Committee shall be construed as giving to any Employee of a Participating Company the right to be retained in its employ or any right to payment except to the extent of the benefits to which he may become entitled under the Plan.

9.4 Loss of Eligibility and Benefits. Notwith-standing a Participant's satisfaction of the requirements for participation herein, such Participant may nevertheless be deemed to be ineligible to participate or to continue to participate in the Plan and be denied benefits hereunder if, upon consideration of the facts and circumstances and any advice or recommendation of a Participating Company, the Board of Directors finds that such Participant has either before or after a Separation from Service:

(i) violated any Participating Company policies, or

(ii) directly or indirectly competed against a Participating Company (where indirect competition could include, but not be limited to, the Participant's having worked for or with others who compete against the Participating Company or do work that the Participating Company may otherwise have had the opportunity to compete for), or

(iii)committed a crime or other offense, or

(iv) acted in a way considered adverse to a Participating Company, or

(v) has taken an action, or has omitted to act in such a way, that is considered contrary to a Participating Company's interests.

9.5 Governing Law. Except to the extent superseded by the Employee Retirement Income Security Act of 1974, as amended from time to time, all questions pertaining to the validity, construction, and operation of the Plan shall be determined in accordance with the laws of the state of Delaware.

9.6 Severability of Provisions. If any provision of this Plan is determined to be void by any court of competent jurisdiction, the Plan shall continue to operate and, for the purposes of the jurisdiction of that court only, shall be deemed not to include the provision(s) determined to be void.

9.7 Mailing Address. Benefit payments and notifica-tions hereunder shall be deemed made when mailed to the last address furnished to the Benefits Committee.

9.8 Spendthrift Clause.

(a) No benefit payable at any time under this Plan and no interest or expectancy herein shall be anticipated, assigned, or alienated by any Participant, surviving Spouse, or Beneficiary, or subject to attachment, garnishment, levy, execution, or other legal or equitable process.

(b) Any attempt to alienate or assign a benefit hereunder, whether currently or hereafter payable, shall be void. No benefit shall in any manner be liable for or subject to the debts or liability of any Participant, surviving Spouse, or Beneficiary. If any Participant, surviving Spouse, or Beneficiary attempts to or does alienate or assign his benefit

under the Plan or any part thereof, or if by reason of his bank-ruptcy or other event happening at any time such benefit would devolve upon anyone else or would not be enjoyed by him, then the Benefits Committee may terminate payment of such benefit and hold or apply it for the benefit of the Participant, surviving Spouse, or Beneficiary.

9.9 Incapacity. If the Benefits Committee deems any individual who is entitled to receive payments hereunder to be incapable of receiving or disbursing the same by reason of ill-ness, infirmity, or incapacity of any kind, such payments shall be applied directly for the comfort, support, and maintenance of the individual, or shall be paid to any responsible person caring for the individual who is determined by the Benefits Committee to be qualified to receive and disburse such payments for the individual's benefit; and the receipt of such person shall be a complete acquittance for the payment of the benefit. Payments pursuant to this Section shall be complete discharge to the extent thereof of any and all liability of the Participating Companies and the Bene-fits Committee.

9.10 Tax Withholding. The Benefits Committee shall have the right to withhold from benefit payments any and all local, state, and federal taxes which may be withheld in accor-dance with applicable law. For purposes of the preceding sentence, any amounts required to be withheld for Federal Insurance Contributions Act (FICA) taxes (and for income taxes on such withheld FICA taxes) with respect to benefits that are payable from this Plan (other than benefits payable under Schedule A) may be paid from such benefits (whether or not such benefits have commenced) in accordance with the requirements of Treasury Regulation Section 1.409A-3(j)(4)(vi)and the Participant's benefit shall be reduced by the amount of such withholding.

9.11 Distribution Delays. The payment or commencement of payments under the Plan shall be made or shall begin on the date specified in the Plan or as soon as administratively practicable thereafter. However, if for administrative or any other reasons there is a delay in the payment or commencement of payments beyond the date specified in the Plan, the payment or commencement of payments (other than payments under Schedule A) shall not be delayed beyond the last day permitted under Treasury Regulation Section 1.409A-3(d) for treating a delayed payment as having been made on the applicable specified payment date.

9.12 Compliance with Section 409A. Except for the benefits set forth on Schedule A, it is intended that the remainder of this Plan comply with the provisions of Section 409A. With respect to the benefits provided by Schedule A, it is intended that such benefits qualify for "grandfathered" status and continue to be governed by the law applicable to nonqualified deferred compensation prior to enactment of Section 409A. This Plan shall be administered in a manner consistent with this intent, and any provision not set forth on Schedule A that would cause the Plan to fail to satisfy Section 409A shall have no force and effect on benefits not covered by Schedule A until amended to comply with Section 409A (which amendment may be retroactive to the extent permitted by Section 409A and may be made by the Company without the consent of the affected Participants).

Notwithstanding anything herein to the contrary, in the event that all or any portion of a Participant's benefit under this Plan is includible in the Participant's income as a result of a failure to comply with the requirements of Section 409A, the Board of Directors may direct the Plan to pay to the Participant during the Plan Year in which such failure is identified a lump sum payment equal to the present value of the benefit under this Plan that is required to be included in the Participant's income as a result of such failure. The Participant's benefit under

the Plan shall be reduced by the actuarial equivalent value of such payment (computed using the actuarial assumptions in the Qualified Retirement Plan for valuing lump sum distributions).

Executed this 31st day of December, 2008.

CELANESE AMERICAS CORPORATION
BENEFITS COMMITTEE

By: /s/ Jan Dean

By: /s/ Patrick Carroll

By: /s/ Michael Summers

SCHEDULE A

Special Provisions for Former
Hoechst Roussel Vet Company Employees

A.1. Notwithstanding any other provision in the Plan to the contrary, certain former Hoechst Roussel Vet Company employees, as described in Section 3.1, will be entitled to benefits in accordance with this Schedule A.

A.2. The annual amount of the benefits payable under this Schedule A shall be equal to:

(a) the annual amount of the benefit that he was entitled to receive from the Qualified Retirement Plan, as of March 31, 2000, if the limitations of Code sections 401(a)(17) and 415 were disregarded, which amount shall be calculated by the Actuary using the Qualified Retirement Plan's benefit formula; minus

(b) the actual annual amount of his Qualified Retirement Plan benefit as of March 31, 2000.

A.3. Benefits payable under this Schedule A shall be expressed and paid in the normal form of benefit (as that term is defined in the Qualified Retirement Plan). No optional forms of benefit will be permitted.

A.4. In the event of the death of a Participant who: (1) is entitled to benefits under this Schedule A; (2) has been credited with at least one hour of service after August 22, 1984, (3) has a surviving spouse, (4) had a vested accrued benefit under the Qualified Retirement Plan as of March 31, 2000, (5) dies before beginning to receive benefits from the Plan, his surviving spouse shall be entitled to benefits as set forth in Section A.5.

A.5. The benefit payable to a surviving spouse, as described in Section A.4, shall be an annual pension, payable monthly, in the form of a single life annuity commencing on the first day of the month coinciding with or next following the date the deceased Participant would have attained age 55 (or the first day of the month following the date of his death, if later), equal to the benefit such spouse would have received if the Participant:

(a) had terminated employment as of March 31, 2000,

(b) had survived to the benefit commencement date described in the preceding sentence,

(c) had then begun to receive an immediate joint and 50% survivor annuity with his spouse as the beneficiary, and

(d) had died the following day.

A.6. In calculating the amount described in Section A.5., the Actuary shall take into

account all pertinent provisions of the Qualified Retirement Plan, including applicable conversion and reduction factors.

A.7. Upon the death of a Participant, after he begins to receive benefits in accordance with this Schedule A, death benefits, if any, shall be payable based upon the form of benefit paid to the Participant.

A.8. Benefits payable in accordance with this Schedule A shall continue to be paid to a Participant or his surviving spouse for as long as required by the form of benefit in which the benefit is paid.

Exhibit 10.15(a)

FIRST AMENDMENT TO THE

CELANESE AMERICAS SUPPLEMENTAL RETIREMENT PENSION PLAN

AS AMENDED AND RESTATED

EFFECTIVE AS OF JANUARY 1, 2009

WHEREAS, Celanese Americas LLC (the "Company") sponsors the Celanese Americas Supplemental Retirement Pension Plan (the "Plan"); and

WHEREAS, the Plan was amended and restated effective as of January 1, 2009; and

WHEREAS, pursuant to Section 8.1 of the Plan, the Company's Benefits Committee has the authority to amend the Plan

NOW, THEREFORE, Section 9.5 of the Plan is hereby amended and restated as follows:

9.5 Governing Law. Except to the extent preempted by federal law, the Plan shall be construed in accordance with the laws of the State of Texas without regard to conflict of law rules, and all disputes and controversies arising out of, concerning or in any way relating to the Plan, including but not limited to eligibility, benefit claims, administration and the amendment or termination of all or any portion of the Plan, shall be subject to the exclusive venue and jurisdiction of the federal courts located in the Dallas Division of the Northern District of Texas.

IN WITNESS WHEREOF, the Company has caused this First Amendment to the Plan to be executed by its duly authorized representative on this 22nd day of July, 2013.

CELANESE BENEFITS COMMITTEE

By: /s/ Jan Dean

By: /s/ James Coppens

By: /s/ Christopher W. Jensen

Exhibit 10.16

Summary of Non-Employee Director Compensation

Each non-employee director of Celanese Corporation (the "Company") is entitled to (i) an annual cash retainer of $105,000, which is paid in quarterly installments, in arrears, and (ii) an annual equity retainer of $150,000 in restricted stock units (awarded at the first regular board meeting following the Annual Meeting of Stockholders). In addition, the chair of the nominating and corporate governance committee and the environmental, health, safety and public policy committee receives an annual fee of $15,000, and the chair of the audit committee and the compensation and management development committee receives an annual fee of $20,000. The lead director receives an annual fee of $25,000. These amounts are paid in quarterly installments, in arrears, and prorated for actual service.

Non-employee directors are also entitled to participate in the Company's 2008 Deferred Compensation Plan, which is an unfunded, nonqualified deferred compensation plan that allows directors the opportunity to defer a portion of their compensation in exchange for a future payment amount equal to their deferments plus or minus certain amounts based upon the market performance of specified measurement funds selected by the participant.

Exhibit 21.1

List of Subsidiaries of Celanese Corporation

(As of December 31, 2019)

Name of Company	Jurisdiction
Aggregate Ownership of more than 50% (100% aggregate ownership unless otherwise indicated)	
Acetate Belgium Holdings B.V.	Netherlands
Acetate Belgium Holdings LLC	Delaware
Acetate Europe Coöperatief U.A.	Netherlands
Acetate Holdings LLC	Delaware
Acetate Intermediate Holdings LLC	Delaware
Acetate International LLC	Delaware
Acetate Holding Company Limited	Hong Kong
Acetate Hong Kong Holdings LLC	Delaware
Acetate Luxembourg S.à r.l.	Luxembourg
Acetate Sales U.S. Ltd.	Texas
Acetate UTP Holdings LLC	Delaware
Acetex Chimie S.A.S.	France
Acetex (Cyprus) Ltd.	Cyprus
CCC Environmental Management and Solutions GmbH & Co. KG	Germany
CCC Environmental Management and Solutions Verwaltungs-GmbH	Germany
CdwllMex S. de R.L. de C.V.	Mexico
CE Mexico Holdings LLC	Delaware
CE Receivables LLC	Delaware
Celanese (China) Holding Co., Ltd.	China
Celanese (Nanjing) Chemical Co., Ltd.	China
Celanese (Shanghai) International Trading Co., Ltd.	China
Celanese (Suzhou) Engineering Plastics Co., Ltd.	China
Celanese Acetate C.V.	Netherlands
Celanese Acetate LLC	Delaware
Celanese Acetate Holdings LLC	Delaware
Celanese Alpine S.à r.l. & Co. KG	Germany
Celanese Americas LLC	Delaware
Celanese BVBA	Belgium
Celanese Canada ULC	Canada
Celanese Chemicals, Inc.	Delaware
Celanese Chemicals India Private Limited	India
Celanese Chemicals S.A. (Pty) Ltd.	South Africa
Celanese Comercial S. de R.L. de C.V.	Mexico
Celanese Deutschland Holding GmbH	Germany
Celanese do Brasil Ltda.	Brazil
Celanese Emulsions Ltd.	United Kingdom
Celanese Emulsions Pension Plan Trustees Limited	United Kingdom
Celanese Europe B.V.	Netherlands
Celanese EVA Performance Polymers LLC	Delaware
Celanese Europe Holdings LLC	Delaware
Celanese Far East Limited	Hong Kong
Celanese Finance Company Limited	Hong Kong
Celanese Finance Holdings 1 LLC	Delaware
Celanese Finance Holdings 2 LLC	Delaware
Celanese Foreign Holdings U.K. Limited	United Kingdom

Celanese France Holdings S.à r.l.	Luxembourg
Celanese Global Relocation LLC	Delaware
Celanese Holding 1, S. de R.L. de C.V.	Mexico
Celanese Holding Company Limited	Hong Kong
Celanese Holdings B.V.	Netherlands
Celanese Hong Kong Holdings LLC	Delaware
Celanese Hungary Kft.	Hungary
Celanese Iberica Holdings LLC	Delaware
Celanese India Holdings B.V.	Netherlands
Celanese Internal Finance Limited	Hong Kong
Celanese International Corporation	Delaware
Celanese International Holdings LLC	Delaware
Celanese IP Germany GmbH	Germany
Celanese IP Hungary Bt.	Hungary
Celanese Japan Limited	Japan
Celanese Korea Ltd.	Korea
Celanese Ltd.	Texas
Celanese Materials Mexico S. de R.L. de C.V.	Mexico
Celanese Mexico Holdings LLC	Delaware
Celanese Operations Mexico S. de R.L. de C.V.	Mexico
Celanese Production Belgium BVBA	Belgium
Celanese Production Germany GmbH & Co. KG	Germany
Celanese Production Italy S.r.l.	Italy
Celanese Production Netherlands B.V.	Netherlands
Celanese Production Sweden AB	Sweden
Celanese Production UK Limited	United Kingdom
Celanese Property Germany GmbH & Co. KG	Germany
Celanese PTE. LTD.	Singapore
Celanese S.A.	Argentina
Celanese Sales Austria GmbH	Austria
Celanese Sales Czech Republic s.r.o.	Czech Republic
Celanese Sales France S.A.S.	France
Celanese Sales Germany GmbH	Germany
Celanese Sales Ibérica, S.L.U.	Spain
Celanese Sales Italy S.r.l.	Italy
Celanese Sales Netherlands B.V.	Netherlands
Celanese Sales Rus AO	Russia
Celanese Sales UK Limited	United Kingdom
Celanese Sales U.S. Ltd.	Texas
Celanese Services Germany GmbH	Germany
Celanese Services Italy S.r.l.	Italy
Celanese Services UK Limited	United Kingdom
Celanese Singapore Acetyls Holding PTE. LTD.	Singapore
Celanese Singapore Chemical Holding PTE. LTD.	Singapore
Celanese Singapore Holdings LLC	Delaware
Celanese Singapore PTE. LTD.	Singapore
Celanese Singapore VAM PTE. LTD.	Singapore
Celanese Singapore Emulsions PTE. LTD.	Singapore
Celanese (Thailand) Limited	Thailand

Celanese US Holdings LLC	Delaware
Celanese Ventas Mexico S. de R.L. de C.V.	Mexico
Celtran, Inc.	Delaware
Celwood Insurance Company	Vermont
CELX Investments S.à r.l.	Luxembourg
CEMX Holdings LLC	Delaware
CNA Holdings LLC	Delaware
Elwood Limited	Bermuda
FKAT LLC	Delaware
Grupo Celanese, S. de R.L. de C.V.	Mexico
Holding Softer America S.A. de C.V	Mexico
HNA Acquisition ULC	Canada
Infraserv Verwaltungs GmbH	Germany
KEP Americas Engineering Plastics, LLC	Delaware
KEP Europe GmbH	Germany
Next Polymers Limited	India
PT Celanese Indonesia Operations	Indonesia
PT Celanese Indonesia Services	Indonesia
RIOMAVA GmbH	Germany
Servicios Acetato Mexico S. de R.L. de C.V.	Mexico
Servicios Corporativos Celanese S. de R.L. de C.V.	Mexico
So.F.teR Brasil Compostos Termoplasticos Ltda.	Brazil
Tenedora Tercera de Toluca S. de R.L. de C.V.	Mexico
Ticona Fortron Inc.	Delaware
Ticona LLC	Delaware
Ticona Polymers, Inc.	Delaware
Ticona Polymers Ltda.	Brazil

Aggregate Ownership of 50% or less	
CTE Petrochemicals Co.[1]	Cayman Islands
Fairway Methanol LLC[1]	Delaware
Fortron Industries, LLC[1]	North Carolina
InfraServ GmbH & Co. Gendorf KG[2]	Germany
Infraserv GmbH & Co. Hoechst KG[3]	Germany
InfraServ GmbH & Co. Wiesbaden KG[4]	Germany
Korea Engineering Plastics Co., Ltd.[1]	Korea
Kunming Cellulose Fibers Company, Limited[5]	China
National Methanol Company[6]	Saudi Arabia
Nantong Cellulose Fibers Company, Limited[7]	China
Polyplastics Company, Ltd.[8]	Japan
Yncoris GmbH & Co. KG[9]	Germany
Zhuhai Cellulose Fibers Company, Limited[5]	China

[1] Aggregate ownership is 50.00%

[2] Aggregate ownership is 29.90%

[3] Aggregate ownership is 32.43%

[4] Aggregate ownership is 7.90%

[5] Aggregate ownership is 30.00%

[6] Aggregate ownership is 25.00%

[7] Aggregate ownership is 30.68%

[8] Aggregate ownership is 45.00%

[9] Aggregate ownership is 22.00%

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders
Celanese Corporation:

We consent to the incorporation by reference in the registration statements on Form S-8 (Nos. 333-122789, 333-128048, 333-158734, 333-158736, 333-166358, 333-180932, 333-193836, and 333-224420) and on Form S-3 (No. 333-216005) of Celanese Corporation (the Company) of our report dated February 6, 2020, with respect to the consolidated balance sheets of the Company as of December 31, 2019 and 2018, and the related consolidated statements of operations, comprehensive income (loss), equity, and cash flows for each of the years in the three-year period ended December 31, 2019, and the related notes (collectively, the consolidated financial statements), and the effectiveness of internal control over financial reporting as of December 31, 2019, which report appears in the December 31, 2019 annual report on Form 10-K of the Company.

Our report refers to a change in accounting principle for the adoption of Financial Accounting Standards Board's Accounting Standards Update 2016-02, *Leases*.

/s/ KPMG LLP

Dallas, Texas
February 6, 2020

Exhibit 31.1

CERTIFICATION
PURSUANT TO 17 CFR 240.13a-14
PROMULGATED UNDER
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Lori J. Ryerkerk, certify that:

1. I have reviewed this annual report on Form 10-K of Celanese Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ LORI J. RYERKERK

Lori J. Ryerkerk
Chief Executive Officer and President
Date: February 6, 2020

Exhibit 31.2

CERTIFICATION
PURSUANT TO 17 CFR 240.13a-14
PROMULGATED UNDER
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Scott A. Richardson, certify that:

1. I have reviewed this annual report on Form 10-K of Celanese Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ SCOTT A. RICHARDSON

Scott A. Richardson
Senior Vice President and
Chief Financial Officer
February 6, 2020

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Celanese Corporation (the "Company") on Form 10-K for the period ending December 31, 2019 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Lori J. Ryerkerk, Chief Executive Officer and President of the Company, hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

1. The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ LORI J. RYERKERK

Lori J. Ryerkerk
Chief Executive Officer and President
Date: February 6, 2020

Exhibit 32.2

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Celanese Corporation (the "Company") on Form 10-K for the period ending December 31, 2019 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Scott A. Richardson, Senior Vice President and Chief Financial Officer of the Company, hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

1. The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ SCOTT A. RICHARDSON

Scott A. Richardson
Senior Vice President and
Chief Financial Officer
February 6, 2020