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, 2020
OR

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

(Commission File Number) 001-32410

Celanese

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 has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☑

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, 2020 (the last business day of the registrants' most recently completed second fiscal quarter) was $10,196,052,077.

The number of outstanding shares of the registrant's common stock, $0.0001 par value, as of January 28, 2021 was 114,173,336.

DOCUMENTS INCORPORATED BY REFERENCE

Certain portions of the registrant's Definitive Proxy Statement relating to the 2021 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, 2020

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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 33 global production facilities and an additional 6 strategic affiliate production facilities. As of December 31, 2020, we employed 7,658 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 23 - Segment Information and Note 24 - 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") • Preservatives	• Automotive • Medical • Industrial • Energy storage • Consumer electronics • Appliances • Filtration equipment • Telecommunications • Beverages • Baked goods	• Ajinomoto Co. Inc. • Anhui Jinhe Industrial Co., Ltd. • BASF SE • Daicel Corporation ("Daicel") • 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, TPE and preservatives) • 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)

- ***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 three strategic affiliates in Saudi Arabia, South Korea and the US. In July 2020, we announced that we are establishing a European Compounding Center of Excellence at our Forli, Italy facility, which includes the intended consolidation of our compounding operations in Kaiserslautern, Germany; Wehr, Germany; and Ferrara Marconi, Italy. These operations are included in our Engineered Materials segment. We expect to complete the consolidation of the compounding operations by 2022. See Note 4 - Acquisitions, Dispositions and Plant Closures in the accompanying consolidated financial statements for further information.

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 three 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.

- ***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. We launched POM ECO-B, a sustainable polyacetal, which allows customers to realize reduction in carbon dioxide emission in their end-use products and advance toward their renewable content goals.

Korea Engineering Plastics Co., Ltd., our 50%-owned strategic affiliate ("KEPCO"), manufactures POM and other engineering resins in the Asia-Pacific region. For further discussion of KEPCO, see *Strategic Affiliates* in this *Item 1. Business*.

National Methanol Company ("Ibn Sina"), our 25% owned strategic affiliate, produces methanol which is a key feedstock for POM production. Its production facilities are located in Saudi Arabia. For further discussion of Ibn Sina, see *Strategic Affiliates* in this *Item 1. Business*.

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

UHMW-PE. Celanese is a global leader in UHMW-PE products, which are sold under the 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.

Preservatives. Our preservatives, 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. Preservatives 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 24 - 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 • 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.

• ***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.

• ***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 market conditions 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 24 - 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 • Vinyl acetate monomer ("VAM") • Acetic anhydride • Acetaldehyde • Ethyl acetate • Formaldehyde • Butyl acetate	• Paints • Coatings • Adhesives • Lubricants • Pharmaceuticals • Films • Textiles • Inks • Plasticizers • Solvents	• BASF SE • Chang Chun Petrochemical Co., Ltd. • Daicel • Dow Inc. • Eastman Chemical Company • E. I. du Pont de Nemours and Company • Huayi Chemical Co., Ltd. • INEOS • Jiangsu Sopo (Group) Co., Ltd. • Kuraray Co., Ltd. • LyondellBasell Industries N.V. • Nippon Gohsei • Showa Denko K.K. • Sipchem	For acetic acid and 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 • Dow Inc. • 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
Redispersible Powders			
• Redispersible Powders ("RDP")	• External thermal insulation composite systems • Tiling • Plasters and renders	• Dairen Chemical Corporation • Dow Inc. • Wacker Chemie AG	• VAE emulsions • Conventional emulsions • Polyvinyl alcohol

• ***Overview***

The Acetyl Chain segment, which includes the integrated chain of intermediate chemistry, emulsion polymers, EVA polymers and redispersible powders 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 RDP business is a leading manufacturer of redispersible polymer powders, sold under the Elotex® brand. The business produces polymer emulsions which are converted into powdered thermoplastic resin materials. RDP products are used in a variety of applications in the mortar industry, including decorative mortar, exterior insulation and finish systems, gypsum-based materials, plaster and render, self leveling floor systems, skim coat and tile adhesives.

- ***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 also produce carbon monoxide in our Clear Lake facility. 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.

Sales from acetyl products amounted to 27%, 27% and 31% of our consolidated net sales for the years ended December 31, 2020, 2019 and 2018, 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.

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.

Redispersible Powders. Our RDP business produces a number of emulsions for use in manufacturing redispersible powders to meet requirements for various applications and formulated to fit our customers' needs for optimal production.

- ***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, RDP and EVA polymers products are sold to a diverse group of regional, family owned and multinational customers. Customers of our emulsion polymers and RDP business are manufacturers of water-based paints and coatings, adhesives, paper, building and construction products, glass fiber, non-wovens, textiles and premixed dry mortars. 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 Acetyl Chain 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 24 - 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. 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. We have a substantial portfolio of affiliates in various regions, including Asia-Pacific, North America and the Middle East. These affiliates 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, 2020, our equity method strategic affiliates generated combined sales of $1.8 billion, resulting in our recording $102 million of equity in net earnings of affiliates and $119 million of dividends.

On October 9, 2020, we completed the sale of our 45% joint venture equity interest in Polyplastics Co., Ltd.("Polyplastics"), to our joint venture partner Daicel, for a purchase price of approximately $1.6 billion in cash. The sale of Polyplastics was meant to drive future growth, advance application development with customers, and pursue high-return expansion opportunities for the benefit of Celanese and its customers. See Note 7 - Investments in Affiliates in the accompanying consolidated financial statements for further information.

Our strategic affiliates as of December 31, 2020 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%); Duke Energy Arabian Ltd. (25%)	1981
KEPCO	South Korea	50 %	Mitsubishi Gas Chemical Company, Inc. (40%); Mitsubishi Corporation (10%)	1999
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 Mitsubishi Gas Chemical Company, Inc. in a world-scale POM facility in Nantong, China. In December 2020, we signed a memorandum of understanding with our joint venture partners to restructure KEPCO, in which we and our joint venture partners will receive exclusive offtake rights to POM in Asia and global marketing rights without restrictions. The joint venture restructuring is expected to be completed before the end of 2021.

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 2020, 2019 and 2018, we received cash dividends of $126 million, $112 million and $112 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, 2020
	(In percentages)
InfraServ GmbH & Co. Gendorf KG	30
InfraServ GmbH & Co. Hoechst KG	31
YNCORIS GmbH & Co. KG[(1)]	22

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(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®, Elotex®, 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®, 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 14 - Environmental and Note 21 - Commitments and Contingencies in the accompanying consolidated financial statements.

We expect to incur approximately $25 million to $50 million in capital expenditures for environmental control measures in each of 2021 and 2022.

Human Capital Resources

Workforce Composition and Diversity, Equity and Inclusion

Our business is operated by a diverse and global workforce, with employees in the following key geographies:

	Employees as of December 31, 2020
North America	
US	2,678
Canada	189
Mexico	418
Total	**3,285**
Europe	
Germany	1,567
Other Europe	1,519
Total	**3,086**
Asia	**1,158**
Rest of World	**129**
Total	**7,658**

We believe that providing a diverse workplace that promotes mutual respect and inclusion for all employees is critical to our business success and to driving innovation and growth. To that end, in recent years we have sought and made significant progress in our efforts to promote diversity, equity and inclusion in our Company. We promote employee engagement through 39 chapters of eight different Employee Resource Groups designed to inspire, develop and increase the visibility, representation and promotion of underrepresented groups. We engage with trade associations and engineering groups to enhance our recruiting of diverse employees. In 2020, we launched our Diversity, Equity & Inclusion Council to strengthen our diversity strategy, identify potential actions and review progress.

As of December 31, 2020:

- globally, women make up approximately 24% of our workforce and hold approximately 28% of management roles.
- in the US, people of color represent approximately 30% of our workforce and hold approximately 29% of US management roles.

Stewardship: Health, Safety and Environmental

At Celanese, rather than just focus on occupational safety of our employees, contractors and any visitors to our sites, we have an expanded view and measurement of "Stewardship" that includes process safety and environmental releases since they may have an impact on the community. Our stewardship values are critical to our success in attracting and retaining the best industry talent across the globe.

As a company, we strive to do no harm to people, the environment or the communities that host our facilities. We believe in continuous improvement by building competency in our people and having a comprehensive management system built from recognized practices from around the globe. Our values include a commitment to the health and safety of our employees, contractors, communities and environment.

The Company utilizes a mixture of leading and lagging indicators to assess the health and safety performance of our operations. Lagging indicators for occupational safety include the Occupational Safety and Health Administration Total Recordable Incident Rate ("TRIR") and the Lost Time Incident Rate ("LTIR") based upon the number of incidents per 200,000 work hours of both employees and contractors. Process Safety indicators follow the industry standard from API RP 754 for Tier 1 and 2 events for incident count, rate, and severity. The criteria for environmental indicators is 10% or greater of the Celanese reportable quantity (based on EPA methodology or internal default release values). Leading indicators include reporting and resolution of all near miss events, behavioral safety observations, hazard recognitions resolved and all releases that fall below the previously-mentioned threshold. Leading process safety indicators include challenges to safety systems. For the year ended December 31, 2020, the Company had a TRIR of 0.21, a LTIR of 0.07 and two work-related fatalities. We also had eight Tier 1 and Tier 2 process safety incidents and nine environmental releases. Through deliberate actions, we have improved our employee safety, process safety and environmental incident metrics in recent years.

Health and Wellness

Our efforts to support our employees' physical well-being starts with comprehensive health benefits offered to all US employees who work more than 20 hours per week, plus their eligible family members. Around the world, we offer other benefits that are competitive in each of the countries where we operate.

The cornerstone programs in the US are:

- Medical coverage with above-industry-average employer contributions to a Health Savings Account, including benefits for transgender employees and dependents and access to a low-cost and convenient telemedicine service;
- Dental and vision coverage that offers employees choices and free or low-cost preventive care; and
- Wellness programs that promote annual physicals for all employees and niche programs such as smoking cessation.

To further create a positive impact in the lives of employees and their families, the following services are available at no cost to our eligible participants:

- Access to an expert medical second opinion with a board-certified doctor when dealing with an illness, injury or chronic pain;
- Participation in a virtual physical therapy program to help with chronic musculoskeletal pain;
- A program created to empower all people with diabetes to live better, healthier lives; and
- In 2020, we expanded our mental health offerings to provide more services to more employees around the world.

Talent Development

At Celanese, we are committed to fostering an engaging and inclusive workplace with opportunities for collaboration, development and leadership. Our Talent Management strategies provide a consistent and efficient approach to how we acquire talent, manage performance, develop bench strength, support development and help employees reach their fullest potential.

We have a structured approach to reviewing talent with management as well as with the Board of Directors. This includes discussions of employee development, executive succession, diversity, talent pipelines and workforce planning requirements. We regularly report to the Board of Directors on talent development and succession across each functional area, and an annual review of executive succession with the Board of Directors.

We believe in giving employees clear opportunities to pursue their unique career goals and helping our leaders be a resource, champion and coach. Our Global Career Framework provides clarity around opportunities that can exist at Celanese and it also removes artificial barriers to help employees own their own careers. It allows employees to regularly increase their scope and responsibility, both within an employee's current role and moving to new roles. We also provide a specific technical career ladder for employees in technical roles to enable employees in manufacturing and other technical functions to grow their careers. We also utilize our Leadership Framework to define the attributes, competencies and behaviors of leaders at Celanese. We provide online courses, leadership webinars and other resources to support employee development.

COVID-19

For further information regarding the impact of COVID-19 and actions taken by the Company in response to the COVID-19 pandemic, including with respect to our employees, see *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations*.

Available Information — Securities and Exchange Commission ("SEC") Filings and Corporate Governance Materials

We make available free of charge, through the investor portion of our internet website (http://investors.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 Economic and Industry Conditions

Our business, financial condition and result of operations have been, and are expected to continue to be, significantly and adversely affected by the COVID-19 pandemic, and we cannot predict the extent to which this effect will continue.

In December 2019, a novel coronavirus causing a disease known as COVID-19 was first reported in China and its spread was declared a pandemic by the World Health Organization in March 2020. Substantially all locations where we and our customers and suppliers have offices and production facilities were impacted by government-imposed quarantines, stay-at-home restrictions, travel restrictions and other public health and safety measures.

COVID-19 has significantly impacted our operations and financial results during 2020 by slowing down the economy and depressing demand in many of our markets, and causing a negative impact on many of our customers, as well as the end customers of products for which our products serve as materials and inputs.

The extent to which COVID-19 will continue to impact our operations or those of our customers or suppliers will depend on future developments and numerous factors, which are highly uncertain and cannot be predicted with confidence. These include:

- the extent of any resurgence in infections and the spread of the disease, and the effectiveness of any vaccines;
- additional governmental, business and individual actions to contain the spread of the outbreak, including social distancing, work-at-home, stay-at-home and shelter-in-place orders and shutdowns, travel restrictions and quarantines;
- the extent to which these conditions depress economic activity generally and demand for our products specifically and affect the financial markets;
- the effect of the outbreak on our employees, customers, suppliers, supply chain and other business partners;
- our ability during the outbreak to provide our products and services;
- disruptions to our business, supply chain or the availability of raw materials caused by plant, workplace and office closures;
- the risk that we could be exposed to liability, negative publicity or reputational harm related to any incidents of actual or perceived transmission of COVID-19 among employees at our facilities;
- the ability of our customers to pay for our products and services during and following the outbreak;
- our ability to access usual sources of liquidity on reasonable terms; and
- our ability to comply with the financial covenant in our Credit Agreement if a material and prolonged economic downturn were to result in increased indebtedness or substantially lower EBITDA.

The COVID-19 pandemic continues to evolve, and it is unknown how long disruptions to our customers' demand will continue. We have monitored and will continue to monitor the situation closely.

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, 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, or trade flows could be negatively impacted, 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 annually, and accounted for approximately 40% of our net sales in 2020. 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, trade disruptions, 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, 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 adversely impacted 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, government-imposed work or travel restrictions, involuntary shutdowns or turnarounds;
- A supplier's inability to meet our delivery orders, a supplier's decision 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, economic and industry activity; and
- The direct or indirect effect of governmental regulation (including the impact of government regulation relating to climate change or regulation of production and transport of certain chemicals).

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 that profitability would be adversely affected if we were 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, with Mitsui, in which we own a 50% interest, for the production of methanol at our integrated chemical plant in Clear Lake, Texas.

Risks Related to Our Global Operations and Our Strategy

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, public health crises (including, but not limited to, the COVID-19 pandemic), 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.

We have experienced recent disruptions of the type described above. In August 2020, to protect our employees and safeguard the assets at our Clear Lake facility, we temporarily, voluntarily ceased production at our Clear Lake, Texas facility during the landfall of Hurricane Laura. 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, 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. 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.

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 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.

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.

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 complete 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. See *Strategic Affiliates* in *Item 1. Business* for further information.

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

We maintain property, business interruption, casualty and cyber/information security 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.

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 and persistent threats in the areas of information technology security and fraud. We seek to prevent unauthorized access to our information technology systems and to detect and investigate any security incidents that may occur, however in some cases we might be unaware of a particular incident or its magnitude and effects. At the current time, we may face increased information technology security and fraud risks due to our increased reliance on working remotely during the COVID-19 pandemic, which may create additional information security vulnerabilities and/or magnify the impact of any disruption in information technology systems. Additionally, we may be exposed to unauthorized access to our information technology systems through undetected vulnerabilities in our service providers' information systems or software.

The theft, misuse 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 or personally identifiable information, we may incur liability or suffer reputational damage in the marketplace as a result. We maintain cyber/information security insurance, but any losses may be beyond the limits, or outside the coverage, of our policy.

Information security threats and methods of perpetrating fraud or misappropriating information are constantly evolving and becoming more complex, which increases the difficulty and expense of defending against these threats. Although we attempt to mitigate these risks by employing a number of measures, including insurance, monitoring of our systems and networks, employee training 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.

Legal, Regulatory and Tax Risks

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. For example, in December 2019 we announced the recording of a reserve in connection with a competition law investigation by the European Commission based on certain past ethylene purchases by certain subsidiaries of the Company, and in July 2020, we announced that we had reached a final settlement of $92 million with respect to this investigation. The

Company paid this settlement in full on January 12, 2021. Although we have implemented policies, procedures and employee training 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 21 - Commitments and Contingencies in the accompanying consolidated financial statements for further information.

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, medical device, pharmaceutical, automobile, construction and aerospace, 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.

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, health and safety laws and regulations, and potential obligations with respect to sites currently or formerly owned or operated by us, may have a 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. See Note 14 - Environmental in the accompanying consolidated financial statements for further information.

Our operations are subject to extensive international, national, state, local and other laws and regulations that govern environmental, health and safety matters and that regulate the handling, manufacture, use, emission and disposal of products, materials and hazardous and non-hazardous waste. 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. We could also face claims for damages from individuals or groups for alleged violations of these laws or regulations.

We also incur substantial capital and other costs to comply with environmental, health and safety requirements. Stricter environmental, safety and health laws and regulations could result in substantial additional 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, independent studies or consumer or societal perceptions 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 polymers 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, including the EU Green Deal Strategy on the Sustainable Use of Chemicals, 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 the US's proposal to update 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.

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, which is administered by the Department of Homeland Security, 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 was enacted, and reauthorized on July 22, 2020 for three years. The reauthorization does not make any changes to the program.

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 reporting greenhouse gas emissions. The European Commission has also embarked on the European Green Deal initiative with the goal of making the EU carbon neutral by 2050, which could lead to additional statutory or regulatory requirements. 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 likely, 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 14 - Environmental and Note 21 - 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 initiatives, which focus 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 and related legislative developments could have a material adverse effect on our effective tax rate, results of operations, cash flows and financial condition.

In December 2017, the Tax Cuts and Jobs Act (the "TCJA") was enacted and was effective January 1, 2018. The US Treasury has issued various final and proposed regulations supplementing the TCJA provisions since 2018. See Note 17 - 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 in future periods.

Risks Related to Our Human Capital

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. See Note 13 - Benefit Obligations in the accompanying consolidated financial statements for further information.

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, 2020, we had 7,658 employees globally. Approximately 16% of our 2,678 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.

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 12 - Debt in the accompanying consolidated financial statements for further information about our indebtedness. See Note 11 - Noncurrent Other Liabilities, Note 13 - Benefit Obligations, Note 14 - Environmental and Note 21 - 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; and

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

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 governing our receivables securitization facility each contain various covenants that limit our ability to engage in specified types of transactions. The Credit Agreement and the Indentures contain covenants including, but not limited to, restrictions on our and certain of our subsidiaries' ability to incur additional debt; incur liens securing debt; 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 certain subsidiaries. Additionally, the Credit Agreement requires the maintenance of certain financial ratios.

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, 2020.

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

Site	Leased/Owned	Products/Functions
Engineered Materials		
Auburn Hills, Michigan, US	Leased	Automotive Development Center
Bishop, Texas, US	Owned	POM, UHMW-PE, Compounding
Evansville, Indiana, US	Owned	Compounding
Ferrara, Italy	Leased	Compounding
Florence, Kentucky, US	Owned	Compounding
Forli, Italy	Leased	Compounding
Frankfurt am Main, Germany[(1)]	Leased	POM, Compounding, Sorbates, Sunett® sweetener
Kaiserslautern, Germany[(1)]	Owned	LFRT
Nanjing, China[(1)]	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
Acetyl Chain		
Bay City, Texas, US[(1)]	Leased	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[(2)]	Owned	Acetic acid, VAM, Methanol
Edmonton, Alberta, Canada	Owned	Low-density polyethylene resins, Ethylene vinyl acetate
Enoree, South Carolina, US	Owned	VAE emulsions
Frankfurt am Main, Germany[(1)]	Leased	Acetaldehyde, Conventional emulsions, VAE emulsions, VAM, RDP
Geleen, Netherlands	Owned	VAE emulsions, RDP
Jurong Island, Singapore[(1)]	Leased	Acetic acid, Butyl acetate, Ethyl acetate, VAE emulsions, VAM
Moosleerau, Switzerland	Owned	RDP
Nanjing, China[(1)]	Leased	Acetic acid, Acetic anhydride, Conventional emulsions, VAE emulsions, VAM
Perstorp, Sweden	Owned	Conventional emulsions, VAE emulsions
Shanghai, China[(1)]	Leased	RDP

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

(2) Methanol is produced by our joint venture, Fairway, 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 14 - Environmental and Note 21 - 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 11, 2021 are as follows:

Name	Age	Position
Lori J. Ryerkerk	58	Chairman of the Board of Directors, Chief Executive Officer and President
Scott A. Richardson	44	Executive Vice President and Chief Financial Officer
Thomas F. Kelly	55	Senior Vice President, Engineered Materials
John G. Fotheringham	52	Senior Vice President, Acetyls
A. Lynne Puckett	58	Senior Vice President and General Counsel
Shannon L. Jurecka	51	Senior Vice President and Chief Human Resources Officer

Lori J. Ryerkerk was named our Chief Executive Officer and President and a member of our board of directors effective May 2019. In April 2020, she was named Chairman of the Board. 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 serves on the board of Eaton Corporation plc, a diversified power management company, and 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. He was promoted to Executive Vice President in March 2020. 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.

Thomas F. Kelly was named Senior Vice President, Engineered Materials in April 2020, leading the Engineered Materials business with global responsibility for product and business management, planning and portfolio development, and pipeline management. He had previously served as Vice President of Engineered Materials with Celanese since January 2019. He re-joined Celanese in January 2019 after serving with Cabot Microelectronics (now CMC Materials), a global supplier of consumable materials to semiconductor manufacturers and pipeline companies, from September 2016 to January 2019. At Cabot Microelectronics he held the roles of Vice President and Chief Commercial Officer and Vice President of Corporate Development. He was previously with Celanese from August 2012 to September 2016 as Director of Raw Materials, where he led a team responsible for sourcing strategic raw materials. Before joining Celanese, he had additional roles in supply chain, sales and manufacturing management with Chemtura, Cabot Microelectronics and Rohm & Haas. Mr. Kelly also served as a board member of Vertellus Global Holdings LLC, a supplier of specialty chemical products, from August 2019 through December 2020. He holds a Master of Business Administration from Drexel University, and Master's and Bachelor's Degrees in Chemical Engineering from Villanova University.

John G. Fotheringham was named Senior Vice President, Acetyls in May 2020 and has global responsibility for the Celanese Acetyl Chain business. Prior to his current role, Mr. Fotheringham had served as Vice President of Global Acetic Acid & Celanese Europe since January 2017. He joined Celanese from ITW (Illinois Tool Works), a global diversified manufacturer of specialized industrial equipment, where he served as Vice President and General Manager from September 2016 to January 2017 with leadership responsibility in industrial applications including industrial lubrication and hygiene. From February 2014 to August 2016, he was Vice President with Wacker Chemie in Germany, where he was responsible for the global emulsions and resins business. Prior to joining Wacker, he was with Celanese for over 20 years in roles of increasing responsibility in the areas of commercial, supply chain and mergers and acquisitions. He holds a Bachelor of Science in Chemistry and Business Management from Kingston University, London.

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. She currently serves on the board of directors of Markel Corporation, an insurance and investment operations holding company. 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.

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 under the symbol "CE" since January 21, 2005.

Holders

As of January 28, 2021, there were 66 holders of record of our Common Stock. By including persons holding shares in broker accounts under street names, however, we estimate we have approximately 134,000 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 our current and anticipated regular cash dividends. See Note 15 - 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, 2020 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, 2020	809,617	$ 114.44	809,617	$ 1,359,000,000
November 1 - 30, 2020	1,772,444	$ 127.49	1,772,444	$ 1,133,000,000
December 1 - 31, 2020	536,691	$ 130.38	536,691	$ 1,063,000,000
Total	3,118,752		3,118,752	

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

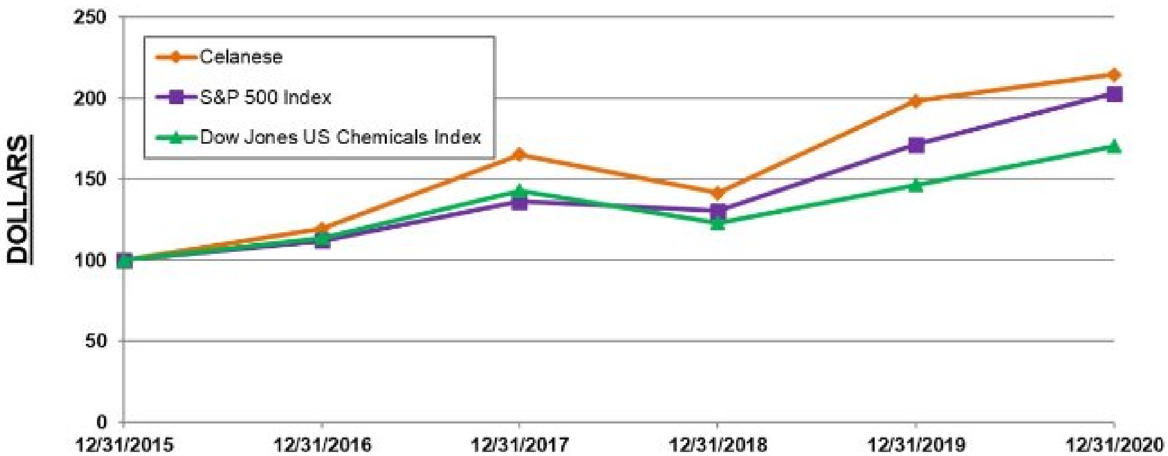
(2) Our Board of Directors has authorized the aggregate repurchase of $5.9 billion of our Common Stock since February 2008.

See Note 15- 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, 2015 through December 31, 2020 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, 2015. 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	12/31/2015	12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020
Celanese	100	119.41	165.42	141.75	198.21	214.59
S&P 500 Index	100	111.96	136.40	130.42	171.49	203.04
Dow Jones US Chemicals Index	100	113.80	143.10	123.10	146.60	170.50

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(a)(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, 2020 and 2019 and the statements of operations data for the years ended December 31, 2020, 2019 and 2018, 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 and 2016, 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,				
	2020	2019	2018	2017	2016
	(In $ millions, except per share data)				
Statement of Operations Data					
Net sales	5,655	6,297	7,155	6,140	5,389
Other (charges) gains, net	(39)	(203)	9	(59)	(8)
Operating profit (loss)	664	834	1,334	857	934
Gain (loss) on sale of investments in affiliates	1,408	—	—	—	—
Earnings (loss) from continuing operations before tax	2,251	988	1,510	1,075	1,030
Earnings (loss) from continuing operations	2,004	864	1,218	862	908
Earnings (loss) from discontinued operations	(12)	(6)	(5)	(13)	(2)
Net earnings (loss) attributable to Celanese Corporation	1,985	852	1,207	843	900
Earnings (loss) per common share					
Continuing operations — basic	16.95	6.93	9.03	6.21	6.22
Continuing operations — diluted	16.85	6.89	8.95	6.19	6.19
Balance Sheet Data (as of the end of period)					
Total assets	10,909	9,476	9,313	9,538	8,357
Total debt	3,723	3,905	3,531	3,641	3,008
Total Celanese Corporation stockholders' equity	3,526	2,507	2,984	2,887	2,588
Other Financial Data					
Depreciation and amortization	350	352	343	305	290
Capital expenditures[1]	348	390	333	281	247
Dividends paid per common share[2]	2.48	2.40	2.08	1.74	1.38

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

(2) Annual dividends for the year ended December 31, 2020 consist of four quarterly dividend payments of $0.62 per share. 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. See Note 15 - 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.

COVID-19 Update

On March 11, 2020, the World Health Organization declared the outbreak of a novel coronavirus ("COVID-19") as a pandemic, which originated in China and has spread throughout the world to substantially all locations where we have offices, production facilities, customers and suppliers, creating a dynamic and challenging situation worldwide. The COVID-19 pandemic is evolving, and to date has led to the implementation of various responses, including government-imposed quarantines, stay-at-home restrictions, travel restrictions and other public health and safety measures.

Our employees' health and well-being continue to be of vital importance. For employees who are working in plants and who have returned to the office, we have implemented government recommended protocols and best practices related to social distancing and best hygiene practices, including the use of additional personal protective equipment and enhanced cleaning protocols, where appropriate. We have also restricted visitor access and non-essential business travel. We have a global crisis team in place monitoring the evolving situation and recommending risk mitigation actions, including workplace health and safety measures. We also have site activation teams at all locations to guide and implement our careful return-to-office efforts in accordance with government regulations and recommended protocols. Our presence in China provided us with an advance view of how COVID-19 scenarios can unfold as well as the importance of taking early action.

We operate within a geographically-balanced global footprint and have the ability to utilize different production and distribution strategies depending on the business and product to satisfy customer demands. We continue to pursue our existing operational strategy. Where we temporarily reduced run rates in prior quarters, our plants are now operating at more normalized levels, and we have been able to maintain a largely consistent supply chain. During the first half of 2020, the effects of COVID-19 and related actions to control its spread had a significant, negative impact on the operating results of our Engineered Materials and Acetyl Chain segments. However, during the second half of 2020, consumer demand for most applications increased within many regions of the world, particularly in China and the US, which have rebounded to pre-COVID-19 levels. In Engineered Materials, demand has returned to pre-COVID-19 levels for automotive and consumer goods such as electronics and appliances. Applications including food and beverage, pharma and 5G infrastructure continue to be resilient. Demand for medical applications remains at slightly reduced levels as a result of delayed elective surgeries. In the Acetyl Chain, we benefit from a highly diversified set of end-uses with less exposure, relative to others in the industry, to end markets that have been most acutely impacted by COVID-19. However, the low acetic acid pricing, along with volatility with global oil markets, presented a deflationary environment for the Acetyl Chain business for the year ended December 31, 2020. That trend began to reverse toward the end of 2020 as recent increases in raw material prices and demand levels had a beneficial impact on pricing within the Acetyl Chain. Further, we see resiliency and even growth in some applications within all of our segments, including packaging, hygiene products, disinfectants, pharma, paints, bonding agents and cigarettes. We currently anticipate that customer demand and our results of operations should continue on a more normalized basis in 2021, assuming effective rollout of vaccines and absent a resurgence of COVID-19, as the economies in which we operate continue to recover.

We have taken, and will continue to take, actions as necessary to mitigate the impact of COVID-19 on our results of operations, financial condition and cash flow. We managed inventory levels, reduced our manufacturing costs and optimized our working capital. We have reduced discretionary spending such as travel and other corporate functional expenses. Although significant layoffs have not occurred within the Company during the year ended December 31, 2020, a small number of positions have been eliminated under a global restructuring program implemented largely as a result of cost cutting initiatives as part of our ongoing commitment to driving efficiencies and on which decisions were made before, and independently from, the onset of the pandemic.

We are actively managing our business to maintain cash flow, and we believe that liquidity from (i) cash generated from operations; (ii) cash on hand; (iii) dividends from our portfolio of strategic investments; and (iv) cash available from our senior unsecured revolving credit facility and our accounts receivable securitization facility, will be sufficient to meet our operational and capital investment needs and financial obligations for the foreseeable future. We remain in compliance with the financial covenants under our senior unsecured revolving credit facility and expect to remain in compliance based on our current expectation of future results of operations.

Capital expenditures were $364 million for the year ended December 31, 2020 and are expected to be in the range of $450 million to $500 million in 2021, prioritizing those projects that continue to drive productivity in the near-term. We remain fully committed to our current cash dividend. During the year ended December 31, 2020, we completed $650 million of share repurchases and expect to purchase approximately $400 million to $500 million of additional shares in 2021.

The extent to which COVID-19 will adversely impact our business, financial condition and results of operations will depend on numerous evolving factors, which are highly uncertain, rapidly changing and cannot be predicted. For further information regarding the impact COVID-19 could have on our business, financial condition and results of operations, see *Item 1A. Risk Factors*. For further discussion of our liquidity condition, see *Liquidity and Capital Resources* in this *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations*.

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, among others, 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:

- the extent to which the COVID-19 pandemic continues to adversely impact the economic environment, market demand and our operations, as well as the pace of any economic recovery;
- 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 complete acquisition or investment transactions, including obtaining regulatory approvals, consistent with our strategy;

- market acceptance of our technology;
- 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 COVID-19 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;
- 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 ("TCJA") and potential regulatory and legislative tax developments in other jurisdictions;
- changes in the degree of intellectual property and other legal protection afforded to our products or technologies, or the theft of such intellectual property;
- potential liability for remedial actions and increased costs under existing or future environmental, health and safety 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; 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. COVID-19 and responses to the pandemic by governments and businesses, have significantly increased financial and economic volatility and uncertainty, exacerbating the risks and potential impact of these factors. Should one or more of these risks or uncertainties materialize, affect us in ways or to an extent that we currently do not expect or consider to be significant, 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,		
	2020	2019	Change
	(In $ millions, except percentages)		
Statement of Operations Data			
Net sales	5,655	6,297	(642)
Gross profit	1,293	1,606	(313)
Selling, general and administrative ("SG&A") expenses	(482)	(483)	1
Other (charges) gains, net	(39)	(203)	164
Operating profit (loss)	664	834	(170)
Equity in net earnings (loss) of affiliates	134	182	(48)
Non-operating pension and other postretirement employee benefit (expense) income	17	(20)	37
Interest expense	(109)	(115)	6
Refinancing expense	—	(4)	4
Dividend income - equity investments	126	113	13
Gain (loss) on sale of investments in affiliates	1,408	—	1,408
Earnings (loss) from continuing operations before tax	2,251	988	1,263
Earnings (loss) from continuing operations	2,004	864	1,140
Earnings (loss) from discontinued operations	(12)	(6)	(6)
Net earnings (loss)	1,992	858	1,134
Net earnings (loss) attributable to Celanese Corporation	1,985	852	1,133
Other Data			
Depreciation and amortization	350	352	(2)
SG&A expenses as a percentage of Net sales	8.5 %	7.7 %	
Operating margin[1]	11.7 %	13.2 %	
Other (charges) gains, net			
Restructuring	(20)	(23)	3
Asset impairments	(31)	(83)	52
Plant/office closures	7	(4)	11
Commercial disputes	6	(4)	10
European Commission investigation	(2)	(89)	87
Other	1	—	1
Total Other (charges) gains, net	(39)	(203)	164

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

	As of December 31,	
	2020	2019
	(In $ millions)	
Balance Sheet Data		
Cash and cash equivalents	955	463
Short-term borrowings and current installments of long-term debt - third party and affiliates	496	496
Long-term debt, net of unamortized deferred financing costs	3,227	3,409
Total debt	3,723	3,905

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, 2020 Compared to Year Ended December 31, 2019

	Volume	Price	Currency	Other	Total
			(In percentages)		
Engineered Materials	(11)	(3)	1	—	(13)
Acetate Tow	(14)	(4)	—	—	(18)
Acetyl Chain	—	(8)	1	—	(7)
Total Company	(5)	(6)	—	1	(10)

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, 2020 Compared to Year Ended December 31, 2019

	Engineered Materials	Acetate Tow	Acetyl Chain	Other Activities	Total
			(In $ millions)		
Service cost	1	—	2	1	4
Interest cost and expected return on plan assets	—	—	—	(45)	(45)
Amortization of prior service credit	—	—	—	—	—
Special termination benefit	—	—	—	—	—
Recognized actuarial (gain) loss	—	—	—	9	9
Curtailment / settlement (gain) loss	(1)	—	—	—	(1)
Total	—	—	2	(35)	(33)

See Note 13 - Benefit Obligations in the accompanying consolidated financial statements for further information.

Consolidated Results

Year Ended December 31, 2020 Compared to Year Ended December 31, 2019

Net sales decreased $642 million, or 10%, for the year ended December 31, 2020 compared to the same period in 2019 primarily due to:

- lower volume in our Engineered Materials and Acetate Tow segments due to (i) depressed global economic conditions as a result of the COVID-19 pandemic and (ii) the expiration of an acetate flake contract; and
- lower pricing across all of our segments, primarily driven by our Acetyl Chain segment due to the reduced global customer demand environment and an overall deflationary environment for raw materials as a result of the COVID-19 pandemic;

partially offset by:

- a favorable currency impact resulting from a stronger Euro relative to the US dollar.

Operating profit decreased $170 million, or 20%, for the year ended December 31, 2020 compared to the same period in 2019 primarily due to:

- lower Net sales across all of our segments; and

- higher plant turnaround and spending in our Engineered Materials and Acetyl Chain segments;

partially offset by:

- lower raw material costs within our Acetyl Chain and Engineered Materials segments;

- a favorable impact to Other (charges) gains, net. During the year ended December 31, 2019, we recorded a reserve of $89 million as a result of the European Commission's investigation of certain past ethylene purchases and an $83 million long-lived asset impairment loss related to the closure of our acetate flake manufacturing operations in Ocotlán, Mexico, which did not recur in the current year. See Note 4 - Acquisitions, Dispositions and Plant Closures and Note 16 - Other (Charges) Gains, Net in the accompanying consolidated financial statements for further information; and

- lower energy costs across all of our segments.

Equity in net earnings (loss) of affiliates decreased $48 million for the year ended December 31, 2020 compared to the same period in 2019 primarily due to:

- a decrease in equity investment in earnings of $31 million and $8 million from our Ibn Sina and Korea Engineering Plastics Co., Ltd. ("KEPCO") strategic affiliates, primarily as a result of depressed global economic conditions; and

- a decrease in equity investment in earnings of $10 million from our Polyplastics strategic affiliate as a result of the sale of our 45% joint venture equity interest to our joint venture partner Daicel during the three months ended December 31, 2020. See Note 7 - Investments in Affiliates in the accompanying consolidated financial statements for further information.

Non-operating pension and other postretirement employee benefit income increased $37 million during the year ended December 31, 2020 compared to the same period in 2019 primarily due to lower interest cost and higher expected return on plan assets. See Note 13 - Benefit Obligations in the accompanying consolidated financial statements for further information.

Gain (loss) on sale of investments in affiliates of $1.4 billion increased for the year ended December 31, 2020 compared to the same period in 2019 due to the sale of our 45% Polyplastics joint venture equity interest. See Note 7 - Investments in Affiliates in the accompanying consolidated financial statements for further information.

Our effective income tax rate for the year ended December 31, 2020 was 11% compared to 13% for the year ended 2019. The lower effective income tax rate for the year ended December 31, 2020 compared to the same period in 2019 was primarily due to the tax impacts of certain divestitures and reorganization transactions, partially offset by tax charges related to the impacts of uncertain tax positions due to available tax attribute carryforwards and increases in the valuation allowance on US foreign tax credit carryforwards due to revised forecasts of foreign sourced income and expenses during the carryforward period. See Note 17 - 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, 2019 compared to the year ended December 31, 2018 and 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 Reports for the years ended December 31, 2019 and December 31, 2018, respectively.

Business Segments

Engineered Materials

	Year Ended December 31, 2020	2019	Change	% Change
	(In $ millions, except percentages)			
Net sales	2,081	2,386	(305)	(12.8)%
Net Sales Variance				
Volume	(11) %			
Price	(3) %			
Currency	1 %			
Other	— %			
Other (charges) gains, net	(36)	5	(41)	(820.0)%
Operating profit (loss)	235	446	(211)	(47.3)%
Operating margin	11.3 %	18.7 %		
Equity in net earnings (loss) of affiliates	115	168	(53)	(31.5)%
Gain (loss) on sale of investments in affiliates	1,408	—	1,408	100.0 %
Depreciation and amortization	134	131	3	2.3 %

Year Ended December 31, 2020 Compared to Year Ended December 31, 2019

Net sales decreased for the year ended December 31, 2020 compared to the same period in 2019 primarily due to:

- lower volume for most of our products driven by depressed global economic conditions as a result of the COVID-19 pandemic; and
- lower pricing for most of our products, primarily due to a continued reduction in customer demand, as well as customer and product mix;

partially offset by:

- a favorable currency impact resulting from a stronger Euro relative to the US dollar.

Operating profit decreased for the year ended December 31, 2020 compared to the same period in 2019 primarily due to:

- lower Net sales;
- higher plant turnaround activity and associated inventory costs of $73 million, partially offset by reduced spending on lower plant production; and
- an unfavorable impact of $41 million to Other (charges) gains, net. During the year ended December 31, 2020, we recorded a $26 million long-lived asset impairment loss related to certain fixed assets used in compounding operations at our facilities in Kaiserslautern, Germany; Wehr, Germany and Ferrara Marconi, Italy. During the year ended December 31, 2019, we also recorded a $15 million gain related to a settlement of a commercial dispute from a previous acquisition, which did not recur in the current year. See Note 16 - Other (Charges) Gains, Net in the accompanying consolidated financial statements for further information;

partially offset by:

- lower raw material costs for most of our products; and
- lower energy costs of $19 million, primarily related to favorable pricing.

Equity in net earnings (loss) of affiliates decreased for the year ended December 31, 2020 compared to the same period in 2019 primarily due to:

- a decrease in equity investment in earnings of $31 million and $8 million from our Ibn Sina and KEPCO strategic affiliates, primarily as a result of depressed global economic conditions; and
- a decrease in equity investment in earnings of $10 million from our Polyplastics strategic affiliate as a result of the sale of our 45% joint venture equity interest to our joint venture partner Daicel during the three months ended December 31, 2020.

Gain (loss) on sale of investments in affiliates of $1.4 billion increased for the year ended December 31, 2020 compared to the same period in 2019 due to the sale of our 45% Polyplastics joint venture equity interest. See Note 7 - Investments in Affiliates in the accompanying consolidated financial statements for further information.

Acetate Tow

	Year Ended December 31,			
	2020	2019	Change	% Change
	(In $ millions, except percentages)			
Net sales	519	636	(117)	(18.4)%
Net Sales Variance				
Volume	(14)%			
Price	(4)%			
Currency	— %			
Other	— %			
Other (charges) gains, net	(1)	(88)	87	98.9 %
Operating profit (loss)	118	52	66	126.9 %
Operating margin	22.7 %	8.2 %		
Dividend income - equity investments	126	112	14	12.5 %
Depreciation and amortization	36	45	(9)	(20.0)%

Year Ended December 31, 2020 Compared to Year Ended December 31, 2019

Net sales decreased for the year ended December 31, 2020 compared to the same period in 2019 primarily due to:

- lower acetate flake volume, primarily due to the expiration of an acetate flake contract;
- lower acetate tow volume, consistent with global demand reduction; and
- lower acetate tow pricing, primarily due to customer mix.

Operating profit increased for the year ended December 31, 2020 compared to the same period in 2019 primarily due to:

- a favorable impact of $87 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, which did not recur in the current year. See Note 16 - Other (Charges) Gains, Net in the accompanying consolidated financial statements for further information; and
- lower energy costs, spending and accelerated depreciation and amortization expense of $23 million, $11 million and $10 million, respectively, primarily related to the closure of our acetate flake manufacturing unit in Ocotlán, Mexico in the prior year;

partially offset by:

- lower Net sales.

Dividend income from equity investments increased for the year ended December 31, 2020 compared to the same period in 2019 primarily due to:

- higher earnings from our acetate tow joint ventures related to the expiration of an acetate flake contract, which was assumed by Nantong Cellulose Fibers Co. Ltd.

Acetyl Chain

	Year Ended December 31, 2020	Year Ended December 31, 2019	Change	% Change
	(In $ millions, except percentages)			
Net sales	3,147	3,392	(245)	(7.2)%
Net Sales Variance				
Volume	— %			
Price	(8) %			
Currency	1 %			
Other	— %			
Other (charges) gains, net	7	(3)	10	333.3 %
Operating profit (loss)	563	678	(115)	(17.0)%
Operating margin	17.9 %	20.0 %		
Equity in net earnings (loss) of affiliates	5	4	1	25.0 %
Depreciation and amortization	163	161	2	1.2 %

Year Ended December 31, 2020 Compared to Year Ended December 31, 2019

Net sales decreased for the year ended December 31, 2020 compared to the same period in 2019 primarily due to:

- lower pricing for most of our products, primarily due to the reduced global customer demand environment and an overall deflationary environment for raw materials as a result of the COVID-19 pandemic; and
- lower volume for most of our products, primarily due to the reduced global customer demand environment as a result of the COVID-19 pandemic, mostly offset by higher volume for redispersible powders due to our acquisition of Nouryon's redispersible polymer powders business offered under the Elotex® brand ("Elotex");

partially offset by:

- a favorable currency impact, primarily related to a stronger Euro relative to the US dollar.

Operating profit decreased for the year ended December 31, 2020 compared to the same period in 2019 primarily due to:

- lower Net sales;
- higher plant turnaround costs of $20 million, primarily related to our joint venture, Fairway, and Clear Lake plants; and
- higher costs of $14 million, primarily related to our acquisition of Elotex;

partially offset by:

- lower raw material costs, primarily for ethylene, acetic acid and methanol; and
- lower energy costs of $13 million, primarily related to favorable pricing.

Other Activities

	Year Ended December 31,			%
	2020	2019	Change	Change
	(In $ millions, except percentages)			
Other (charges) gains, net	(9)	(117)	108	92.3 %
Operating profit (loss)	(252)	(342)	90	26.3 %
Equity in net earnings (loss) of affiliates	14	10	4	40.0 %
Non-operating pension and other postretirement employee benefit (expense) income	16	(20)	36	180.0 %
Dividend income - equity investments	—	1	(1)	(100.0)%
Depreciation and amortization	17	15	2	13.3 %

Year Ended December 31, 2020 Compared to Year Ended December 31, 2019

Operating loss decreased for the year ended December 31, 2020 compared to the same period in 2019 primarily due to:

- a favorable impact of $108 million to Other (charges) gains, net. During the year ended December 31, 2019, we recorded a reserve of $89 million as a result of the European Commission's investigation and a $19 million loss related to settlements with former third-party customers, which did not recur in the current year. See Note 16 - Other (Charges) Gains, Net in the accompanying consolidated financial statements for further information; and

partially offset by:

- an unfavorable impact of $12 million resulting from losses on foreign currency forwards and swaps.

Non-operating pension and other postretirement employee benefit income increased for the year ended December 31, 2020 compared to the same period in 2019 primarily due to:

- lower interest cost and higher expected return on plan assets. See Note 13 - Benefit Obligations in the accompanying consolidated financial statements for further information.

Liquidity and Capital Resources

Our primary sources of liquidity are cash generated from operations, available cash and cash equivalents, dividends from our portfolio of strategic investments and available borrowings under our senior unsecured revolving credit facility. As of December 31, 2020 we have $1.3 billion available for borrowing under our senior unsecured revolving credit facility, if required, in meeting our working capital needs and other contractual obligations. In addition, we held cash and cash equivalents of $955 million as of December 31, 2020. We are actively managing our business to maintain cash flow, and we believe that liquidity from the above-referenced sources will be sufficient to meet our operational and capital investment needs and financial obligations for the foreseeable future.

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 $450 million to $500 million in 2021, primarily due to additional investments in growth opportunities and productivity improvements primarily in our Engineered Materials and Acetyl Chain segments.

On a stand-alone basis, Celanese and its immediate 100% owned subsidiary, Celanese US, have 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.

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. While it is possible that future tightening of these restrictions or application of new similar restrictions could impact us, these limitations do not currently restrict our operations.

We remain in compliance with the financial covenants under our senior unsecured revolving credit facility and expect to remain in compliance based on our current expectation of future results of operations. If our actual future results of operations differ materially from these expectations, or if we otherwise experience increased indebtedness or substantially lower EBITDA, we may be required to seek an amendment or waiver of such covenants which may increase our borrowing costs under those debt instruments.

Cash Flows

Cash and cash equivalents increased $492 million to $955 million as of December 31, 2020 compared to December 31, 2019. As of December 31, 2020, $578 million of the $955 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 deemed repatriation of previously unremitted foreign earnings, including foreign held cash. These funds are largely accessible without additional material tax consequences, if needed in the US, to fund operations. See Note 17 - Income Taxes in the accompanying consolidated financial statements for further information.

Year Ended December 31, 2020 Compared to Year Ended December 31, 2019

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

Net cash provided by operating activities decreased $111 million to $1.3 billion for the year ended December 31, 2020 compared to $1.5 billion for the same period in 2019. Net cash provided by operations for the year ended December 31, 2020 decreased primarily due to:

- a decrease in Net earnings, net of the sale of our Polyplastics joint venture equity interest;

partially offset by:

- favorable trade working capital of $147 million, primarily due to a decrease in inventory and payables. Inventory decreased as a result of turnaround activity and reduced operational rates in the current year. Payables decreased as a result of timing of settlement of trade payables; and

- a decrease in incentive compensation payouts of $62 million.

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

Net cash provided by investing activities increased $1.1 billion to $592 million for the year ended December 31, 2020 compared to net cash used in investing activities of $493 million for the same period in 2019, primarily due to:

- a net cash inflow of $1.6 billion related to the sale of our 45% Polyplastics joint venture equity interest. See Note 7 - Investments in Affiliates in the accompanying consolidated financial statements for further information;

partially offset by:

- a net cash outflow of $544 million related to the purchase of marketable securities.

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

Net cash used in financing activities increased $536 million to $1.5 billion for the year ended December 31, 2020 compared to $935 million for the same period in 2019, primarily due to:

- an increase in net repayments of short-term debt of $715 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

- a decrease in net proceeds of long-term debt of $169 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:

- lower share repurchases of our Common Stock of $346 million during the year ended December 31, 2020.

In addition, exchange rates had a favorable impact of $28 million on cash and cash equivalents and an unfavorable impact of $2 million on cash and cash equivalents for the years ended December 31, 2020 and 2019, respectively.

Debt and Other Obligations

- ***Senior Credit Facilities***

In January 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 $685 million and repaid $963 million under our senior unsecured revolving credit facility during the year ended December 31, 2020.

- ***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)			
5.875% Notes	May 2011	$400	5.875	June 15	December 15	June 15, 2021
4.625% Notes	November 2012	$500	4.625	March 15	September 15	November 15, 2022
1.125% Notes	September 2016	€750	1.125	September 26		September 26, 2023
3.500% Notes	May 2019	$500	3.500	May 8	November 8	May 8, 2024
1.250% Notes	December 2017	€300	1.250	February 11		February 11, 2025
2.125% Notes	November 2018	€500	2.125	March 1		March 1, 2027

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.

In May 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.

- ***Accounts Receivable Securitization Facility***

On July 6, 2020, we entered into an amended and restated receivables purchase agreement (the "Amended Receivables Purchase Agreement") under our US accounts receivable securitization facility among certain of our subsidiaries, our wholly-owned, "bankruptcy remote" special purpose subsidiary ("SPE") and certain global financial institutions ("Purchasers"). The Amended Receivables Purchase Agreement extends the term of the securitization facility such that the SPE may sell certain receivables to the Purchasers until July 2, 2021. Under the Amended Receivables Purchase Agreement, transfers of accounts receivable from the SPE are treated as sales and are accounted for as a reduction in accounts receivable because the agreement transfers effective control over and risk related to the accounts receivable to the SPE. We have no continuing involvement in the transferred accounts receivable, other than collection and administrative responsibilities and, once sold, the accounts receivable are no longer available to satisfy our creditors. On July 6, 2020, we sold $87 million of our accounts receivable and repaid $87 million of borrowings from the accounts receivable securitization facility. These sales were transacted at 100% of the face value of the relevant accounts receivable. We de-recognized $595 million of accounts receivable under this agreement through December 31, 2020. Unsold accounts receivable of $51 million were pledged by the SPE as collateral to the Purchasers as of December 31, 2020.

- ***European Factoring Agreement***

We also have a factoring agreement in Europe with a 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 $201 million and $257 million of accounts receivable through December 31, 2020 and 2019, respectively.

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, 2020.

See Note 12 - Debt in the accompanying consolidated financial statements for further information.

Guarantor Financial Information

The Senior Notes were issued by Celanese US ("Issuer") and are guaranteed by Celanese Corporation ("Parent Guarantor") and the Subsidiary Guarantors (collectively the "Obligor Group"). See Note 12 - Debt in the accompanying consolidated financial statements for further information. The Issuer and Subsidiary Guarantors are 100% owned subsidiaries of the Parent Guarantor. The Parent Guarantor and Subsidiary Guarantors represent substantially all of the Company's US assets and business operations. The Subsidiary Guarantors are listed in Exhibit 22.1 to this Annual Report.

The Parent Guarantor and the Subsidiary Guarantors have guaranteed the Senior Notes on a full and unconditional, joint and several, senior unsecured basis. The guarantees are subject to certain customary release provisions, including that a Subsidiary Guarantor will be released from its respective guarantee in specified circumstances, including (i) the sale or transfer of all of its assets or capital stock; (ii) its merger or consolidation with, or transfer of all or substantially all of its assets to, another person; or (iii) its ceasing to be a majority-owned subsidiary of the Issuer in connection with any sale of its capital stock or other transaction. Additionally, a Subsidiary Guarantor will be released from its guarantee of the Senior Notes at such time that it ceases to guarantee the Issuer's obligations under the Credit Agreement (subject to the satisfaction of customary document delivery requirements). The obligations of the Subsidiary Guarantors under their guarantees are limited as necessary to prevent such guarantees from constituting a fraudulent conveyance or fraudulent transfer under applicable law.

The Parent Guarantor and the Issuer are holding companies that conduct substantially all of their operations through their subsidiaries, which own substantially all of our consolidated assets. The Parent Guarantor has no material assets other than the stock of its immediate 100% owned subsidiary, the Issuer. The principal source of cash to pay the Parent Guarantor's and the Issuer's obligations, including obligations under the Senior Notes and the guarantee of the Issuer's obligations under the Credit Agreement, is the cash that our subsidiaries generate from their operations. Each of the Subsidiary Guarantors and our non-guarantor subsidiaries is a distinct legal entity and, under certain circumstances, applicable country or state laws, regulatory limitations and terms of other debt instruments may limit our subsidiaries' ability to distribute cash to the Issuer and the Parent Guarantor. While the Credit Agreement and the Indentures generally limit the ability of our subsidiaries to restrict payment of dividends or other distributions to us, these limitations are subject to certain qualifications and exceptions, which may have the effect of significantly limiting the applicability of those restrictions.

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. While the non-guarantor subsidiaries do not guarantee the Issuer's obligations under our outstanding debt, 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 Senior Notes, Credit Agreement, the Company's other outstanding debt, Common Stock dividends and Common Stock repurchases.

The summarized financial information of the Obligor Group is presented below on a combined basis after the elimination of: (i) intercompany transactions among such entities and (ii) equity in earnings from and investments in the non-guarantor subsidiaries. Transactions with, and amounts due to or from, non-guarantor subsidiaries and affiliates are separately disclosed.

	Year Ended December 31, 2020
	(In $ millions)
Net sales to third parties	1,264
Net sales to non-guarantor subsidiaries	868
Total net sales	2,132
Gross profit	355
Earnings (loss) from continuing operations	1,530
Net earnings (loss)	1,524
Net earnings (loss) attributable to the Obligor Group	1,524

	As of December 31,	
	2020	2019
	(In $ millions)	
Receivables from non-guarantor subsidiaries	318	391
Other current assets	1,597	580
Total current assets	1,915	971
Goodwill	399	399
Other noncurrent assets	3,519	1,972
Total noncurrent assets	3,918	2,371
Current liabilities due to non-guarantor subsidiaries	1,206	468
Current liabilities due to affiliates	58	78
Other current liabilities	958	772
Total current liabilities	2,222	1,318
Noncurrent liabilities due to non-guarantor subsidiaries	1,593	316
Other noncurrent liabilities	3,648	3,814
Total noncurrent liabilities	5,241	4,130

Share Capital

On January 28, 2021, we declared a quarterly cash dividend of $0.68 per share on our Common Stock amounting to $78 million. The cash dividend will be paid on February 23, 2021 to holders of record as of February 9, 2021.

Our Board of Directors has authorized the aggregate repurchase of $5.9 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, 2020, we repurchased shares of our Common Stock at an aggregate cost of $650 million. As of December 31, 2020, we had $1.1 billion remaining under authorizations by our Board of Directors.

See Note 15 - 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, 2020:

	Total	Payments due by period			
		Less Than 1 Year	Years 2 & 3	Years 4 & 5	After 5 Years
	(In $ millions)				
Fixed Contractual Debt Obligations					
Senior notes	3,296	400	1,419	867	610
Interest payments on debt and other obligations	341 (1)	90	123	57	71
Finance lease obligations	201	30	48	39	84
Other debt	239 (2)	66	3	88	82
Total	4,077	586	1,593	1,051	847
Operating leases	280	41	68	46	125
Uncertain tax positions, including interest and penalties	240	—	—	—	240 (3)
Unconditional purchase obligations	3,355 (4)	355	646	544	1,810
Pension and other postretirement funding obligations	447	47	94	90	216
Environmental and asset retirement obligations	84	21	25	11	27
Total	8,483	1,050	2,426	1,742	3,265

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(1) Future interest expense is calculated using the rate in effect on December 31, 2020.

(2) Other debt is primarily made up of fixed rate pollution control and industrial revenue bonds, short-term borrowings from affiliated companies 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, 2020, we have standby letters of credit of $21 million and bank guarantees of $23 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 12 - Debt in the accompanying consolidated financial statements for a description of the guarantees under our Senior Notes and Credit Agreement.

See Note 21 - 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 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. We may elect to bypass the qualitative assessment for some or all of our reporting units or other indefinite-lived intangible assets and proceed directly to a quantitative analysis depending on the facts and circumstances.

In performing a quantitative analysis of goodwill, recoverability of goodwill for each reporting unit is measured using a discounted cash flow model incorporating discount rates commensurate with the risks involved. 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.

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. 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, growth rates and sales projections are the assumptions most sensitive and susceptible to change as they require significant management judgment.

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 9 - Goodwill and Intangible Assets, Net 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 13 - Benefit Obligations 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 17 - 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 19 - 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 $52 million and $19 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.

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, 2020	June 30, 2020	September 30, 2020	December 31, 2020
	(Unaudited) (In $ millions, except per share data)			
Net sales	1,460	1,193	1,411	1,591
Gross profit	348	242	327	376
Other (charges) gains, net	(6)	(21)	(10)	(2)
Operating profit (loss)	194	83	184	203
Gain (loss) on sale of investments in affiliates	—	—	—	1,408
Earnings (loss) from continuing operations before tax	292	147	241	1,571
Amounts attributable to Celanese Corporation				
Earnings (loss) from continuing operations	225	110	209	1,453
Earnings (loss) from discontinued operations	(7)	(3)	(2)	—
Net earnings (loss)	218	107	207	1,453
Earnings (loss) per common share - basic				
Continuing operations	1.89	0.93	1.77	12.56
Net earnings (loss)	1.83	0.90	1.75	12.56
Earnings (loss) per common share - diluted				
Continuing operations	1.88	0.93	1.76	12.50
Net earnings (loss)	1.82	0.90	1.75	12.50

	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

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. Based on that evaluation, as of December 31, 2020, 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, 2020, 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, 2020. 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 64.

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 "Governance," "Stock Ownership Information" and "Questions and Answers" sections of the Company's definitive proxy statement for the 2021 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 "2021 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 "Governance – Director Compensation" and "Executive Compensation" sections of the 2021 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 "Stock Ownership Information" section of the 2021 Proxy Statement.

Equity Compensation Plans

Securities Authorized for Issuance Under Equity Compensation Plans

The following information is provided as of December 31, 2020 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	839,195 (1)	$ — (2)	19,062,342 (3)

(1) Includes 342,405 restricted stock units ("RSUs") granted under the Celanese Corporation 2009 Global Incentive Plan, as amended and restated April 19, 2012 and February 9, 2017 (the "2009 Plan"), and 496,790 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 1,013,186. Also includes 51,682 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) There were no outstanding options under the 2009 Plan or the 2018 Plan as of December 31, 2020.

(3) 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, 2020, an aggregate of 5,427,265 shares were available for future issuance under the 2018 Plan and 13,635,077 shares of our Common Stock were available for future issuance under the ESPP. As of December 31, 2020, 364,923 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 "Governance" section of the 2021 Proxy Statement.

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

The information required by this Item 14 is incorporated herein by reference from the "Audit Matters" section of the 2021 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 64 of this Annual Report.

2. *Financial Statement Schedules.*

The financial statement schedules required by this item, if any, are included as Exhibits to this Annual Report.

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	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).
4.6	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).
4.7	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).
4.8	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).
4.9	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).
4.10*	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 party 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‡	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).
10.2(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).
10.2(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).
10.2(c)‡	Amendment Number Three to the Celanese Corporation 2008 Deferred Compensation Plan dated October 31, 2019 (incorporated by reference to Exhibit 10.4(c) to the Annual Report on Form 10-K filed with the SEC on February 6, 2020).
10.2(d)‡	Amendment Number Four to the Celanese Corporation Deferred Compensation Plan dated February 5, 2020 (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q filed with the SEC on April 28, 2020).
10.2(e)*‡	Amendment Number Five to the Celanese Corporation Deferred Compensation Plan dated December 28, 2020.
10.3‡	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).
10.4‡	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).
10.4(a)‡	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).

Exhibit Number	Description
10.4(b)‡	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).
10.5‡	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).
10.6(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).
10.6(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).
10.6(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).
10.6(d)‡	Form of Amendment Agreement to the 2019 Restricted Stock Unit Award Agreements dated February 5, 2020 (incorporated by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q filed with the SEC on April 28, 2020).
10.6(e)‡	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).
10.6(f)‡	Form of 2020 Performance-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 28, 2020).
10.6(g)‡	Form of 2020 Time-Based Restricted Stock Unit Award Agreement (incorporated by reference to Exhibit 10.4 to the Quarterly Report on Form 10-Q filed with the SEC on April 28, 2020).
10.6(h)‡	Form of 2020 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 29, 2020).
10.7(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).
10.7(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).
10.7(c)‡	Executive Severance Benefits Plan, amended effective February 5, 2020 (incorporated by reference to Exhibit 10.5 to the Quarterly Report on Form 10-Q filed with the SEC on April 28, 2020).
10.8(a)‡	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).
10.8(b)‡	Amended and Restated Offer Letter, dated February 5, 2020, between Celanese Corporation and Lori J. Ryerkerk (incorporated by reference to Exhibit 10.6 to the Quarterly Report on Form 10-Q filed with the SEC on April 28, 2020).
10.9(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).
10.9(b)‡	Form of Amended and Restated Change in Control Agreement between Celanese Corporation and Lori J. Ryerkerk (incorporated by reference to Exhibit 10.7 to the Quarterly Report on Form 10-Q filed with the SEC on April 28, 2020).
10.9(c)‡	Form of Amended and Restated 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 10.8 to the Quarterly Report on Form 10-Q filed with the SEC on April 28, 2020).
10.9(c).1*‡	Amended Schedule of Participants to Form of Non-CEO Amended and Restated Change in Control Agreement
10.10‡	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).
10.11‡	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 (File No. 001-32410) filed with the SEC on February 6, 2015).

Exhibit Number	Description
10.11(a)*‡	Amendment Number One to the Celanese Americas Supplemental Retirement Savings Plan, as amended and restated effective January 1, 2014, dated December 28, 2020.
10.12‡	Celanese Americas Supplemental Retirement Pension Plan, as amended and restated effective January 1, 2009 (incorporated by reference to Exhibit 10.15 to the Annual Report on Form 10-K filed with the SEC on February 6, 2020).
10.12(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 (incorporated by reference to Exhibit 10.15(a) to the Annual Report on Form 10-K filed with the SEC on February 6, 2020).
10.12(b)‡	Amendment Number Two to the Celanese Americas Supplemental Retirement Pension Plan, as amended and restated effective January 1, 2009, dated as of February 5, 2020 (incorporated by reference to Exhibit 10.9 to the Quarterly Report on Form 10-Q filed with the SEC on April 28, 2020).
10.13	Transaction Agreement, dated July 20, 2020, among Celanese Corporation, Celanese Sales Netherlands B.V., Daicel Corporation and Polyplastics Company Ltd. (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the SEC on July 20, 2020).
10.14*‡	Summary of Non-Employee Director Compensation.
21.1*	List of Subsidiaries of Celanese Corporation.
22.1*	List of Guarantor Subsidiaries.
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.
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, 2020 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:	Chairman of the Board of Directors, Chief Executive Officer and President
Date:	February 11, 2021

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, 2020 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	Chairman of the Board of Directors, Chief Executive Officer and President (Principal Executive Officer)	February 11, 2021
/s/ SCOTT A. RICHARDSON Scott A. Richardson	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 11, 2021
/s/ BENITA M. CASEY Benita M. Casey	Vice President, Finance, Controller and Chief Accounting Officer (Principal Accounting Officer)	February 11, 2021
/s/ JEAN S. BLACKWELL Jean S. Blackwell	Director	February 11, 2021
/s/ WILLIAM M. BROWN William M. Brown	Director	February 11, 2021
/s/ EDWARD G. GALANTE Edward G. Galante	Director	February 11, 2021
/s/ KATHRYN M. HILL Kathryn M. Hill	Director	February 11, 2021

Signature	Title	Date
/s/ DAVID F. HOFFMEISTER David F. Hoffmeister	Director	February 11, 2021
/s/ JAY V. IHLENFELD Jay V. Ihlenfeld	Director	February 11, 2021
/s/ DEBORAH J. KISSIRE Deborah J. Kissire	Director	February 11, 2021
/s/ KIM K.W. RUCKER Kim K.W. Rucker	Director	February 11, 2021
/s/ JOHN K. WULFF John K. Wulff	Director	February 11, 2021

CELANESE CORPORATION AND SUBSIDIARIES
INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

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, 2020 and 2019, 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, 2020, 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, 2020, 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, 2020 and 2019, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2020, 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, 2020 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 2 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 Note 17 to the consolidated financial statements, the Company had $224 million of U.S. foreign tax credit carryforwards, and a related valuation allowance of $224 million, as of December 31, 2020. 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 complex auditor judgment required to evaluate 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 and the use of income tax professionals with specialized skills and knowledge were required in evaluating the Company's related forecast of foreign source taxable income, allocation of overhead and other directly allocable expenses.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls related to the critical audit matter. This included controls related to 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 application of multinational income tax regulations

As discussed in Note 17 to the consolidated financial statements, the Company recorded $247 million of income tax expense for the year ended December 31, 2020. Because of its multinational presence, the Company's effective income tax rate and related income tax attributes are significantly impacted by tax regulations in certain operating locations. As a result, the Company continuously monitors, evaluates, and responds to these impacts.

We identified the evaluation of the Company's ongoing assessment and application of multinational income tax regulations as a critical audit matter. This was due to the complex, subjective and evolving nature of tax regulations, the steps taken by the Company to interpret and respond to changes in the tax environment, and taxing authorities' collective impacts on the Company's consolidated income tax computations. As a result, a high degree of auditor judgment and the use of income tax professionals with specialized skills and knowledge were required to 1) evaluate significant income tax regulations, including changes thereto, 2) assess the application of the taxing authorities' regulations on the Company's business operations, and 3) evaluate the Company's accounting for income taxes pertaining to significant transactions and restructurings.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls related to the critical audit matter. This included controls related to 1) the application of tax regulations, 2) the execution of certain significant transactions and restructurings, and 3) their collective impacts on consolidated 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 significant transactions and restructurings, including reviewing the underlying documentation and evaluating the impact on the Company's global tax rate.

/s/ KPMG LLP

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

Dallas, Texas
February 11, 2021

CELANESE CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS

	Year Ended December 31,		
	2020	2019	2018
	(In $ millions, except share and per share data)		
Net sales	5,655	6,297	7,155
Cost of sales	(4,362)	(4,691)	(5,183)
Gross profit	1,293	1,606	1,972
Selling, general and administrative expenses	(482)	(483)	(546)
Amortization of intangible assets	(22)	(24)	(24)
Research and development expenses	(74)	(67)	(72)
Other (charges) gains, net	(39)	(203)	9
Foreign exchange gain (loss), net	(5)	7	—
Gain (loss) on disposition of businesses and assets, net	(7)	(2)	(5)
Operating profit (loss)	664	834	1,334
Equity in net earnings (loss) of affiliates	134	182	233
Non-operating pension and other postretirement employee benefit (expense) income	17	(20)	(62)
Interest expense	(109)	(115)	(125)
Refinancing expense	—	(4)	(1)
Interest income	6	6	6
Dividend income - equity investments	126	113	117
Gain (loss) on sale of investments in affiliates	1,408	—	—
Other income (expense), net	5	(8)	8
Earnings (loss) from continuing operations before tax	2,251	988	1,510
Income tax (provision) benefit	(247)	(124)	(292)
Earnings (loss) from continuing operations	2,004	864	1,218
Earnings (loss) from operation of discontinued operations	(14)	(8)	(5)
Income tax (provision) benefit from discontinued operations	2	2	—
Earnings (loss) from discontinued operations	(12)	(6)	(5)
Net earnings (loss)	1,992	858	1,213
Net (earnings) loss attributable to noncontrolling interests	(7)	(6)	(6)
Net earnings (loss) attributable to Celanese Corporation	1,985	852	1,207
Amounts attributable to Celanese Corporation			
Earnings (loss) from continuing operations	1,997	858	1,212
Earnings (loss) from discontinued operations	(12)	(6)	(5)
Net earnings (loss)	1,985	852	1,207
Earnings (loss) per common share - basic			
Continuing operations	16.95	6.93	9.03
Discontinued operations	(0.10)	(0.05)	(0.04)
Net earnings (loss) - basic	16.85	6.88	8.99
Earnings (loss) per common share - diluted			
Continuing operations	16.85	6.89	8.95
Discontinued operations	(0.10)	(0.05)	(0.04)
Net earnings (loss) - diluted	16.75	6.84	8.91
Weighted average shares - basic	117,817,445	123,925,697	134,305,269
Weighted average shares - diluted	118,481,376	124,651,759	135,416,858

See the accompanying notes to the consolidated financial statements.

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

	Year Ended December 31,		
	2020	2019	2018
	(In $ millions)		
Net earnings (loss)	1,992	858	1,213
Other comprehensive income (loss), net of tax			
Foreign currency translation	(8)	(16)	(60)
Gain (loss) on cash flow hedges	(18)	(30)	(10)
Pension and postretirement benefits	(2)	(7)	—
Total other comprehensive income (loss), net of tax	(28)	(53)	(70)
Total comprehensive income (loss), net of tax	1,964	805	1,143
Comprehensive (income) loss attributable to noncontrolling interests	(7)	(6)	(6)
Comprehensive income (loss) attributable to Celanese Corporation	1,957	799	1,137

See the accompanying notes to the consolidated financial statements.

CELANESE CORPORATION AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

	As of December 31,	
	2020	2019
	(In $ millions, except share data)	
ASSETS		
Current Assets		
Cash and cash equivalents	955	463
Trade receivables - third party and affiliates	792	850
Non-trade receivables, net	450	331
Inventories	978	1,038
Marketable securities	533	40
Other assets	55	43
Total current assets	3,763	2,765
Investments in affiliates	820	975
Property, plant and equipment (net of accumulated depreciation - 2020: $3,279; 2019: $2,957)	3,939	3,713
Operating lease right-of-use assets	232	203
Deferred income taxes	259	96
Other assets	411	338
Goodwill	1,166	1,074
Intangible assets, net	319	312
Total assets	10,909	9,476
LIABILITIES AND EQUITY		
Current Liabilities		
Short-term borrowings and current installments of long-term debt - third party and affiliates	496	496
Trade payables - third party and affiliates	797	780
Other liabilities	680	461
Income taxes payable	—	17
Total current liabilities	1,973	1,754
Long-term debt, net of unamortized deferred financing costs	3,227	3,409
Deferred income taxes	509	257
Uncertain tax positions	240	165
Benefit obligations	643	589
Operating lease liabilities	208	181
Other liabilities	214	223
Commitments and Contingencies		
Stockholders' Equity		
Preferred stock, $0.01 par value, 100,000,000 shares authorized (2020 and 2019: 0 issued and outstanding)	—	—
Common stock, $0.0001 par value, 400,000,000 shares authorized (2020: 169,402,979 issued and 114,168,464 outstanding; 2019: 168,973,172 issued and 119,555,207 outstanding)	—	—
Treasury stock, at cost (2020: 55,234,515 shares; 2019: 49,417,965 shares)	(4,494)	(3,846)
Additional paid-in capital	257	254
Retained earnings	8,091	6,399
Accumulated other comprehensive income (loss), net	(328)	(300)
Total Celanese Corporation stockholders' equity	3,526	2,507
Noncontrolling interests	369	391
Total equity	3,895	2,898
Total liabilities and equity	10,909	9,476

See the accompanying notes to the consolidated financial statements.

CELANESE CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF EQUITY

	Year Ended December 31,					
	2020		2019		2018	
	Shares	Amount	Shares	Amount	Shares	Amount
	(In $ millions, except share data)					
Common Stock						
Balance as of the beginning of the period	119,555,207	—	128,095,849	—	135,769,256	—
Stock option exercises	—	—	14,045	—	—	—
Purchases of treasury stock	(5,889,073)	—	(9,166,267)	—	(7,935,392)	—
Stock awards	502,330	—	611,580	—	261,985	—
Balance as of the end of the period	114,168,464	—	119,555,207	—	128,095,849	—
Treasury Stock						
Balance as of the beginning of the period	49,417,965	(3,846)	40,323,105	(2,849)	32,387,713	(2,031)
Purchases of treasury stock, including related fees	5,889,073	(650)	9,166,267	(1,000)	7,935,392	(818)
Issuance of treasury stock under stock plans	(72,523)	2	(71,407)	3	—	—
Balance as of the end of the period	55,234,515	(4,494)	49,417,965	(3,846)	40,323,105	(2,849)
Additional Paid-In Capital						
Balance as of the beginning of the period		254		233		175
Stock-based compensation, net of tax		3		22		58
Stock option exercises, net of tax		—		(1)		—
Balance as of the end of the period		257		254		233
Retained Earnings						
Balance as of the beginning of the period		6,399		5,847		4,920
Net earnings (loss) attributable to Celanese Corporation		1,985		852		1,207
Common stock dividends		(293)		(300)		(280)
Balance as of the end of the period		8,091		6,399		5,847
Accumulated Other Comprehensive Income (Loss), Net						
Balance as of the beginning of the period		(300)		(247)		(177)
Other comprehensive income (loss), net of tax		(28)		(53)		(70)
Balance as of the end of the period		(328)		(300)		(247)
Total Celanese Corporation stockholders' equity		3,526		2,507		2,984
Noncontrolling Interests						
Balance as of the beginning of the period		391		395		412
Net earnings (loss) attributable to noncontrolling interests		7		6		6
(Distributions to) contributions from noncontrolling interests		(29)		(10)		(23)
Balance as of the end of the period		369		391		395
Total equity		3,895		2,898		3,379

See the accompanying notes to the consolidated financial statements.

CELANESE CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year Ended December 31,		
	2020	2019	2018
	(In $ millions)		
Operating Activities			
Net earnings (loss)	1,992	858	1,213
Adjustments to reconcile net earnings (loss) to net cash provided by (used in) operating activities			
Asset impairments	31	83	—
Depreciation, amortization and accretion	356	356	349
Pension and postretirement net periodic benefit cost	(99)	(58)	(92)
Pension and postretirement contributions	(48)	(47)	(47)
Actuarial (gain) loss on pension and postretirement plans	96	87	165
Pension curtailments and settlements, net	(1)	—	(1)
Deferred income taxes, net	77	(31)	137
(Gain) loss on disposition of businesses and assets, net	3	3	7
Stock-based compensation	28	48	71
Undistributed earnings in unconsolidated affiliates	13	(14)	(12)
(Gain) loss on sale of investments in affiliates	(1,408)	—	—
Other, net	18	18	26
Operating cash provided by (used in) discontinued operations	5	—	(10)
Changes in operating assets and liabilities			
Trade receivables - third party and affiliates, net	141	165	(48)
Inventories	124	6	(158)
Other assets	60	(9)	(113)
Trade payables - third party and affiliates	(6)	(59)	15
Other liabilities	(39)	48	56
Net cash provided by (used in) operating activities	1,343	1,454	1,558
Investing Activities			
Capital expenditures on property, plant and equipment	(364)	(370)	(337)
Acquisitions, net of cash acquired	(100)	(91)	(144)
Proceeds from sale of businesses and assets, net	21	1	13
Proceeds from sale of investments in affiliates	1,575	—	—
Proceeds from sale of marketable securities	43	—	—
Purchases of marketable securities	(544)	(16)	—
Other, net	(39)	(17)	(39)
Net cash provided by (used in) investing activities	592	(493)	(507)
Financing Activities			
Net change in short-term borrowings with maturities of 3 months or less	(287)	247	(38)
Proceeds from short-term borrowings	311	117	51
Repayments of short-term borrowings	(466)	(91)	(78)
Proceeds from long-term debt	—	499	561
Repayments of long-term debt	(30)	(360)	(536)
Purchases of treasury stock, including related fees	(650)	(996)	(805)
Stock option exercises	—	(1)	—
Common stock dividends	(293)	(300)	(280)
(Distributions to) contributions from noncontrolling interests	(29)	(10)	(23)
Other, net	(27)	(40)	(17)
Net cash provided by (used in) financing activities	(1,471)	(935)	(1,165)
Exchange rate effects on cash and cash equivalents	28	(2)	(23)
Net increase (decrease) in cash and cash equivalents	492	24	(137)
Cash and cash equivalents as of beginning of period	463	439	576
Cash and cash equivalents as of end of period	955	463	439

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.

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. Recoverability of the carrying amount of goodwill is measured at the reporting unit level. 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.

When assessing the recoverability of goodwill and other indefinite-lived intangible assets, the Company may first assess qualitative factors in determining whether it is more likely than not that the fair value of a reporting unit, including goodwill, or an 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. The Company may elect to bypass this qualitative assessment for some or all of its reporting units or other indefinite-lived intangible assets 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.

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 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.

Outside of the US, a similar approach of discounting pension and other postretirement benefit plan liabilities is used based on the high quality corporate bonds available in each market. There are some exceptions to this methodology, namely in locations where there is a sparse corporate bond market, and in such cases the discount rate takes into account yields of government bonds at the appropriate duration.

- ***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 approximately 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.

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.

Variable Interest Entities

The Company assesses whether it has a variable interest in legal entities in which it has a financial relationship and, if so, whether or not those entities are variable interest entities ("VIEs"). A VIE is an entity with insufficient equity at risk for the entity to finance its activities without additional subordinated financial support or in which equity investors lack the characteristics of a controlling financial interest. If an entity is determined to be a VIE, the Company evaluates whether the Company is the primary beneficiary. The primary beneficiary analysis is a qualitative analysis based on power and economics. The Company concludes that it is the primary beneficiary and consolidates the VIE if the Company has both (i) the power to direct the activities of the VIE that most significantly influence the VIE's economic performance, and (ii) the obligation to absorb losses of, or the right to receive benefits from, the VIE that could potentially be significant to the VIE.

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. Fairway is a VIE in which the Company is the primary beneficiary. 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. As of December 31, 2020 and 2019, the carrying amount of the total assets associated with Fairway included in the consolidated balance sheets were $666 million and $722 million, respectively, made up primarily of $592 million and $622 million, respectively, of property, plant and equipment.

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, 2020 and 2019 were $267 million and $113 million, respectively, related primarily to the recovery of capital expenditures for certain property, plant and equipment.

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.

Marketable Securities

Marketable securities represent equity securities with readily determinable fair values and are accounted for at fair value. All gains and losses on investments in equity securities are recognized in the consolidated statements of operations.

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 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.

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.

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.

Loss Contingencies

When determinable, the Company accrues a liability for loss contingencies deemed probable of occurring for which an amount can be reasonably estimated. For certain potentially material loss contingencies, 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 often occurs well 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 may 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.

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, which are reassessed each reporting period, 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 10).

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, 2020, the Company had $703 million of remaining performance obligations related to take-or-pay contracts. The Company expects to recognize approximately $275 million of its remaining performance obligations as Net sales in 2021, $188 million in 2022, $115 million in 2023 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 11).

The Company does not have any material contract assets as of December 31, 2020.

Research and Development

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

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.

The Company adopted ASU (defined below) 2016-02, *Leases* on January 1, 2019, using the modified retrospective application.

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 Accounting Standard Updates ("ASU") issued by the Financial Accounting Standards Board ("FASB"):

Standard	Description	Effective Date	Effect on the Financial Statements or Other Significant Matters
In March 2020, the FASB issued ASU 2020-04, *Facilitation of the Effects of Reference Rate Reform on Financial Reporting*.	The new guidance provides optional expedients and exceptions for applying US GAAP to contracts, hedging relationships and other transactions affected by reference rate reform if certain criteria are met. The guidance applies only to contracts, hedging relationships and other transactions that reference LIBOR or another reference rate expected to be discontinued because of reference rate reform.	March 12, 2020 through December 31, 2022.	The Company has completed its assessment, and the adoption of the new guidance did not have a material impact to the Company.
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 Topic 740, Income Taxes ("Topic 740"). The guidance also clarifies and amends existing guidance under Topic 740.	January 1, 2021.	The Company adopted the new guidance effective January 1, 2021. The adoption of the new guidance did not have a material impact to the Company.

4. Acquisitions, Dispositions and Plant Closures

Plant Closures

- ***European Compounding Center of Excellence***

In July 2020, the Company announced that it is establishing a European Compounding Center of Excellence at its Forli, Italy facility, which includes the intended consolidation of its compounding operations in Kaiserslautern, Germany; Wehr, Germany; and Ferrara Marconi, Italy. These operations are included in the Company's Engineered Materials segment. The Company expects to complete the consolidation of the compounding operations by 2022.

The exit and shutdown costs related to the Forli, Italy consolidation were as follows:

	Year Ended December 31,
	2020
	(In $ millions)
Asset impairments[1]	26
Restructuring[1]	6
Accelerated depreciation expense	2
Total	34

[1] Included in Other (charges) gains, net in the consolidated statements of operations (Note 16).

The Company expects to incur additional exit and shutdown costs related to the Forli, Italy consolidation of approximately $44 million through 2022.

5. Receivables, Net

	As of December 31,	
	2020	2019
	(In $ millions)	
Trade receivables - third party and affiliates	803	859
Allowance for doubtful accounts - third party and affiliates	(11)	(9)
Trade receivables - third party and affiliates, net	792	850

	As of December 31,	
	2020	2019
	(In $ millions)	
Non-income taxes receivable	267	203
Reinsurance receivables	12	16
Income taxes receivable	100	27
Other	71	85
Non-trade receivables, net	450	331

6. Inventories

	As of December 31,	
	2020	2019
	(In $ millions)	
Finished goods	653	718
Work-in-process	74	76
Raw materials and supplies	251	244
Total	978	1,038

7. 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.

On October 9, 2020, the Company completed the sale of its 45% joint venture equity interest in Polyplastics Co., Ltd. ("Polyplastics"), to its joint venture partner Daicel Corporation ("Daicel"), for a purchase price of approximately $1.6 billion in cash. In connection with the transaction, the Company recorded a gain on the sale of its equity interest in Polyplastics of $1.4 billion to Gain (loss) on sale of investments in affiliates in the consolidated statements of operations and income tax expense, net, of approximately $254 million during the three months ended December 31, 2020. The gain on the sale of the Company's equity interest in Polyplastics was included in its Engineered Materials segment.

In addition to the sale of the Company's 45% equity interest in Polyplastics, the agreement provides for the amendment of certain supply agreements and the execution of certain intellectual property licenses between Celanese, certain of its affiliates and Polyplastics and Daicel, as applicable, as well as the termination of certain agreements and a mutual release of liabilities under such terminated agreements.

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,		
	2020	2019	2020	2019	2020	2019	2018	2020	2019	2018
	(In percentages)		(In $ millions)							
Engineered Materials										
Ibn Sina	25	25	172	164	37	68	96	(29)	(69)	(112)
InfraServ GmbH & Co. Hoechst KG[(1)(2)]	31	31	124	116	18	14	20	(18)	(17)	(25)
Fortron Industries LLC	50	50	136	133	12	18	14	(9)	(7)	(3)
Korea Engineering Plastics Co., Ltd.	50	50	153	146	19	27	29	(23)	(28)	(27)
Polyplastics Co., Ltd.	—	45	—	192	34	44	64	(58)	(39)	(45)
Other Activities[(2)]										
InfraServ GmbH & Co. Gendorf KG	30	30	47	38	11	8	7	(7)	(5)	(5)
YNCORIS GmbH & Co. KG[(3)]	22	22	17	16	3	3	3	(3)	(3)	(4)
Total			649	805	134	182	233	(147)	(168)	(221)

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(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) 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.

(3) 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,	
	2020	2019
	(In $ millions)	
Current assets	244	253
Noncurrent assets	817	871
Current liabilities	201	148
Noncurrent liabilities	372	433

	Twelve Months Ended September 30,		
	2020	2019	2018
	(In $ millions)		
Revenues	625	726	913
Gross profit	187	299	396
Net income	118	227	322

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,		
	2020	2019	2020	2019	2020	2019	2018
	(In percentages)		(In $ millions)				
Acetate Tow							
Kunming Cellulose Fibers Co. Ltd.	30	30	14	14	11	11	12
Nantong Cellulose Fibers Co. Ltd.	31	31	121	121	91	79	87
Zhuhai Cellulose Fibers Co. Ltd.	30	30	30	30	24	22	13
Other Activities							
InfraServ GmbH & Co. Wiesbaden KG	8	8	6	5	—	1	1
Other			—	—	—	—	4
Total			171	170	126	113	117

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,		
	2020	2019	2018
	(In $ millions)		
Purchases	249	291	305
Sales and other credits	42	102	117
Interest expense	—	1	1

	As of December 31,	
	2020	2019
	(In $ millions)	
Trade receivables	—	1
Non-trade receivables	22	35
Total due from affiliates	22	36
Short-term borrowings[(1)]	58	67
Trade payables	38	43
Current Other liabilities	9	10
Total due to affiliates	105	120

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(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.

8. Property, Plant and Equipment, Net

	As of December 31,	
	2020	2019
	(In $ millions)	
Land	53	46
Land improvements	79	78
Buildings and building improvements	826	775
Machinery and equipment	5,768	5,316
Construction in progress	492	455
Gross asset value	7,218	6,670
Accumulated depreciation	(3,279)	(2,957)
Net book value	3,939	3,713

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

	As of December 31,	
	2020	2019
	(In $ millions)	
Buildings	14	13
Machinery and equipment	365	272
Accumulated depreciation	(231)	(202)
Net book value	148	83

Capitalized interest costs and depreciation expense are as follows:

	Year Ended December 31,		
	2020	2019	2018
	(In $ millions)		
Capitalized interest	8	8	10
Depreciation expense	327	327	319

During 2020 and 2019, certain long-lived assets were impaired (Note 16). No long-lived assets were impaired during 2018.

9. Goodwill and Intangible Assets, Net

Goodwill

	Engineered Materials	Acetate Tow	Acetyl Chain	Total
	(In $ millions)			
As of December 31, 2018	707	148	202	1,057
Acquisitions	29 (1)	—	—	29
Exchange rate changes	(9)	—	(3)	(12)
As of December 31, 2019	727	148	199	1,074
Acquisitions	—	—	30 (2)	30
Exchange rate changes	41	1	20	62
As of December 31, 2020[3]	768	149	249	1,166

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(1) Represents goodwill related to the acquisition of Next Polymers Ltd. ("Next Polymers").

(2) Represents goodwill related to the acquisition of Nouryon's redispersible polymer powders business offered under the Elotex® brand ("Elotex").

(3) There were no accumulated impairment losses as of December 31, 2020.

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, 2020, 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, 2020 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, 2018	42	651	44	56	793
Acquisitions	—	25	—	—	25 [1]
Exchange rate changes	—	(9)	—	—	(9)
As of December 31, 2019	42	667	44	56	809
Acquisitions	—	16	—	—	16 [2]
Exchange rate changes	2	41	1	—	44
As of December 31, 2020	44	724	45	56	869
Accumulated Amortization					
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)
Amortization	(1)	(17)	(3)	(1)	(22)
Exchange rate changes	(2)	(34)	(2)	—	(38)
As of December 31, 2020	(38)	(555)	(40)	(39)	(672)
Net book value	6	169	5	17	197

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(1) Related to intangible assets acquired from Next Polymers with a weighted average amortization period of 13 years.

(2) Related to intangible assets acquired from Elotex with a weighted average amortization period of 14 years.

Indefinite-lived intangible assets are as follows:

	Trademarks and Trade Names
	(In $ millions)
As of December 31, 2018	112
Acquisitions	4 [1]
Exchange rate changes	(1)
As of December 31, 2019	115
Acquisitions	2 [2]
Impairment loss (Note 2)	(1)
Exchange rate changes	6
As of December 31, 2020	122

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

(2) Related to indefinite-lived intangible assets acquired from Elotex.

In connection with the Company's annual indefinite-lived intangible assets impairment assessment (Note 2), the Company recorded an impairment loss of $1 million in Other charges (gains), net (Note 16) to write-off the total net book value of a trade name included in the Engineered Materials segment. Other than this trade name, the estimated fair value for each of the Company's other indefinite-lived intangible assets exceeded the carrying value of the underlying asset by a substantial margin. No events or changes in circumstances occurred during the three months ended December 31, 2020 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, 2020, the Company did not renew or extend any intangible assets.

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

	(In $ millions)
2021	23
2022	22
2023	19
2024	18
2025	18

10. Current Other Liabilities

	As of December 31,	
	2020	2019
	(In $ millions)	
Asset retirement obligations	10	6
Benefit obligations (Note 13)	27	28
Customer rebates	53	63
Derivatives (Note 19)	87	8
Environmental (Note 14)	11	12
Insurance	5	6
Interest	29	29
Legal (Note 21)	107	105
Operating leases (Note 18)	36	29
Restructuring (Note 16)	11	13
Salaries and benefits	121	89
Sales and use tax/foreign withholding tax payable	140	35
Other	43	38
Total	680	461

11. Noncurrent Other Liabilities

	As of December 31,	
	2020	2019
	(In $ millions)	
Asset retirement obligations	10	13
Deferred proceeds	47	43
Deferred revenue	4	6
Derivatives (Note 19)	34	50
Environmental (Note 14)	58	49
Insurance	33	34
Other	28	28
Total	214	223

12. Debt

	As of December 31,	
	2020	2019
	(In $ millions)	
Short-Term Borrowings and Current Installments of Long-Term Debt - Third Party and Affiliates		
Current installments of long-term debt	431	28
Short-term borrowings, including amounts due to affiliates[(1)]	65	81
Revolving credit facility[(2)]	—	272
Accounts receivable securitization facility[(3)]	—	115
Total	496	496

(1) The weighted average interest rate was 0.6% and 2.3% as of December 31, 2020 and 2019, respectively. During the year ended December 31, 2020, the Company entered into an aggregate of $300 million in short-term, bilateral term loans, which were repaid during the same period.

(2) The weighted average interest rate was 0.0% and 1.6% as of December 31, 2020 and 2019, respectively.

(3) The weighted average interest rate was 0.0% and 2.4% as of December 31, 2020 and 2019, respectively.

	As of December 31,	
	2020	2019
	(In $ millions)	
Long-Term Debt		
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%	919	841
Senior unsecured notes due 2024, interest rate of 3.500%	499	499
Senior unsecured notes due 2025, interest rate of 1.250%	368	337
Senior unsecured notes due 2027, interest rate of 2.125%	610	558
Pollution control and industrial revenue bonds due at various dates through 2030, interest rates ranging from 4.05% to 5.00%	166	167
Bank loans due at various dates through 2026[1]	8	9
Obligations under finance leases due at various dates through 2054	201	144
Subtotal	3,671	3,455
Unamortized debt issuance costs[2]	(13)	(18)
Current installments of long-term debt	(431)	(28)
Total	3,227	3,409

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(1) The weighted average interest rate was 1.3% and 1.3% as of December 31, 2020 and 2019, respectively.

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

Senior Credit Facilities

The Company has a 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 domestic subsidiaries together representing substantially all of the Company's US assets and business operations ("the Subsidiary Guarantors"). The Subsidiary Guarantors are listed in Exhibit 22.1 to this Annual Report.

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

	As of December 31, 2020
	(In $ millions)
Revolving Credit Facility	
Borrowings outstanding[1]	—
Available for borrowing[2]	1,250

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(1) The Company borrowed $685 million and repaid $963 million under its senior unsecured revolving credit facility during the year ended December 31, 2020.

(2) The margin for borrowings under the senior unsecured revolving credit facility was 1.5% 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.

In May 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 19 for additional information.

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

	(In $ millions)
2021	496
2022	527
2023	943
2024	541
2025	453
Thereafter	776
Total	3,736

Accounts Receivable Securitization Facility

On July 6, 2020, the Company entered into an amended and restated receivables purchase agreement (the "Amended Receivables Purchase Agreement") under its US accounts receivable securitization facility among certain of the Company's subsidiaries, its wholly-owned, "bankruptcy remote" special purpose subsidiary ("SPE") and certain global financial institutions ("Purchasers"). The Amended Receivables Purchase Agreement extends the term of the securitization facility such that the SPE may sell certain receivables to the Purchasers until July 2, 2021. Under the Amended Receivables Purchase Agreement, transfers of accounts receivable from the SPE are treated as sales and are accounted for as a reduction in accounts receivable because the agreement transfers effective control over and risk related to the accounts receivable to the SPE. The Company and related subsidiaries have no continuing involvement in the transferred accounts receivable, other than collection and administrative responsibilities and, once sold, the accounts receivable are no longer available to satisfy creditors of the Company or the related subsidiaries. On July 6, 2020, the Company sold $87 million of its accounts receivable and repaid $87 million of borrowings from the accounts receivable securitization facility. These sales were transacted at 100% of the face value of the relevant accounts receivable, resulting in derecognition of the accounts receivable from the Company's consolidated balance sheet. The Company de-recognized $595 million of accounts receivable under this agreement through December 31, 2020. Unsold accounts receivable of $51 million were pledged by the SPE as collateral to the Purchasers as of December 31, 2020.

European Factoring Agreement

The Company also has a factoring agreement in Europe with a 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 $201 million and $257 million of accounts receivable under this factoring agreement as of December 31, 2020 and 2019, 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, 2020.

13. 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 2020 unaudited and 2019 audited multiemployer defined benefit plan's financial statements, the plan is 100% funded in 2020, 2019 and 2018. The number of employees covered by the Company's multiemployer defined benefit plan remained relatively stable year over year from 2018 to 2020, 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,		
	2020	2019	2018
	(In $ millions)		
Multiemployer defined benefit plan	9	8	8

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,	
	2020	**2019**
	(In $ millions)	
Postemployment benefits	7	7

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,		
	2020	**2019**	**2018**
		(In $ millions)	
Defined contribution plans	39	42	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,	
	2020	2019	2020	2019
	(In $ millions)			
Change in Projected Benefit Obligation				
Projected benefit obligation as of beginning of period	3,610	3,412	64	59
Service cost	12	9	1	—
Interest cost	85	115	1	2
Net actuarial (gain) loss(1)	275	377	—	8
Acquisitions(2)	42	—	—	—
Settlements	(7)	(3)	—	—
Benefits paid	(230)	(230)	(5)	(5)
Curtailments	—	—	(1)	—
Special termination benefits	1	1	—	—
Exchange rate changes	59	(3)	1	—
Other(3)	—	(68)	—	—
Projected benefit obligation as of end of period	3,847	3,610	61	64
Change in Plan Assets				
Fair value of plan assets as of beginning of period	3,141	2,915	—	—
Actual return on plan assets	380	467	—	—
Employer contributions	43	42	5	5
Acquisitions(2)	30	—	—	—
Settlements	(7)	(3)	—	—
Benefits paid(4)	(230)	(230)	(5)	(5)
Other(3)	—	(52)	—	—
Exchange rate changes	31	2	—	—
Fair value of plan assets as of end of period	3,388	3,141	—	—
Funded status as of end of period	(459)	(469)	(61)	(64)
Amounts Recognized in the Consolidated Balance Sheets Consist of:				
Noncurrent Other assets	142	77	—	—
Current Other liabilities	(22)	(23)	(4)	(4)
Benefit obligations	(579)	(523)	(57)	(60)
Net amount recognized	(459)	(469)	(61)	(64)
Amounts Recognized in Accumulated Other Comprehensive Income Consist of:				
Net actuarial (gain) loss(5)	17	15	—	—
Prior service (benefit) cost	—	—	(1)	(1)
Net amount recognized(6)	17	15	(1)	(1)

(1) Primarily relates to changes in discount rates.

(2) Represents plan obligations and assets related to the Elotex acquisition.

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

(4) Includes benefit payments to nonqualified pension plans of $21 million and $21 million as of December 31, 2020 and 2019, respectively.

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

(6) Amount shown net of an income tax benefit of $4 million and $4 million as of December 31, 2020 and 2019, respectively, in the consolidated statements of equity (Note 15).

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,	
	2020	2019	2020	2019
	(In percentages)			
US plans	78	81	50	55
International plans	22	19	50	45
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,	
	2020	2019
	(In percentages)	
US plans	85	87
International plans	15	13
Total	100	100

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

	As of December 31,	
	2020	2019
	(In $ millions)	
Projected benefit obligation	913	881
Fair value of plan assets	311	337

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

	As of December 31,	
	2020	2019
	(In $ millions)	
Accumulated benefit obligation	888	776
Fair value of plan assets	311	255

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

	As of December 31,	
	2020	2019
	(In $ millions)	
Accumulated postretirement benefit obligation	61	64

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

	As of December 31,	
	2020	2019
	(In $ millions)	
Accumulated benefit obligation	3,819	3,584

The components of net periodic benefit cost are as follows:

	Pension Benefits Year Ended December 31,			Postretirement Benefits Year Ended December 31,		
	2020	2019	2018	2020	2019	2018
	(In $ millions)					
Service cost	12	9	9	1	—	1
Interest cost	85	115	104	1	2	2
Expected return on plan assets	(199)	(185)	(210)	—	—	—
Recognized actuarial (gain) loss	97	79	169	(1)	8	(4)
Curtailment (gain) loss	—	—	(1)	(1)	—	—
Special termination benefit	1	1	2	—	—	—
Total	(4)	19	73	—	10	(1)

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

	As of December 31,	
	2020	2019
	(In $ millions)	
Nonqualified Trust Assets		
Marketable securities	17	24
Noncurrent Other assets, consisting of insurance contracts	30	35
Nonqualified Pension Obligations		
Current Other liabilities	20	20
Benefit obligations	221	219

(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,		
	2020	2019	2018
	(In $ millions)		
Total	23	26	(3)

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,	
	2020	2019	2020	2019
	(In percentages)			
Discount Rate Obligations				
US plans	2.4	3.2	2.2	3.1
International plans	1.0	1.4	1.9	2.7
Combined	2.1	2.8	2.1	2.9
Rate of Compensation Increase				
US plans	N/A	N/A		
International plans	2.5	2.6		
Combined	2.5	2.6		

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,		
	2020	2019	2018	2020	2019	2018
	(In percentages)					
Discount Rate Obligations						
US plans	3.2	4.2	3.5	3.1	4.1	3.4
International plans	1.4	2.1	2.1	2.7	3.4	3.2
Combined	2.8	3.8	3.3	2.9	3.8	3.2
Discount Rate Service Cost						
US plans	1.9	3.1	1.9	3.8	4.6	3.7
International plans	1.8	2.5	2.3	2.7	3.4	3.3
Combined	1.8	2.5	2.2	2.7	3.4	2.9
Discount Rate Interest Cost						
US plans	2.8	3.9	3.1	2.6	3.8	3.0
International plans	1.1	1.8	1.7	2.5	3.2	2.9
Combined	2.4	3.5	2.9	2.6	3.5	2.9
Expected Return on Plan Assets						
US plans	6.7	6.7	6.8			
International plans	5.1	5.6	5.9			
Combined	6.5	6.5	6.7			
Rate of Compensation Increase						
US plans	N/A	N/A	N/A			
International plans	2.6	2.8	2.8			
Combined	2.6	2.8	2.8			
Interest Crediting Rate						
US plans	2.1	3.0	2.8			
International plans	N/A	N/A	N/A			
Combined	2.1	3.0	2.8			

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,		
	2020	2019	2018
	(In percentages, except year)		
Health care cost trend rate assumed for next year	7.5	8.0	8.5
Health care cost trend ultimate rate	5.0	5.0	5.0
Health care cost trend ultimate rate year	2031	2026	2026

Plan Assets

The weighted average target asset allocations for the Company's pension plans in 2020 are as follows:

	US Plans	International Plans
	(In percentages)	
Bonds - domestic to plans	80	57
Equities - domestic to plans	10	16
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, 2020 was 13.5% 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 2021 net periodic benefit cost is 6.5% 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,					
	2020	2019	2020	2019	2020	2019
	(In $ millions)					
Assets						
Cash and cash equivalents	10	8	—	—	10	8
Derivatives						
Swaps	—	—	3	7	3	7
Equity securities						
International companies	82	77	—	—	82	77
Fixed income						
Corporate debt	—	—	890	762	890	762
Treasuries, other debt	17	35	1,447	1,403	1,464	1,438
Mortgage backed securities	—	—	16	15	16	15
Insurance contracts	—	—	63	47	63	47
Other	4	4	6	1	10	5
Total investments, at fair value[(1)]	113	124	2,425	2,235	2,538	2,359
Liabilities						
Derivatives						
Swaps	—	—	3	7	3	7
Total liabilities	—	—	3	7	3	7
Total net assets[(2)]	113	124	2,422	2,228	2,535	2,352

(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, 2020 excludes investments in common/collective trusts, registered investment companies and short-term investment funds with fair values of $732 million, $71 million and $45 million, respectively. 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.

(2) Total net assets excludes non-financial plan receivables and payables of $72 million and $67 million, respectively, as of December 31, 2020 and $29 million and $26 million, respectively, as of December 31, 2019. Non-financial items include due to/from broker, interest receivables and accrued expenses.

Benefit obligation funding is as follows:

	Total Expected 2021
	(In $ millions)
Cash contributions to defined benefit pension plans	23
Benefit payments to nonqualified pension plans	20
Benefit payments to other postretirement benefit plans	4

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)	
2021	236	4
2022	228	4
2023	226	4
2024	222	3
2025	218	3
2026-2030	1,027	15

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[1] Payments are expected to be made primarily from plan assets.

[2] Payments are expected to be made primarily from Company assets.

14. 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,	
	2020	2019
	(In $ millions)	
Demerger obligations (Note 21)	29	23
Divestiture obligations (Note 21)	15	12
Active sites	12	13
US Superfund sites	11	11
Other environmental remediation liabilities	2	2
Total	69	61

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 21). 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 2020 or have any receivables for insurance recoveries related to these matters as of December 31, 2020.

German InfraServ Entities

The Company's InfraServ Entities (Note 7) 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 21). 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, 2020		
	Ownership	**Liability**	**Reserves[1]**
	(In percentages)		**(In $ millions)**
InfraServ GmbH & Co. Gendorf KG	30	10	11
InfraServ GmbH & Co. Hoechst KG	31	40	76
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. In June 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.

15. 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, par value $0.0001 per share ("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.

On January 28, 2021, the Company declared a quarterly cash dividend of $0.68 per share on its Common Stock amounting to $78 million. The cash dividend will be paid on February 23, 2021 to holders of record as of February 9, 2021.

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, 2020
	2020	2019	2018	
Shares repurchased	5,889,073	9,166,267	7,933,692 [1]	62,768,051
Average purchase price per share	$ 110.41	$ 109.10	$ 103.01	$ 76.52
Amount spent on repurchased shares (in millions)	$ 650	$ 1,000	$ 817	$ 4,803
Aggregate Board of Directors repurchase authorizations during the period (in millions)	$ 500	$ 1,500	$ —	$ 5,866

(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,								
	2020			2019			2018		
	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)								
Foreign currency translation	(4)	(4)	(8)	(10)	(6)	(16)	(65)	5	(60)
Gain (loss) on cash flow hedges	(26)	8	(18)	(38)	8	(30)	(12)	2	(10)
Pension and postretirement benefits	(2)	—	(2)	(6)	(1)	(7)	1	(1)	—
Total	(32)	4	(28)	(54)	1	(53)	(76)	6	(70)

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

	Foreign Currency Translation Gain (Loss)	Gain (Loss) on Cash Flow Hedges (Note 19)	Pension and Postretirement Benefits Gain (Loss) (Note 13)	Accumulated Other Comprehensive Income (Loss), Net
	(In $ millions)			
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)
Other comprehensive income (loss) before reclassifications	(4)	(28)	(2)	(34)
Amounts reclassified from accumulated other comprehensive income (loss)	—	2	—	2
Income tax (provision) benefit	(4)	8	—	4
As of December 31, 2020	(260)	(56)	(12)	(328)

16. Other (Charges) Gains, Net

	Year Ended December 31,		
	2020	2019	2018
	(In $ millions)		
Restructuring (Note 4)	(20)	(23)	(4)
Asset impairments (Note 4)	(31)	(83)	—
Plant/office closures	7	(4)	13
Commercial disputes	6	(4)	—
European Commission investigation	(2)	(89)	—
Other	1	—	—
Total	(39)	(203)	9

2020

During the year ended December 31, 2020, the Company recorded $20 million of employee termination benefits primarily related to Company-wide business optimization projects.

During the year ended December 31, 2020, the Company recorded a $26 million long-lived asset impairment loss related to certain fixed assets used in compounding operations at its facilities in Kaiserslautern, Germany; Wehr, Germany and Ferrara Marconi, Italy (Note 4). In addition, during the year ended December 31, 2020, the Company recorded a $4 million long-lived asset impairment loss related to the closure of its manufacturing operations in Lebanon, Tennessee. The long-lived asset impairment losses were measured at the date of impairment to write-down the related property, plant and equipment to fair value and were included in the Company's Engineered Materials segment.

During the year ended December 31, 2020, the Company recorded a $6 million gain within plant/office closures related to receipt of a non-income tax credit from Nanjing, China, which was included in the Company's Acetyl Chain segment.

During the year ended December 31, 2020, the Company recorded a $6 million gain within commercial disputes, primarily related to the receipt of a settlement claim from a previous acquisition that was included within the Company's Engineered Materials segment.

2019

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

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. 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.

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 of certain past ethylene purchases, which was included within the Other Activities segment (Note 21).

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.

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, 2018	—	2	2	—	4
Additions	10	4	1	9	24
Cash payments	(5)	(3)	(2)	(4)	(14)
Other changes	—	—	(1)	—	(1)
As of December 31, 2019	5	3	—	5	13
Additions	12	—	1	10	23
Cash payments	(7)	(2)	(1)	(12)	(22)
Other changes	(2)	—	—	(1)	(3)
As of December 31, 2020	8	1	—	2	11

17. Income Taxes

In response to COVID-19, various global taxing authorities passed or are considering relief initiatives to aid taxpayers from an effective tax rate or cash flow perspective. On March 27, 2020, the Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act") was enacted in the US in response to the global pandemic. The CARES Act provides numerous tax provisions and other stimulus measures, including temporary changes regarding the prior and future utilization of net operating losses, temporary changes to the prior and future limitations on interest deductions, temporary suspension of certain payment requirements for the employer portion of social security taxes, technical corrections from prior tax legislation for tax depreciation of certain qualified improvement property and the creation of certain refundable employee retention credits. The Company does not currently expect the CARES Act to have a material impact on its tax expense. In Germany, the Company was approved for a deferral of corporate income tax payments for 2020. In December 2020, the US Congress approved an additional relief package that included individual relief payments, enhanced the employee retention credit, extended certain corporate tax credits including the carbon recapture credit, and extended certain sunsetting corporate tax provisions. The Company does not expect the additional relief package to have a material impact on current or future income tax expense. The Company will continue to monitor global legislative and regulatory developments related to COVID-19 and will record the associated tax impacts as discrete events in the periods the guidance is finalized, or the Company is able to estimate an impact.

In December 2017, the Tax Cuts and Jobs Act (the "TCJA") was enacted and was effective January 1, 2018. The US Treasury has issued various final and proposed regulatory packages supplementing the TCJA provisions since 2018, which the Company does not expect to have a material impact on current or future income tax expense. The Company will continue to monitor the 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 or becomes effective.

Income Tax Provision

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

	Year Ended December 31,		
	2020	2019	2018
	(In $ millions)		
US	1,530	252	480
International	721	736	1,030
Total	2,251	988	1,510

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

	Year Ended December 31,		
	2020	2019	2018
	(In $ millions)		
Current			
US	13	(8)	(184)
International	126	149	143
Total	139	141	(41)
Deferred			
US	308	1	314
International	(200)	(18)	19
Total	108	(17)	333
Total	247	124	292

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

	Year Ended December 31,		
	2020	2019	2018
	(In $ millions, except percentages)		
Income tax provision computed at US federal statutory tax rate	473	208	317
Change in valuation allowance	(1)	(47)	94
Equity income and dividends	(54)	(38)	(48)
(Income) expense not resulting in tax impact, net	(46)	(9)	(51)
US tax effect of foreign earnings and dividends	65	85	25
Foreign tax credits	(51)	(76)	(20)
Other foreign tax rate differentials	7	4	17
Legislative changes	1	(3)	(59)
State income taxes, net of federal benefit	4	6	4
Recognition of basis differences in investments in affiliates	(14)	—	—
Asset transfers between wholly owned foreign affiliates	(170)	—	—
Other, net	33	(6)	13
Income tax provision (benefit)	247	124	292
Effective income tax rate	11 %	13 %	19 %

On October 9, 2020, the Company completed the sale of its 45% joint venture equity interest in Polyplastics (see Note 7). The tax gain on this disposal was less than the related gain for financial reporting purposes due to basis differences. In November 2020, the Company relocated certain tangible and intangible assets in response to various geopolitical risks in certain regions in which it operates. The transfer of these assets between wholly owned foreign affiliates in this reorganization generated a deferred tax benefit of approximately $170 million. Included in the Other, net line in the effective income tax rate reconciliation above are charges of approximately $40 million related to changes in uncertain tax positions and impacts of amended tax return filings.

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,	
	2020	2019
	(In $ millions)	
Deferred Tax Assets		
Pension and postretirement obligations	132	140
Accrued expenses	32	57
Inventory	12	11
Net operating loss carryforwards	535	506
Tax credit carryforwards	247	273
Other	322	227
Subtotal	1,280	1,214
Valuation allowance[1]	(748)	(714)
Total	532	500
Deferred Tax Liabilities		
Depreciation and amortization	256	411
Investments in affiliates	402	192
Other	124	58
Total	782	661
Net deferred tax assets (liabilities)	(250)	(161)

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(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.

As a result of the TCJA, US federal and state income taxes have been recorded on undistributed foreign earnings accumulated from 1986 through 2017. 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.

Tax Carryforwards

- ***Net Operating Loss Carryforwards***

As of December 31, 2020, the Company had available US federal net operating loss carryforwards of $28 million that are subject to limitation. These net operating loss carryforwards begin to expire in 2022. As of December 31, 2020, the Company also had available state net operating loss carryforwards, net of federal tax impact, of $28 million, $22 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, 2020 of $2.0 billion primarily for Luxembourg, Spain, China, Mexico and Canada, with various expiration dates. Net operating loss carryforwards of $140 million in China are scheduled to expire beginning in 2021 through 2025. Net operating losses in most other foreign jurisdictions do not have an expiration date.

- ***Tax Credit Carryforwards***

The Company had available $224 million of foreign tax credit carryforwards, which are fully offset by a valuation allowance 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 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 of the appropriate character 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,		
	2020	2019	2018
	(In $ millions)		
As of the beginning of the year	134	162	119
Increases in tax positions for the current year	18	1	61
Increases in tax positions for prior years[1]	26	37	4
Decreases in tax positions for prior years	(13)	(41)	(21)
Decreases due to settlements	—	(25)	(1)
As of the end of the year	165	134	162
Total uncertain tax positions that if recognized would impact the effective tax rate	182	132	154
Total amount of interest expense (benefit) and penalties recognized in the consolidated statements of operations[2]	6	5	1
Total amount of interest expense and penalties recognized in the consolidated balance sheets	54	45	38

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(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.

(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 increase in uncertain tax positions for the year ended December 31, 2020 was primarily due to increases in foreign tax positions.

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 joint examination by the US, German and Dutch taxing authorities. The examinations are in the preliminary data gathering phase. 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. 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.

18. Leases

The components of lease expense are as follows:

	Year Ended December 31,		
	2020	2019	Statement of Operations Classification
	(In $ millions)		
Lease Cost			
Operating lease cost	40	39	Cost of sales / Selling, general and administrative expenses
Short-term lease cost	24	23	Cost of sales / Selling, general and administrative expenses
Variable lease cost	11	8	Cost of sales / Selling, general and administrative expenses
Finance lease cost			
Amortization of leased assets	18	19	Cost of sales
Interest on lease liabilities	15	18	Interest expense
Total net lease cost	108	107	

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

	As of December 31,		
	2020	2019	Balance Sheet Classification
	(In $ millions)		
Leases			
Assets			
Operating lease assets	232	203	Operating lease ROU assets
Finance lease assets	148	83	Property, plant and equipment, net
Total leased assets	380	286	
Liabilities			
Current			
Operating	36	29	Current Other liabilities
Finance	30	26	Short-term borrowings and current installments of long-term debt
Noncurrent			
Operating	208	181	Operating lease liabilities
Finance	171	118	Long-term debt
Total lease liabilities	445	354	

	As of December 31,	
	2020	2019
Weighted-Average Remaining Lease Term (years)		
Operating leases	13.8	15.0
Finance leases	9.6	6.9
Weighted-Average Discount Rate		
Operating leases	2.1 %	2.7 %
Finance leases	7.1 %	11.5 %

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

	Year Ended December 31,	
	2020	2019
	(In $ millions)	
Cash paid for amounts included in the measurement of lease liabilities		
Operating cash flows from operating leases	37	36
Operating cash flows from finance leases	15	19
Financing cash flows from finance leases	29	23
ROU assets obtained in exchange for finance lease liabilities (Note 22)	78	—
ROU assets obtained in exchange for operating lease liabilities	58	11

Maturities of lease liabilities are as follows:

	As of December 31, 2020	
	Operating Leases	Finance Leases
	(In $ millions)	
2021	41	43
2022	37	36
2023	31	31
2024	25	28
2025	21	24
Later years	125	122
Total lease payments	280	284
Less amounts representing interest	(36)	(83)
Total lease obligations	244	201

As of December 31, 2020, there was one financing lease commitment that has not yet commenced of approximately $33 million that is contracted to begin in June 2022 with a lease term of 10 years. There were no additional operating leases that have not yet commenced.

19. 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,	
	2020	2019
	(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,	
	2020	2019
	(In € millions)	
Total	1,358	1,578

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:

	2021 Maturity
	(In $ millions)
Currency	
Brazilian real	(13)
British pound sterling	(91)
Canadian dollar	(8)
Chinese yuan	(117)
Euro	(19)
Hungarian forint	13
Indonesian rupiah	(7)
Korean won	13
Mexican peso	(28)
Singapore dollar	21
Swedish krona	(11)
Swiss franc	(24)
Total	(271)

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

	As of December 31,	
	2020	2019
	(In $ millions)	
Total	546	692

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

	Year Ended December 31,			
	2020	2019	2018	Statement of Operations Classification
	(In $ millions)			
Hedging activities	(5)	2	1	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,			
	2020	2019	2018	2020	2019	2018	Statement of Operations Classification
	(In $ millions)						
Designated as Cash Flow Hedges							
Commodity swaps	13	(5)	(2)	(4)	2	1	Cost of sales
Interest rate swaps	(41)	(30)	(10)	—	—	—	Interest expense
Foreign currency forwards	(1)	—	1	(1)	—	—	Cost of sales
Total	(29)	(35)	(11)	(5)	2	1	
Designated as Net Investment Hedges							
Foreign currency denominated debt (Note 12)	(81)	37	51	—	—	—	N/A
Cross-currency swaps (Note 12)	(26)	3	—	—	—	—	N/A
Total	(107)	40	51	—	—	—	
Not Designated as Hedges							
Foreign currency forwards and swaps	—	—	—	(8)	(3)	13	Foreign exchange gain (loss), net; Other income (expense), net
Total	—	—	—	(8)	(3)	13	

See Note 20 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,	
	2020	2019
	(In $ millions)	
Derivative Assets		
Gross amount recognized	26	16
Gross amount offset in the consolidated balance sheets	2	1
Net amount presented in the consolidated balance sheets	24	15
Gross amount not offset in the consolidated balance sheets	11	8
Net amount	13	7

	As of December 31,	
	2020	2019
	(In $ millions)	
Derivative Liabilities		
Gross amount recognized	123	59
Gross amount offset in the consolidated balance sheets	2	1
Net amount presented in the consolidated balance sheets	121	58
Gross amount not offset in the consolidated balance sheets	11	8
Net amount	110	50

20. 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,						
	2020	2019	2020	2019	2020	2019	Balance Sheet Classification
	(In $ millions)						
Derivatives Designated as Cash Flow Hedges							
Commodity swaps	—	—	2	—	2	—	Current Other assets
Commodity swaps	—	—	8	—	8	—	Noncurrent Other assets
Designated as Net Investment Hedges							
Cross-currency swaps	—	—	13	13	13	13	Current Other assets
Derivatives Not Designated as Hedges							
Foreign currency forwards and swaps	—	—	1	2	1	2	Current Other assets
Total assets	—	—	24	15	24	15	
Derivatives Designated as Cash Flow Hedges							
Commodity swaps	—	—	—	(4)	—	(4)	Current Other liabilities
Commodity swaps	—	—	(1)	(3)	(1)	(3)	Noncurrent Other liabilities
Interest rate swaps	—	—	(81)	—	(81)	—	Current Other liabilities
Interest rate swaps	—	—	—	(40)	—	(40)	Noncurrent Other liabilities
Derivatives Designated as Net Investment Hedges							
Cross-currency swaps	—	—	(1)	(1)	(1)	(1)	Current Other liabilities
Cross-currency swaps	—	—	(33)	(7)	(33)	(7)	Noncurrent Other liabilities
Derivatives Not Designated as Hedges							
Foreign currency forwards and swaps	—	—	(5)	(3)	(5)	(3)	Current Other liabilities
Total liabilities	—	—	(121)	(58)	(121)	(58)	

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

			Fair Value Measurement					
	Carrying Amount		Significant Other Observable Inputs (Level 2)		Unobservable Inputs (Level 3)		Total	
	As of December 31,							
	2020	2019	2020	2019	2020	2019	2020	2019
	(In $ millions)							
Equity investments without readily determinable fair values	171	170	—	—	—	—	—	—
Insurance contracts in nonqualified trusts	30	35	31	35	—	—	31	35
Long-term debt, including current installments of long-term debt	3,671	3,455	3,644	3,456	201	143	3,845	3,599

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, 2020 and 2019, the fair values of cash and cash equivalents, receivables, marketable securities, 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.

21. 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.

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 14).

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, 2020 are $96 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 14).

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, 2020. 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, 2020, the Company had unconditional purchase obligations of $3.4 billion, which extend through 2042.

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 current and 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 had 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 in 2019, which was included within the Company's Other Activities segment. On July 14, 2020, Celanese reached a final settlement with the European Commission in respect of this matter of $92 million, which was included in Current Other liabilities as of December 31, 2020. The Company paid this settlement in full on January 12, 2021.

22. Supplemental Cash Flow Information

	Year Ended December 31,		
	2020	2019	2018
	(In $ millions)		
Interest paid, net of amounts capitalized	120	118	133
Taxes paid, net of refunds	167	157	100
Noncash Investing and Financing Activities			
Accrued treasury stock repurchases	—	4	13
Finance lease obligations (Note 18)	78	—	—
Accrued capital expenditures	(16)	20	(4)
Asset retirement obligations	5	6	(7)

23. 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, ethylene vinyl acetate ("EVA") polymers and redispersible powders ("RDP") 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. The Company's RDP business is a leading producer of products that have applications in a number of building and construction applications including flooring, plasters, insulation, tiling and waterproofing.

- ***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, 2020					
Net sales	2,081	519	3,147 (1)	—	(92)	5,655
Other (charges) gains, net (Note 16)	(36)	(1)	7	(9)	—	(39)
Operating profit (loss)	235	118	563	(252)	—	664
Equity in net earnings (loss) of affiliates	115	—	5	14	—	134
Gain (loss) on sale of investments in affiliates (Note 7)	1,408	—	—	—	—	1,408
Depreciation and amortization	134	36	163	17	—	350
Capital expenditures	106	37	171	34	—	348 (2)
	As of December 31, 2020					
Goodwill and intangible assets, net	1,030	154	301	—	—	1,485
Total assets	3,990	975	3,930	2,014	—	10,909
	Year Ended December 31, 2019					
Net sales	2,386	636	3,392 (1)	—	(117)	6,297
Other (charges) gains, net (Note 16)	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 (2)
	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	4,042 (1)	—	(129)	7,155
Other (charges) gains, net (Note 16)	—	(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 (2)

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(1) Includes intersegment sales of $92 million, $117 million and $129 million for the years ended December 31, 2020, 2019 and 2018, respectively.

(2) Includes a decrease in accrued capital expenditures of $16 million, an increase in accrued capital expenditures of $20 million and a decrease in accrued capital expenditures of $4 million for the years ended December 31, 2020, 2019 and 2018, respectively.

Geographical Area Information

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

	Year Ended December 31,		
	2020	2019	2018
	(In $ millions)		
Belgium	274	259	261
Canada	68	75	115
China	888	859	1,070
Germany	1,837	2,132	2,335
Mexico	200	244	307
Singapore	627	787	997
Switzerland	81	—	—
US	1,490	1,713	1,769
Other	190	228	301
Total	5,655	6,297	7,155

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

	As of December 31,	
	2020	2019
	(In $ millions)	
Belgium	60	55
Canada	99	105
China	406	316
Germany	914	866
Mexico	57	57
Singapore	76	80
US	2,155	2,095
Other	172	139
Total	3,939	3,713

24. 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,		
	2020	2019	2018
	(In $ millions)		
Engineered Materials			
North America	577	735	770
Europe and Africa	906	1,047	1,216
Asia-Pacific	534	533	532
South America	64	71	75
Total	2,081	2,386	2,593
Acetate Tow			
North America	92	125	133
Europe and Africa	273	258	260
Asia-Pacific	142	224	217
South America	12	29	39
Total	519	636	649
Acetyl Chain			
North America	1,014	1,079	1,145
Europe and Africa	1,019	1,098	1,236
Asia-Pacific	951	1,013	1,411
South America	71	85	121
Total[1]	3,055	3,275	3,913

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[1] Excludes intersegment sales of $92 million, $117 million and $129 million for the years ended December 31, 2020, 2019 and 2018 respectively.

25. Earnings (Loss) Per Share

	Year Ended December 31,		
	2020	2019	2018
	(In $ millions, except share data)		
Amounts attributable to Celanese Corporation			
Earnings (loss) from continuing operations	1,997	858	1,212
Earnings (loss) from discontinued operations	(12)	(6)	(5)
Net earnings (loss)	1,985	852	1,207
Weighted average shares - basic	117,817,445	123,925,697	134,305,269
Incremental shares attributable to equity awards[1]	663,931	726,062	1,111,589
Weighted average shares - diluted	118,481,376	124,651,759	135,416,858

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[1] Excludes 4,313, 45 and 0 equity award shares for the years ended December 31, 2020, 2019 and 2018, respectively, as their effect would have been antidilutive.

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

The Company's authorized capital stock consisted of (i) 400,000,000 shares of common stock ("Common Stock"), par value $0.0001 per share and (ii) 100,000,000 shares of preferred stock, par value $0.01 per share.

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 FIVE

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; and

WHEREAS, the Plan's administrative committee has authority to amend the Plan on behalf of the Company.

NOW, THEREFORE, Section 17.17 of the Plan is hereby amended and restated as follows:

17.17 **Deduction Limitation on Benefit Payments.** If an Employer reasonably anticipates that the Employer's deduction with respect to any distribution from this Plan would be limited or eliminated by application of Code Section 162(m), then to the extent permitted by Treas. Reg. §1.409A-2(b)(7)(i), payment shall be delayed as deemed necessary to ensure that the entire amount of any distribution from this Plan is deductible. Any amounts for which distribution is delayed pursuant to this Section shall continue to be credited/debited with additional amounts in accordance with Section 3.8. The delayed amounts (and any amounts credited thereon) shall be distributed to the Participant (or his or her Beneficiary in the event of the Participant's death) at the earliest date the Employer reasonably anticipates that the deduction of the payment of the amount will not be limited or eliminated by application of Code Section 162(m). To the extent deemed necessary to comply with Treas. Reg. §1.409A-3(i)(2), in the event that such date is determined to be after a Participant's Separation from Service the delayed payment shall not be made before the end of the six-month period following such Participant's Separation from Service. Effective December 31, 2020, with respect to amounts that are subject to the changes to Code Section 162(m) that were enacted by the Tax Cuts and Jobs Act (P.L. 115-97), (i) all such amounts that were otherwise required to be paid by December 31, 2020 (but for the delay set forth in this Section 17.17) shall be paid by December 31, 2020 and (ii) with respect to all other such amounts, the payment delay set forth in this Section 17.17 shall not be mandatory and shall be exercised in the discretion of the Company in accordance with Treas. Reg. Section 1.409A-2(b)(7)(i). The preceding sentence is intended to comply with and shall be administered and interpreted in accordance with applicable guidance under Code Section 162(m) and Code Section 409A.

IN WITNESS WHEREOF, this Amendment Number Four is executed this 28th day of December, 2020.

Celanese Corporation Deferred Compensation Plan Committee

For the Committee

By: /s/ Vanessa Dupuis
Vanessa Dupuis, Chair

ATTEST: /s/ Michael R. Sullivan
Michael R. Sullivan

<u>Amended Schedule of Participants to Form of Non-CEO Amended and Restated Change in Control Agreement</u>

Scott A. Richardson
Shannon L. Jurecka
A. Lynne Puckett
Thomas F. Kelly
John G. Fotheringham

AMENDMENT NUMBER ONE

to the

CELANESE AMERICAS
SUPPLEMENTAL RETIREMENT SAVINGS PLAN

WHEREAS, Celanese Americas LLC (the "Company") previously adopted the Celanese Americas Supplemental Retirement Savings Plan, as amended and restated effective January 1, 2014 (the "Plan");

WHEREAS, Article IX of the Plan provides that the Company’s Benefits Committee may amend the Plan at any time provided that any such amendment does not increase the cost of the Plan by more than $250,000 annually; and

WHEREAS, the Benefits Committee has determined that the amendments set forth below are in the best interest of the Company and will not increase the cost of the Plan by more than $250,000 annually.

NOW, THEREFORE, Section Article X of the Plan is hereby amended by adding the following new Section 10.11 at the end thereof:

10.10 **Deduction Limitation on Benefit Payments.** If an Employer reasonably anticipates that the Employer’s deduction with respect to any distribution from this Plan would be limited or eliminated by application of Code Section 162(m), then to the extent permitted by Treas. Reg. §1.409A-2(b)(7)(i), payment shall be delayed as deemed necessary to ensure that the entire amount of any distribution from this Plan is deductible. Any amounts for which distribution is delayed pursuant to this Section shall continue to be credited/debited with additional amounts in accordance with Section 3.8. The delayed amounts (and any amounts credited thereon) shall be distributed to the Participant (or his or her Beneficiary in the event of the Participant’s death) at the earliest date the Employer reasonably anticipates that the deduction of the payment of the amount will not be limited or eliminated by application of Code Section 162(m). To the extent deemed necessary to comply with Treas. Reg. §1.409A-3(i)(2), in the event that such date is determined to be after a Participant’s Separation from Service the delayed payment shall not be made before the end of the six-month period following such Participant’s Separation from Service. Effective December 31, 2020, with respect to amounts that are subject to the changes to Code Section 162(m) that were enacted by the Tax Cuts and Jobs Act (P.L. 115-97), (i) all such amounts that were otherwise required to be paid by December 31, 2020 (but for the delay set forth in this Section 10.10) shall be paid by December 31, 2020 and (ii) with respect to all other such amounts, the payment delay set forth in this Section 10.10

shall not be mandatory and shall be exercised in the discretion of the Company in accordance with Treas. Reg. Section 1.409A-2(b)(7)(i). The preceding sentence is intended to comply with and shall be administered and interpreted in accordance with applicable guidance under Code Section 162(m) and Code Section 409A.

IN WITNESS WHEREOF, this Amendment Number One is executed this 28th day of

December, 2020.

CELANESE AMERICAS LLC
BENEFITS COMMITTEE

For the Committee

By: /s/ Vanessa Dupuis
Vanessa Dupuis, Chair

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, 2020)

Name of Company	Jurisdiction
Aggregate Ownership of more than 50% (100% aggregate ownership unless otherwise indicated)	
Acetate (Malta) Company Limited	Malta
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
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 (Malta) Company 2 Limited	Malta
Celanese (Malta) Company Limited	Malta
Celanese (Nanjing) Chemical Co., Ltd.	China
Celanese (Shanghai) International Trading Co., Ltd.	China
Celanese (Shanghai) Polymers 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 2 LLC & Co. KG	Germany
Celanese Americas LLC	Delaware
Celanese Betiligungs GmbH	Germany
Celanese BV	Belgium
Celanese Canada Holdings Limited	United Kingdom
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 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 Limited	Jersey
Celanese Finance Holdings 2 Limited	Jersey
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 (Malta) 2 Limited	Malta
Celanese Holdings (Malta) Limited	Malta
Celanese Holdings GmbH	Germany
Celanese Holdings UK 1 Limited	United Kingdom
Celanese Holdings UK 2 Limited	United Kingdom
Celanese Holdings UK 3 Limited	United Kingdom
Celanese Holdings UK 4 LP	United Kingdom
Celanese Hong Kong Holdings LLC	Delaware
Celanese Hungary Kft.	Hungary
Celanese India Holdings B.V.	Netherlands
Celanese Internal Finance Limited	Hong Kong
Celanese International Corporation	Delaware
Celanese IP Germany GmbH	Germany
Celanese IP Hungary Bt.	Hungary
Celanese Japan Limited	Japan
Celanese Jersey Company Limited	Jersey
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 BV	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 Switzerland AG	Switzerland
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 Shanghai Holdings LLC	Delaware
Celanese Singapore Acetyls Holding PTE. LTD.	Singapore
Celanese Singapore Chemical Holding PTE. LTD.	Singapore
Celanese Singapore PTE. LTD.	Singapore
Celanese Singapore VAM PTE. LTD.	Singapore
Celanese Singapore Emulsions PTE. LTD.	Singapore
Celanese Switzerland AG	Switzerland
Celanese (Thailand) Limited	Thailand
Celanese US Holdings LLC	Delaware
Celanese Ventas Mexico S. de R.L. de C.V.	Mexico
Celanese Worldwide Holdings LLC	Delaware
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
Next Polymers Limited	India
PT Celanese Indonesia Operations	Indonesia
PT Celanese Indonesia Services	Indonesia
RIOMAVA GmbH	Germany
Servicios Corporativos Celanese S. de R.L. de C.V.	Mexico
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
Fortron China Holdings LLC[1]	Delaware
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 31.20%

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 21.90%

List of Guarantor Subsidiaries

Celanese US Holdings LLC (the "Issuer"), a 100% owned subsidiary of Celanese Corporation (the "Parent"), has 5.875% Senior Notes due 2021, 4.625% Senior Notes due 2022, 1.25% Senior Notes due 2023, 3.50% Senior Notes due 2024, 1.250% Senior Notes due 2025 and 2.125% Senior Notes due 2027 (the "Senior Notes"). The Senior Notes are jointly and severally guaranteed on a full and unconditional basis by the Parent and the 100% owned subsidiaries of the Parent listed below.

Name of Company	**Jurisdiction**
Parent Guarantor	
Celanese Corporation	Delaware
Subsidiary Guarantors	
Celanese Acetate LLC	Delaware
Celanese Americas LLC	Delaware
Celanese Chemicals, Inc.	Delaware
Celanese Global Relocation LLC	Delaware
Celanese International Corporation	Delaware
Celanese Ltd.	Texas
Celanese Sales U.S. Ltd.	Texas
Celtran, Inc.	Delaware
CNA Holdings LLC	Delaware
KEP Americas Engineering Plastics, LLC	Delaware
Ticona Fortron Inc.	Delaware
Ticona LLC	Delaware
Ticona Polymers, Inc.	Delaware

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. 333-236294) of Celanese Corporation (the Company) of our report dated February 11, 2021, with respect to the consolidated balance sheets of the Company as of December 31, 2020 and 2019, 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, 2020, and the related notes (collectively, the consolidated financial statements), and the effectiveness of internal control over financial reporting as of December 31, 2020, which report appears in the December 31, 2020 annual report on Form 10-K of the Company.

Our report refers to a change in accounting principle as of January 1, 2019 for the adoption of Financial Accounting Standards Board's Accounting Standards Update 2016-02, *Leases*.

/s/ KPMG LLP

Dallas, Texas
February 11, 2021

**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
Chairman of the Board of Directors,
Chief Executive Officer and President
Date: February 11, 2021

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
Executive Vice President and
Chief Financial Officer
Date: February 11, 2021

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, 2020 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Lori J. Ryerkerk, Chairman of the Board of Directors, 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
Chairman of the Board of Directors,
Chief Executive Officer and President
Date: February 11, 2021

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, 2020 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Scott A. Richardson, Executive 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
Executive Vice President and
Chief Financial Officer
Date: February 11, 2021