

REFINITIV

DELTA REPORT

10-K

CE - CELANESE CORP

10-K - DECEMBER 31, 2024 COMPARED TO 10-K - DECEMBER 31, 2023

The following comparison report has been automatically generated

TOTAL DELTAS	3212
CHANGES	460
DELETIONS	1180
ADDITIONS	1572

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, 2023 2024

OR

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

(Commission File Number) 001-32410

ex103eimage1a10a01a03a01a21.gif

CELANESE CORPORATION

(Exact Name of Registrant as Specified in its Charter)

Delaware

(State or Other Jurisdiction of Incorporation or Organization)

98-0420726

(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
4.777% Senior Notes due 2026	CE /26A	New York Stock Exchange
2.125% Senior Notes due 2027	CE /27	New York Stock Exchange
0.625% Senior Notes due 2028	CE /28	New York Stock Exchange
5.337% Senior Notes due 2029	CE /29A	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. ☒

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

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, 2023 June 30, 2024 (the last business day of the registrants' most recently completed second fiscal quarter) was \$12,564,643,206 \$14,686,088,441.

The number of outstanding shares of the registrant's common stock, \$0.0001 par value, as of February 9, 2024 February 17, 2025 was 108,906,426 109,332,326.

DOCUMENTS INCORPORATED BY REFERENCE

Certain portions of the registrant's Definitive Proxy Statement relating to the 2024 2025 annual meeting of shareholders, 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, 2023** **December 31, 2024**

TABLE OF CONTENTS

	Page
Special Note Regarding Forward-Looking Statements	3
PART I	
Item 1. Business	4
Item 1A. Risk Factors	17
Item 1B. Unresolved Staff Comments	29 30
Item 1C. Cybersecurity	29 30
Item 2. Properties	30 31
Item 3. Legal Proceedings	31 32
Item 4. Mine Safety Disclosures	31 32
Information about our Executive Officers	31 32
PART II	
Item 5. Market for the Registrant's Common Equity, Related Shareholder Matters and Issuer Purchases of Equity Securities	33 34
Item 6. Reserved	34 35
Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations	35 36
Item 7A. Quantitative and Qualitative Disclosures About Market Risk	50 52
Item 8. Financial Statements and Supplementary Data	51 52
Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure	51 52
Item 9A. Controls and Procedures	51 52
Item 9B. Other Information	52 53
Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections	52 53
PART III	
Item 10. Directors, Executive Officers and Corporate Governance	53 54
Item 11. Executive Compensation	53 54
Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Shareholder Matters	53 54
Item 13. Certain Relationships and Related Transactions, and Director Independence	53 54
Item 14. Principal Accounting Fees and Services	53 54
PART IV	
Item 15. Exhibits and Financial Statement Schedules	54 55
Signatures	59 61

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; **deleveraging efforts**; **future revenues and financial performance**; pension expenses and funding; **dividend policy**; anticipated restructuring, divestiture, and consolidation activities; planned construction or operation of facilities; cost reduction and control efforts and targets and integration **and expected synergies** 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 shareholders 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 U.S." 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, medical, consumer electronics, energy storage, filtration, paints and coatings, paper and packaging, industrial applications 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 U.S.-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 **58 56** global production facilities and an additional 20 strategic affiliate production facilities. As of **December 31, 2023** **December 31, 2024**, we employed **12,410 12,163** people worldwide.

Business Segment Overview

Effective December 31, 2022, we reorganized our operating and reportable segments to align with recent structural and management reporting changes. The change reflects the resegmentation of the former Acetate Tow operating and reportable segment into the Acetyl Chain operating and reportable segment. This reorganization reflects the culmination of a shift in operating strategy and organizational hierarchy, with a focus on integration, collaboration and maximization of value creation through its global optionality and integrated chain model of the underlying businesses.

We operate principally through two business segments: Engineered Materials and the Acetyl Chain. See *Business Segments* in this [Item 1. Business](#) and [Note 21 - Segment Information](#) and [Note 22 - 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
<ul style="list-style-type: none"> Nylon compounds or formulations High temperature nylons ("HTN") Polyoxymethylene ("POM") Polyethylene terephthalate ("PET") Polybutylene terephthalate ("PBT") Ultra-high molecular weight polyethylene ("UHMW-PE") Long-chain polyamides ("LCPA") Long-fiber reinforced thermoplastics ("LFRT") Liquid crystal polymers ("LCP") Thermoplastic elastomers ("TPE") Thermoplastic vulcanizates ("TPV") Polypropylene compounds or formulations Polyphenylene sulfide ("PPS") Ethylene vinyl acetate ("EVA") pharmaceutical grade copolymers Ethylene acrylic elastomers ("EAE") 	<ul style="list-style-type: none"> Automotive Medical Industrial Energy storage Consumer electronics Appliances Construction Filtration equipment Telecommunications Beverages Electrical Mobility Consumer apparel Connectivity 	<ul style="list-style-type: none"> Anhui Jinhe Industrial Co., Ltd. Ascend Performance Materials LLC BASF SE Daicel Corporation ("Daicel") DOMO Chemicals E. I. du Pont de Nemours and Company Kingfa Science and Technology Korea Petrochemical Ind. Co, Ltd ("KPIC") Envalior GmbH SABIC Innovative Plastics Solvay S.A. <p>Other regional competitors:</p> <ul style="list-style-type: none"> Asahi Kasei Corporation Braskem S.A. Mitsubishi Gas Chemical Company, Inc. Sumitomo Corporation Teijin Limited Toray Industries, Inc. 	<ul style="list-style-type: none"> HMD Adipic acid Formaldehyde DMT BDO Ethylene Fiberglass Polypropylene Acetic anhydride Propylene Ethylene propylene diene monomer Base Oil PA6 PA66 Para-dichlorobenzene Diketene TPEE PTMEG Flame Retardants DDDA PTA Methyl acrylate Precious metals PET

Overview

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

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 Belgium, Brazil, Canada, China, Germany, India, Italy, Japan, Luxembourg, Mexico, Singapore, South Korea, Switzerland, Taiwan, the United Kingdom and the U.S., along with sites associated with our 17 strategic affiliates in China, Germany, Japan, Luxembourg, Netherlands, Saudi Arabia, South Korea, United Kingdom and the U.S.

Our broad marketplace presence reflects our deep understanding of global and customer trends, including the growing global demand for more sophisticated vehicles, elevated evolving 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. 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. 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.

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 17 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.

In July 2020, we announced that we are establishing a European Compounding Center of Excellence at our Forlì, Italy facility, which includes the intended consolidation of our compounding operations in Kaiserslautern, Germany; Wehr, Germany; and Ferrara Marconi, Italy. This consolidation was completed in 2023 and are included in our Engineered Materials segment. **economies.**

In November 2022, we acquired a majority of the Mobility & Materials business (the "M&M Business") of DuPont de Nemours, Inc. ("DuPont") pursuant to a definitive transaction agreement entered into in February 2022 by us, DuPont and an affiliate of DuPont (the "M&M Acquisition"). The M&M Acquisition was completed for a purchase price of \$11.0 billion, subject to transaction adjustments. The M&M Business is a **leading** global producer of engineering thermoplastics and elastomers serving a variety of end-uses including automotive, electrical and electronics, consumer goods and industrial applications. The acquired M&M Business product portfolio includes numerous specialty materials with global leadership positions in nylons, specialty nylons polyesters and elastomers. See [Note 4 - Acquisitions, Dispositions and Plant Closures](#) in the accompanying consolidated financial statements for further information.

On September 27, 2023, In September 2023, we formed a food ingredients joint venture with Mitsui & Co., Ltd. ("Mitsui") under the name Nutrinova. We contributed receivables, inventory, property, plant and equipment, certain other assets, **other** liabilities, technology and employees of our food ingredients business while retaining a 30% interest in the joint venture. Mitsui acquired the remaining 70% interest in the food ingredients business for a purchase price of \$503 million. See [Note 4 - Acquisitions, Dispositions and Plant Closures](#) in the accompanying consolidated financial statements for further information.

• Key Products

Nylon. Our nylon products include Nylfor® A (PA 6.6), Nylfor® B (PA 6), NILAMID Celanyl® (PA 6, PA 66, PPA) 6.6, FRIANYL® (flame retardant PA 6, PA 66, PPA compounds), ECOMID® (recycled polyamide), Zytel® (PA, PA 6, PA 66, PA 610, PA 612), Zytel® HTN (PPA) and Zytel® LCPA (long-chain polyamide) and are used in automotive, appliances, electrical, medical, industrial and consumer applications due to their mechanical properties, dimensional stability, high impact resistance, resistance to organic solvents, high wear and fatigue resistance even at high temperatures, and easy processing and molding.

POM. Commonly known as polyacetal in the chemical industry, POM is sold by our engineered materials business under the trademarks Celcon®, **and** Hostaform® **and** Tarnoform®. 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® **and** Tarnoform® 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 Our sustainable polyacetal, POM ECO-B, **a sustainable polyacetal, which** allows customers to realize reduction in carbon dioxide emissions in their end-use products and advance toward their renewable content goals.

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

National Methanol Company, 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, 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.

Polyesters. Our products include a series of thermoplastic polyesters including Celanex® PBT, Crastin® PBT **Melinex®, Mylar®** and Thermx® PCT (polycyclohexylene-dimethylene terephthalate), as well as Rynite® PET, a polyester resin. These products are used in a wide variety of automotive, electrical, medical, industrial and consumer applications, including ignition system parts, radiator grilles, electrical switches, medical devices, insulation, photovoltaic panels, critical energy components, appliance and sensor housings, light emitting diodes and technical fibers.

UHMW-PE. Celanese is a global leader in UHMW-PE products, which are sold under the GUR® trademark. They are, **our UHMW-PE trademark, is a** highly engineered **thermoplastics thermoplastic** 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.

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, Laprene® and Hytrel®, 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.

TPV. Santoprene™, Dytron™ and Geolast™, our TPV trademarks, are chemically cross-linked, high-performance materials which leverage a unique combination of engineering thermoplastic and elastomer properties. These products are used in future mobility, infrastructure, medical and sustainability applications.

Elastomers. Vamac® EAE, our elastomer brand, is primarily used in variety of demanding automotive applications, including electric and hybrid vehicle components. These materials can be formulated to provide excellent resistance to extreme temperatures and fluids.

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.

VitalDose®. Our ethylene vinyl acetate ("EVA") copolymers, sold under the VitalDose® trademark, are an enabling technology used for controlled-release drugs, medical implants and combination devices, including drug-eluting implants, reliable controlled-release performance in subcutaneous and surgical implants, intravitreal and extraocular devices.

- **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.

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 22 - Revenue Recognition](#) in the accompanying consolidated financial statements for further information.

Acetyl Chain

Products ⁽¹⁾	Major End-Use Applications	Principal Competitors	Key Raw Materials
<ul style="list-style-type: none"> Acetic acid Vinyl acetate monomer ("VAM") Vinyl acetate ethylene ("VAE") emulsions Conventional emulsions Ethylene vinyl acetate ("EVA") resins and compounds Low-density polyethylene resins ("LDPE") Redispersible Powders ("RDP") Acetic anhydride Ethyl acetate Formaldehyde Butyl acetate Acetate tow Acetate flake 	<ul style="list-style-type: none"> Paints Coatings Adhesives Textiles Paper finishing Flexible packaging Lamination products Pharmaceuticals Films Inks Plasticizers Solvents Automotive parts External thermal insulation composite systems Tiling Plasters and renders Lubricants Filtration Food and beverage Consumer goods Food packaging 	<ul style="list-style-type: none"> Arkema BASF SE Cerdia Chang Chun Petrochemical Co., Ltd. Daicel Dairen Chemical Corporation Dow Inc. Eastman Chemical Company ExxonMobil Chemical Huayi Chemical Co., Ltd. INEOS Jiangsu Sopo (Group) Co., Ltd. Kuraray Co., Ltd. LyondellBasell Industries N.V. Nippon Gohsei Showa Denko K.K. Sipchem Wacker Chemie AG 	<ul style="list-style-type: none"> Methanol Carbon monoxide Ethylene Acetic acid VAM VAE emulsions Conventional emulsions Acrylate esters Styrene Polyvinyl alcohol Wood pulp Acetic anhydride

⁽¹⁾ Our globally-integrated value chain positions us to provide solutions with carbon capture content across all products in the Acetyl Chain as well as other methanol derived products like acetal copolymers, including POM.

• Overview

The Acetyl Chain segment, which includes the integrated chain of acetic acid, VAM, acetic anhydride, acetate esters, emulsion polymers, EVA polymers, redispersible powders, and acetate tow businesses, is active in every major global industrial sector and serves diverse consumer end-use applications. The Acetyl Chain operates as an integrated business with the breadth and flexibility to sell solutions across the segment and across global geographies utilizing various feedstocks. These solutions 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 acetyl chain 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 acetyl chain 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 acetyl chain business in response to trade flows and prevailing industry trends.

Our Acetyl Chain segment has production sites in Belgium, Canada, China, Germany, Mexico, the Netherlands, Singapore, Sweden, Switzerland and the U.S. We are a global industry leader, with a broad acetyls product portfolio, leading technology, low cost production footprint and a global supply chain. 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. With decades of experience, advanced proprietary process technology and favorable capital and production costs, we are a leading global producer of acetic acid, VAM and VAE. AOPlus[®]3 technology extends our historical technology advantage in acetic acid and enables us to construct a world scale greenfield acetic acid facility at a lower capital cost than our competitors. Our VAntage[®]2 technology enables us to increase VAM capacity to meet growing customer demand globally with minimal investment. VAM produced by the acetyl chain business is a primary raw material for our emulsion polymers and EVA polymers businesses.

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[®], Avicor[®], Flexbond[®] and Resyn[®].

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 RDP business is a leading global producer of redispersible polymer powders, sold under the Elotex® brand. The business consumes 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.

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.

• **Key Products**

Acetyl Products. Acetyl products include acetic acid, VAM, acetic anhydride and acetate esters. 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. Acetate esters are used in solvents for ink formulations, surface coatings, adhesives and pharmaceutical industries. 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 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, 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 U.S. Gulf Coast region as a feedstock. Almost all of our North American methanol needs are met from our share of the production, as well as the long-term contract we have with our joint venture partner, Mitsui.

In December 2023, we began carbon capture and utilization ("CCU") operations at our Clear Lake site as part of our Fairway joint venture. The unit is expected to capture capable of capturing CO2 industrial emissions and produce producing low-carbon methanol which will would help our global customers meet the growing demand for more sustainable and circular solutions. The products will be launched under the ECO-CC name and be supported through third-party mass balance tracking and life cycle assessment processes.

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 uses a number of emulsions in manufacturing redispersible powders to meet requirements for various applications and formulated to fit our customers' needs for optimal production.

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**

Our acetyl chain business sells its products both directly to customers and through distributors. Acetic acid, VAM, acetate esters 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 intermediate chemicals and 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.

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

Pricing of our products within the Acetyl Chain segment is influenced by industry utilization, changes in the cost of raw materials, sensitivity to demand and the value-in-use. 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 22 - 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, taxes, 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, property 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. During 2022, we acquired interests in several global strategic affiliates as part of the M&M Acquisition, described further below. On September 27, 2023, In September 2023, we formed a food ingredients joint venture with Mitsui under the name Nutrinova, also described below.

We have a substantial portfolio of affiliates in various regions, including Asia-Pacific, Europe, 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, 2023 December 31, 2024, our equity method strategic affiliates generated combined sales of \$2.1 \$2.2 billion, resulting in our recording \$67 \$149 million of equity in net earnings of affiliates and \$124 \$130 million of dividends.

Our strategic affiliates as of December 31, 2023 December 31, 2024 are as follows:

	Location of Headquarters	Location of Headquarters	Ownership	Partner(s)	Year Entered	Location of Headquarters	Ownership	Partner(s)	Yea Enter
Equity									
Investments									
Engineered Materials									
Engineered Materials									
Engineered Materials									
National Methanol Company									

National Methanol Company											
National Methanol Company		Saudi Arabia	25 %	Saudi Basic Industries Corporation (50%); Duke Energy Arabian Ltd. (25%)	1981	Saudi Arabia		25 %	Saudi Basic Industries Corporation (50%); Duke Energy Arabian Ltd. (25%)	1981	
Nutrinova B.V.	Nutrinova B.V.	Netherlands	30 %	Mitsui & Co., Ltd. (70%)	2023	Nutrinova B.V.	Netherlands	30 %	Mitsui & Co., Ltd. (70%)	2023	
Korea Engineering Plastics Co., Ltd.	Korea Engineering Plastics Co., Ltd.	South Korea	50 %	Mitsubishi Gas Chemical Company, Inc. (40%); Mitsubishi Corporation (10%)	1999	Korea Engineering Plastics Co., Ltd.	South Korea	50 %	Mitsubishi Gas Chemical Company, Inc. (40%); Mitsubishi Corporation (10%)	1999	
Fortron Industries, LLC	Fortron Industries, LLC	U.S.	50 %	Kureha America Inc. (50%)	1992	Fortron Industries, LLC	U.S.	50 %	Kureha America Inc. (50%)	1992	
Toray Celanese Co., Ltd.	Toray Celanese Co., Ltd.	Japan	50 %	Toray (50%)	2022	Toray Celanese Co., Ltd.	Japan	50 %	Toray (50%)	2022	
DuBay Polymer GmbH	DuBay Polymer GmbH	Germany	50 %	Lanxess AG (50%)	2022	DuBay Polymer GmbH	Germany	50 %	Lanxess AG (50%)	2022	
DuPont Teijin Films UK Ltd. now known as Mylar Specialty Films UK Limited		United Kingdom	50 %	Teijin Limited (50%)	2022						
DuPont Teijin Films Netherlands B.V.		Netherlands	50 %	Teijin Limited (50%)	2022						
DuPont Teijin Films Luxembourg S.A. now known as Mylar Specialty Films Luxembourg S.A.		Luxembourg	50 %	Teijin Limited (50%)	2022						
DuPont Teijin Films U.S. Limited Partnership now known as Mylar Specialty Films U.S. Limited Partnership		U.S.	50 %	Teijin Limited (50%)	2022						
Teijin-DuPont Films, Incorporated now known as Mylar Specialty Films Incorporated		U.S.	50 %	Teijin Limited (50%)	2022						
Mylar Specialty Films UK Limited		United Kingdom	50 %	Teijin Limited (50%)	2022						
Mylar Specialty Films Netherlands B.V.		Netherlands	50 %	Teijin Limited (50%)	2022						
Mylar Specialty Films Luxembourg S.A.		Luxembourg	50 %	Teijin Limited (50%)	2022						

Mylar Specialty Films U.S. Limited Partnership	U.S.	50 %	Teijin Limited (50%)	2022
Mylar Specialty Films Incorporated	U.S.	50 %	Teijin Limited (50%)	2022

Consolidated

Investments

Engineered Materials												
Engineered Materials												
Engineered Materials												
DuPont Teijin Films China Ltd. now known as Mylar Specialty Films China Limited												
DuPont Teijin Films China Ltd. now known as Mylar Specialty Films China Limited												
DuPont Teijin Films China Ltd. now known as Mylar Specialty Films China Limited		China	51 %		Teijin Limited (49%)		2022					
Mylar Specialty Films China Limited												
Mylar Specialty Films China Limited												
Mylar Specialty Films China Limited		China	51 %		Teijin Limited (49%)		2022					
DuPont Teijin Hongji Films Ningbo Co. Ltd.	DuPont Teijin Hongji Films Ningbo Co. Ltd.	China	26 %		Teijin Limited (73.99%)		2022	DuPont Teijin Hongji Films Ningbo Co. Ltd.	China	26 %	Teijin Limited (73.99%)	2022
DuPont Hongji Films Foshan Co. Ltd.		China	26 %		Teijin Limited (73.99%)		2022					
Mylar Hongji Films Foshan Co., Ltd.		China	26 %		Teijin Limited (73.99%)		2022					
Celanese Filaments-Americas, LLC	Celanese Filaments-Americas, LLC	U.S.	70 %		Xingda (30%)		2022	Celanese Filaments-Americas, LLC	U.S.	70 %	Xingda (30%)	2022
DuPont Filaments-Europe, B.V.		Netherlands	70 %		Xingda (30%)		2022					
Celanese Filaments-Europe B.V.		Netherlands	70 %		Xingda (30%)		2022					
Celanese Xingda Filaments Co., Ltd.	Celanese Xingda Filaments Co., Ltd.	China	70 %		Xingda (30%)		2022	Celanese Xingda Filaments Co., Ltd.	China	70 %	Xingda (30%)	2022
Acetyl Chain												
Fairway Methanol LLC												
Fairway Methanol LLC												
Fairway Methanol LLC		U.S.	50 %		Mitsui & Co., Ltd. (50%)		2014	U.S.	50 %	Mitsui & Co., Ltd. (50%)		2014

Equity
Investments
Without
Readily
Determinable
Fair Value

Acetyl Chain										
Acetyl Chain										
Acetyl Chain										
Kunming Cellulose Fibers Company, Limited										
Kunming Cellulose Fibers Company, Limited										
Kunming Cellulose Fibers Company, Limited										
		China	30 %	China National Tobacco Corporation (70%)	1993	China		30 %	China National Tobacco Corporation (70%)	1993
Nantong Cellulose Fibers Company, Limited	Nantong Cellulose Fibers Company, Limited	China	31 %	China National Tobacco Corporation (69%)	1986	Nantong Cellulose Fibers Company, Limited	China	31 %	China National Tobacco Corporation (69%)	1986
Zhuhai Cellulose Fibers Company, Limited	Zhuhai Cellulose Fibers Company, Limited	China	30 %	China National Tobacco Corporation (70%)	1993	Zhuhai Cellulose Fibers Company, Limited	China	30 %	China National Tobacco Corporation (70%)	1993

National Methanol Company. National Methanol Company ("Ibn Sina") 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.

Nutrinova Netherlands B.V. Nutrinova Netherlands B.V. ("Nutrinova") is a producer of Sunett® acesulfame potassium (Ace-K) and Nutrinova® sorbates, which are used to improve the safety, shelf-life and taste of its customers' products including food and beverages, personal care, pet food, household cleaning products and pharmaceutical products.

Korea Engineering Plastics Co., Ltd. Korea Engineering Plastics Co., Ltd. ("KEPCO") is a 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. In April 2022, we completed the joint venture restructuring of KEPCO. As part of the restructuring of KEPCO, we paid KEPCO \$5 million and will have paid 5 equal annual installments of €24 million on October 1 of each year from 2022 to 2026. This resulted in an increase to our investment in KEPCO of \$134 million. Our joint venture partner has made and will make similar payments to KEPCO. The restructuring did not result in a change in ownership percentage of KEPCO, nor a change in control, and KEPCO will continue to be accounted for as an equity method investment.

Fortron Industries, LLC. Fortron Industries, LLC ("Fortron") is a 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.

Toray Celanese Co., Ltd. Toray Celanese Co., Ltd. manufactures Hytrel® for sale primarily in the Japanese market. Hytrel® is a versatile material with the ability to flex in multiple directions long after rubber would break. Its strength and durability, combined with its heat resilience and chemical resistance make it an essential ingredient in automotive and construction applications due to its ability to combine the advantages of both flexible and plastic materials.

DuBay Polymer GmbH. DuBay Polymer GmbH is a manufacturing joint venture with Lanxess AG for the production of PBT-based products.

DuPont Teijin Mylar Specialty Films. DuPont Teijin Mylar Specialty Films is a leading global producer of PET and polyethylene naphthalate ("PEN") polyester films, which are used in a wide variety of end markets from such as consumer, industrial, healthcare to industrial and electronics. Mylar® and Melinex® brand films, known for their wide range of performance capabilities, are used in a variety of applications.

DuPont Celanese Filaments. DuPont Celanese Filaments is a joint venture with Xingda for the production and sale of nylon and PBT-based filament products used in the personal care, construction and industrial end-markets.

Acetyl Chain strategic ventures. Our Acetyl Chain ventures generally fund their operations using operating cash flow and pay dividends based on each ventures' performance in the preceding year. In 2024, 2023 2022 and 2021, 2022, we received cash dividends of \$127 million, \$125 million \$132 million and \$146 \$132 million, respectively.

Although our ownership interest in each of our Acetyl Chain 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

InfraSrvs. 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, 2023 December 31, 2024
	(In percentages)
InfraServ GmbH & Co. Gendorf KG	30
InfraServ GmbH & Co. Hoechst KG	31
Yncoris GmbH & Co. KG	22

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®, Crastin®, Dur-O-Set®, Dytron®, ECOMID®, EcoVAE®, Elotex®, Factor®, Flexbond®, Forprene®, FRIANYL®, Fortron®, Geolast®, GHR®, GUR®, Hostaform®, Hytrel®, Laprene®, Melinex®, MetaLX®, Micromax®, Mowilith®, MT®, Mylar®, NILAMID®, Nyflor®, OmniLon®, Pibifor®, Pibiter®, Polifor®, Resyn®, Rynite®, Santoprene®, SlideX®, Sofprene®, Sofpur®, Talcoprene®, Tarnoform®, Tecnoprene®, TufCOR®, Tynex®, Vamac®, VAntage®, Vectra®, Vinac®, Vinamul®, VitalDose®, Zenite®, Zytel® 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 13 - Environmental](#) and [Note 19 - Commitments and Contingencies](#) in the accompanying consolidated financial statements.

We expect to incur approximately \$50 \$20 million to \$70 \$50 million in capital expenditures for environmental control measures in each of 2024 2025 and 2025, 2026.

Climate Change

Climate change is one of the most a challenging and significant issues facing the world today, and we seek to do our part to make sustainable progress toward addressing this challenge.

issue. The nature of our operations is energy and fossil fuel intensive. We have therefore invested in capital projects to increase energy efficiency, improve reliability, recover and reuse waste heat, and increase our purchase of renewable energy as well as more sustainable raw materials. These include a combined heat and power unit at our Lanaken, Belgium facility, a waste-to-

energy waste-to-energy system in Nanjing, China, using solar energy at our Clear Lake, Texas facility designed for use by us and our onsite industrial partners, and a carbon dioxide capture and conversion to methanol project at our Clear Lake, Texas facility.

We are focused on developing products to help our customers meet their sustainability goals. Examples include products for improving the sustainability of building and construction materials, adhesives, fiber coatings, flexible packaging, stretch fabrics, vehicle lightweighting and powering electric vehicles. We are also focused on making our own products from more sustainable sources, including increasing our offering products product offerings using biocertified content or bio-mass balanced, carbon capture and utilization, and recycled feedstocks. We believe these capabilities, together with trends such as the automobile industry's commitment towards improved energy efficiency and clean energy, present market opportunities for us.

With the fourth quarter 2023 2024 publication of our 2022-2023 2023-2024 Sustainability Report, we have reported updated gross Scope 1 and Scope 2 greenhouse gas ("GHG") emissions for 2021, 2022, and 2022 2023 using *The Greenhouse Gas Protocol, A Corporate Accounting and Reporting Standard*, as a guide. These emissions figures now include M&M facility manufacturing data. Updated 2023 2024 emissions figures were not available at the time of this Form 10-K filing. We have also announced a Scope 1 and 2 GHG emissions reduction target described in our 2022-2023 2023-2024 Sustainability Report, integrated the M&M Business into our GHG measurement and reporting process, obtained limited external assurance on our 2021 and 2022 2021-2023 environmental metrics, and are working to better understand where we can further reduce our GHG emissions sources and to continue to integrate the M&M Business into our GHG measurement and reporting processes. sources.

For information on the risks we face related to climate change and other sustainability matters as well as, potential legislative and regulatory developments in this area that may increase our operating costs, potentially significantly, please see the risk factors in *Item 1A. Risk Factors* titled "We are subject to financial, regulatory, physical and transition risks associated with climate change or other sustainability matters as well as potential legislation, regulation and international accords to address climate change and other sustainability matters," "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 or significant restrictions on use and/or production of our products and raw materials" and "Our aspirations, goals, and initiatives related to sustainability, and our public statements and disclosures regarding them, expose us to risks." Climate-related regulatory risks are assessed as a part of

our Enterprise Risk Management process. However, due to the level of uncertainty regarding what legislative or regulatory requirements may be enacted, it is not possible for us to estimate the impact of climate-related developments on our results of operations or financial conditions. condition.

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, 2023 December 31, 2024
North America	
U.S.	4,248 4,085
Other North America	709 863
Total	4,957 4,948
Europe	
Germany	1,918 1,736
Other Europe	2,597 2,469
Total	4,515 4,205
Asia	
China	1,785 1,831
Other Asia	1,057 1,058
Total	2,842 2,889
Rest of World	96 121
Total	12,410 12,163

We believe that providing a workplace that promotes mutual respect and inclusion equal opportunity for all employees is critical to our success and to driving innovation and growth. To that end, we continue to make progress in our efforts to promote diversity, equity inclusion and inclusion equal opportunity in our Company. In As part of this, we invest in initiatives in order to enhance our visibility to a diverse broad pipeline of talent and broaden our candidate pool, we engage with historically black colleges and universities ("HBCUs"), trade associations and other professional groups. We also promote engagement globally through 68 chapters of nine different Employee Resource Groups designed to inspire, develop and increase the representation and engagement of underrepresented groups. pool.

As of **December 31, 2023** **December 31, 2024**:

- globally, women represent approximately 33% of our senior leadership team and 26% of our overall workforce; and
- in the U.S., people of color represent approximately 11% of our senior leadership team and 28% of our overall workforce.

The following shows our attrition rate for the year ended **December 31, 2023** **December 31, 2024**:

Employee Category	Attrition Rate
Global employees	10.5 9.1 %
Women (globally)	9.5 9.3 %
People of Color (U.S.)	12.8 10.8 %

Stewardship: Health, Safety and Environmental

We focus on more than the occupational health and 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 events since these incidents may have an impact on our communities. Our Stewardship values and guiding principles are centered on a commitment to do no harm to our workforce, environment, people or communities.

Achieving and maintaining stewardship excellence is a process of continuous improvement. Our values include a commitment to the health and safety of our employees, contractors, communities and the environment.

We utilize a mixture of leading and lagging indicators to assess the Stewardship performance of our operations. Lagging indicators for occupational health and safety include Total Recordable Incident Rate ("TRIR") and Lost Time Incident Rate ("LTIR") based upon the number of incidents per 200,000 work hours of both employees and contractors. Process Safety lagging indicators follow the industry standard from API RP 754 for Tier 1 and Tier 2 events for incident count, rate, and severity. In 2023, the criteria for tracking release to the environment was enhanced to a criteria that includes impact to the community and notification to a regulatory authority outside of routine communications.

Examples of Stewardship Tier 3 leading indicators include reporting and resolution of near miss events and high potential events, losses of primary containment releases and challenges to process safety systems.

For the year ended **December 31, 2023** **December 31, 2024**, we had a TRIR of 0.11 0.15 and an LTIR of 0.03. Through deliberate actions and intentions 0.02. These rates continue to understand and recognize reflect world class safety performance as compared to our employees' contributions industry peers. We remain committed to stewardship excellence, the value we have reduced our TRIR rate by 58% from 2022, established for safety.

Rounding out our Stewardship performance in 2023, 2024, we had 5 12 Tier 1 and Tier 2 process safety incidents and 5 environmental incidents. Any other loss of primary containment incidents, challenges to pressure relief systems, safety instrumented systems and safe operating limits are tracked as Tier 3 leading indicators. Our expanded tracking of leading indicator events helps identify potential emerging deficiencies that enables us to take continuous improvement actions. For example, this past year we concentrated heavily on improving our hazard identification and risk assessment and migration systems, which included expanding these concepts beyond process safety. We are also working to strengthen and fully integrate our stewardship management systems and developing new ways to establish and maintain an effective stewardship culture in a changing and evolving world around us so that all members of our workforce understand and act on their responsibilities seriously, leaders lead, and the entire workforce is fully involved and engaged. We continue to strive to create a workplace where every worker can return home safely every day.

Talent Development

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 management strategies across functional areas, and annually review executive succession with the Board of Directors.

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

The following risks could materially and adversely affect our business, financial condition, cash flows and results of operations, and the trading price of our common stock or outstanding senior notes could decline. These risk factors do not identify all risks that we face; our operations could also be affected by factors that are not presently known to us or that we currently consider to be immaterial to our operations. Additionally, some of the factors, events, and contingencies discussed below may have occurred in the past, and the disclosures below are not representations as to whether or not the factors, events or contingencies have occurred in the past, but are provided because future occurrences of such factors, events, or contingencies could have a material adverse effect. Due to risks and uncertainties, known and unknown, our past financial results may not be a reliable indicator of future performance, and historical trends should not be used to anticipate results or trends in future periods. Refer also to the other information set forth in this Form 10-K, including in [Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations](#) and the accompanying consolidated financial statements and notes thereto.

Risks Related to Business and Industry Conditions

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 ("U.S."), 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 declines in consumer and business confidence, fluctuating commodity prices and interest rates, cost inflation, instability in credit markets, volatile exchange rates and other challenges such as the changing regulatory environment.

Our operations are also subject to global political conditions, which may be subject to heightened uncertainty as a result of changes in governmental administration in the jurisdictions in which we operate and elsewhere. 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, including, but not limited to, anti-dumping and countervailing duties, 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 **continue to** 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 approximately one-third of our net sales annually, and accounted for approximately **32% 31%** of our Net sales in **2023, 2024**. Adverse conditions in the European economy **may be expected to continue to** negatively impact our overall financial results **and liquidity** 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 are exposed to volatility in the prices of our raw materials and energy. 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. We also procure polymers, rubber and polypropylene for use in production of engineered materials, and other raw materials as additives to our products including fiberglass, flame retardant materials and other compounding components.

The prices and availability of many of these items **is are** dependent on supply and logistics considerations. Prices can increase significantly as a result of uncertainties associated with inflationary pressures, transportation or logistics disruptions, weather, natural disasters, epidemics, pandemics, the effects of climate change or political instability, plant or production disruptions, war or conflicts, strikes or other labor unrest, breakdown or degradation of transportation infrastructure used in the delivery of raw materials and energy commodities, terrorist activities, civil unrest, or changes in laws, **regulations, or regulations tariffs** in any of the countries in which we have significant suppliers. In particular, to the extent of our vertical integration in the production of chemicals, shortages in the availability of raw material chemicals, such as natural gas, ethylene and methanol or the loss of our dedicated supplies of carbon monoxide, may have an increased adverse impact on us as it can cause a shortage in intermediate and finished products. Such shortages would adversely impact our ability to produce certain products and increase our costs resulting in reduced margins and adverse impacts to our financial results.

Like many companies, we **have** experienced significant supply disruptions and increased costs of **inputs during 2021 and into 2022, inputs**. These trends **have** impacted, **and may in the future impact**, our operating costs. We **undertook have previously undertaken** efforts to offset these costs through pricing actions, alternative supply arrangements, and hedging strategies, however, these **do have** not **eliminate eliminated** all exposure to inflationary pressure. **Should such conditions recur or resume, we** **We** cannot always successfully pass **increased** costs to customers. **competitive market conditions** may prevent us from doing so, and even where we are successful, increased prices **have led to and** could lead to reduced demand for our products or could result in competitive disadvantages.

We are exposed to volatility in the prices of our raw materials and energy. Although we **generally** 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, **hexamethylene diamine, PA66, PBT, ethanol, natural gas, fuel oil, 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 power usage, 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, lost sales and adverse impacts to our 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. **Almost all of our supply of methanol in North America is currently obtained from our Fairway joint venture with Mitsui, in which we own a 50% interest, for the production of methanol at our integrated chemical plant in Clear Lake, Texas.** 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 Fairway joint venture 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 or interruptions of operations could occur for many reasons, including fire, natural disasters, severe weather, unplanned maintenance or other manufacturing problems, public health crises, (including, but not limited to, the COVID-19 pandemic), disease, geopolitical events, strikes or other labor unrest, transportation interruption, government regulation, political unrest or terrorism, accidents, interruptions in sources of raw materials, cybersecurity incidents, the occurrence direct or indirect consequences of acts of war or conflict (such as the Russia-Ukraine conflict or conflicts in the Middle East), or other unforeseen events or delays in construction or operation of facilities. 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.

We have experienced disruptions of the type described above in recent years. For example, in 2024, concurrent outages by two of our suppliers of critical raw materials for production of acetic acid and subsequent production of VAM at our U.S. gulf coast sites led to the declaration of force majeure for these products sold in the Western Hemisphere. Additionally, we proactively and temporarily shut down one or more of our Texas production facilities during Winter Storm Uri in February 2021 and Hurricane Laura in August 2020, each of which instances resulted in lost sales and impacted our financial results for the relevant quarter.

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, had in the past and 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 may experience difficulties or delays achieving the intended benefits from acquiring the M&M Business and integrating its systems with the Company. Business.

In November 2022, we completed the acquisition of the M&M Business of DuPont. Since closing, we have actively worked, and continue to actively work, to integrate the M&M Business and its systems into our own and improve the performance of the M&M Business. The benefits of the M&M Acquisition, including the anticipated financial benefits and the synergies and growth opportunities, may not be realized as expected or may not be achieved within the anticipated timeframe, or at all. Since closing we have also worked, and continue to actively work, to integrate the M&M Business and its systems into our own. For example, in February 2024 we incorporated the M&M Business into the new enterprise resource planning ("ERP") system used by the Company. As we work to further integrate technology, information and ERP systems, financial reporting and commercial activities, it is possible that we may encounter unanticipated delays, costs or inefficiencies in connection with our continuing efforts to integrate the M&M Business.

If this occurs, if the potential financial and other benefits and synergies of the M&M Business going forward do not materialize in the amounts or on the timing we expect, or if we are not as successful as we plan at aligning our and the M&M Business's practices and operations, – including continuing to integrate commercial activities, information and ERP systems and technologies and continuing to align business cultures – then our business, financial performance and operating results could be adversely affected.

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 improving process technologies. If we are unsuccessful in developing new products, applications and improved 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, overruns, 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, which may be limited or offset by, among other things, contractual obligations, 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, specified. A successful claim or series of claims against us could have a material adverse effect on our reputation, 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 and practices 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.

We have recognized goodwill and indefinite-lived intangible asset impairment losses and may be required to recognize goodwill and indefinite-lived intangible asset impairment losses in the future.

At December 31, 2024, the Company has \$5.4 billion of goodwill and \$1.5 billion of indefinite-lived intangible assets recorded on its balance sheet. We test goodwill and indefinite-lived intangibles for impairment at least annually and more frequently if the Company believes indicators of impairment exist. The valuation models used to determine the fair value of goodwill or indefinite-lived intangible assets are dependent upon various assumptions and reflect management's best estimates.

The goodwill and indefinite-lived intangible asset impairment analyses are sensitive to changes in key assumptions used, such as discount rate, revenue growth rate, tax rate, cash flow projections and terminal value rate. Such key assumptions may be adversely impacted by significant negative industry or economic trends and forecasts, disruptions to our business, inability to effectively integrate acquired businesses, unexpected significant change or planned changes in use of our assets, changes in the structure of our business, divestitures, or market capitalization declines. Changes in market conditions or key assumptions made in future quantitative tests could negatively impact the results of future impairment testing for any of the Company's reporting units and could result in the recognition of an impairment charge. Because of the significance of our goodwill and indefinite-lived intangible assets, any future impairment of these assets could require material noncash impairment losses, which also could be material to our statements of operations.

During the three months ended December 31, 2024, we recognized a non-cash goodwill impairment loss of \$1.5 billion in our Engineered Materials segment. Additionally, we recognized aggregate non-cash impairment losses of \$117 million for the year ended December 31, 2024 related to certain trade names, primarily Zytel®, included in the Engineered Materials segment. See [Note 9 - Goodwill and Intangible Assets, Net](#) in the accompanying consolidated financial statements for further information.

There can be no assurance that future events or conditions may not result in additional impairments in our engineered materials reporting unit or impairment to any of our other reporting units' goodwill or to any of our indefinite-lived intangible or long-lived assets.

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 highly cyclical in nature, thus posing risks to us that vary throughout the year, including, but not limited to, accurately forecasting demand and other trends affecting our ability to accurately forecast revenues and operating results, and vary according to macroeconomic factors. 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, facility and engage in other divestitures that introduce significant risks and uncertainties.

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 of our Polyamide 66 (also known as PA66 or Nylon 66) and High-Performance Nylon (HPN) polymerization units at our facility in Uentrop, Germany Mechelen, Belgium, resulted in charges during fiscal 2023 2024 and is expected to result in charges in through fiscal 2024, 2028. The closure or divestiture of all or part of a manufacturing plant or facility could result in future charges that could be significant. Additionally, as part of our deleveraging efforts, we may engage in opportunistic dispositions or monetization of product or business lines or other assets. Divestitures involve significant risks and uncertainties that could adversely affect our business, results of operations and financial condition. These include, among others, the inability to find potential buyers on favorable terms, disruption to our business and/or diversion of management attention from other business concerns, loss of key employees, renegotiation or termination of key business relationships, retention of certain liabilities related to the divested business and indemnification or other post-closing claims. See [Note 4 - Acquisitions, Dispositions and Plant Closures](#) in the accompanying consolidated financial statements 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.

Risks associated with our joint ventures, including differences in views with our joint venture partners may cause them 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 **acquired interests in several additional joint ventures through the M&M Acquisition** and may enter into additional joint ventures in the future. Our joint ventures require 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. Additionally, our partners may be unable or unwilling to meet their economic or other obligations to the joint ventures, which could negatively impact them. If these risks cause the joint ventures to fail to achieve their desired operating performance, our results of operations could be adversely affected.

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

We conduct a significant portion of our operations outside the U.S. Consequently, fluctuations in currencies of other countries, especially the euro and Chinese yuan, may materially affect our operating results. Because our consolidated financial statements are presented in U.S. dollars, we must translate revenues, income and expenses, as well as assets and liabilities, into U.S. 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 U.S. 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 U.S. 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 or operational technology cybersecurity 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 and operational technology security and fraud. We rely on information and operational technology systems, including tools that utilize artificial intelligence, to conduct our business. We seek to prevent unauthorized access, **to maintain the confidentiality and the integrity of** our information and operational technology systems and **strive** to detect and investigate any cybersecurity incidents that may occur, however in some cases we might be unaware of a particular incident or its magnitude and effects. We may face increased information technology security, **continuity** and fraud risks due in part to our business efforts to digitize certain operations at our manufacturing sites to increase efficiencies and to our continued reliance on many employees working remotely part of the time, which may create additional information security vulnerabilities and/or magnify the impact of any disruption in information technology systems. **In addition, the rapid evolution and increased adoption of artificial intelligence technologies may intensify our cybersecurity risks.** Many tools and resources we use integrate or will integrate some form of artificial intelligence, which has the potential to result in bias, miscalculations, data errors, intellectual property infringement and other unintended consequences. **Artificial intelligence technologies may also be used by adversaries to enable new or augment existing attack techniques, tactics and protocols.** Additionally, we may be exposed to unauthorized access or operational interruptions to our information or operational technology systems through undetected vulnerabilities in our service providers' information systems or software. These risks may be heightened as a result of our ongoing efforts to integrate the M&M Business's technology environment with our own. **It may take considerable time for us to investigate and evaluate the full impact of incidents, particularly for sophisticated attacks. These factors may inhibit our ability to provide prompt, full, and reliable information about the incident to our customers, partners, regulators, and the public.**

The theft, misuse or publication of our intellectual property and/or confidential business information or the compromising of our systems or networks (including through ransomware, **unauthorized access or denial-of-service attacks**) **insider threats**) could harm our competitive position, cause operational disruption (including the potential to disrupt or compromise our control of physical plant operations at our manufacturing sites), 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 impacts operations at our manufacturing sites, we may experience production or shipping disruptions. 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 and operational 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, implementation of security tools and processes, employee training, crisis simulations and maintenance of backup and protective systems, our systems, networks, products and services remain potentially vulnerable to increasingly sophisticated advanced persistent threats, **including nation-state actors**, that may have a material effect on our business. In addition, the devotion of additional resources to the security of our information or operational technology systems in the future could significantly increase the cost of doing business or otherwise adversely impact our financial results.

We cannot guarantee the timing or amount of our dividends and/or our share repurchases, which are subject to a number of uncertainties that may affect the price of our common stock.

The declaration, payment, and amount of any dividends, and/or the decision to purchase common stock under our share repurchase programs, are subject to the sole discretion of our Board of Directors and, in the context of our capital allocation strategy, will depend upon many factors, including our financial condition, operating results, cash flows, relevant prospects, our capital requirements and access to capital markets, covenants associated with certain of our debt obligations, legal requirements, and other factors that our Board of Directors may deem relevant, and there can be no assurances that we will continue to pay a dividend or repurchase shares of our common stock in the future. In furtherance of our deleveraging efforts, we have paused our share repurchase program and are in the process of evaluating additional cash generation or conservation opportunities. As part of this process, on November 4, 2024, we announced our intent to reduce our quarterly dividend by approximately 95 percent beginning in the first quarter of 2025. We plan to continue to evaluate our dividend policy, taking into account our ability to return to a balanced capital allocation strategy. Any further reduction or elimination of our dividends could adversely affect the price of our common stock.

Regulatory, Legal, Environmental 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, anticorruption and sanctions laws, rules, regulations or court decisions, could expose us to fines, penalties and other costs. Although we have implemented policies, procedures and employee training designed to ensure promote 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. For example, in July 2020 we announced that we had reached a final settlement of \$92 million with respect to a competition law investigation by the European Commission based on certain past ethylene purchases by certain subsidiaries of the Company. Shell Chemicals Europe, and another group of corporate claimants, and, most recently, TotalEnergies Petrochemicals & Refining SA have filed claims for damages with the District Court of Amsterdam against four companies, including the Company, arising from those activities, and activities. BASF SE has filed a similar claim in the first court hearing was held in late September 2023. Court of Munich, Germany. See [Note 19 - Commitments and Contingencies](#) in the accompanying consolidated financial statements for further information.

Moreover, changes in laws or regulations, including the more aggressive enforcement of such laws and regulations, such as unexpected changes in regulatory requirements (including trade compliance requirements), or changes in reporting requirements of the U.S., 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 types of 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 19 - Commitments and Contingencies](#) in the accompanying consolidated financial statements for further information.

The M&M Acquisition introduced us into a number of new geographic markets, subjecting us to additional non-U.S. laws, regulations and policies which did not previously apply to us, and increased our exposure to certain other geographic markets as well as their laws and regulations. These laws and regulations are complex, change frequently, have become more stringent over time, could increase our cost of doing business, and could result in conflicting legal requirements. The increased risk of non-compliance with non-U.S. laws, regulations and policies as a result of the M&M Acquisition could adversely affect our results of operations, financial condition or strategic objectives.

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 materials and chemical products by us, including products produced for the medical device, pharmaceutical, automobile, construction, appliance, cigarette and aerospace end markets, involves a risk of exposure to product liability, warranty, toxic tort, public nuisance, and other tort claims, product recalls, product seizures and related adverse publicity. A product liability, warranty, toxic tort, public nuisance, or other 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 clean-ups, fines, penalties 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 13 - 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.

For more information on risks we face specifically related to climate change and related potential regulation, see the risk factor titled "We are subject to financial, regulatory, physical and transition risks associated with climate change or other sustainability matters as well as potential legislation, regulation and international accords to address climate change and other sustainability matters" below.

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 or significant restrictions on use and/or production of our products and raw materials.

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 and acetaldehyde, may be classified and labeled in a manner that would adversely affect demand for such products. For example, in 2019 the EPA designated formaldehyde as a high-priority substance under the Toxic Substances Control Act ("TSCA") and the substance is currently undergoing a multi-step review process. In December 2024, the EPA issued its final risk evaluation. In addition, in 2012 evaluation of certain uses of formaldehyde under 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. TSCA. We anticipate that, consistent with the results of TSCA, the IARC's and the NTP's reviews EPA will continue develop a draft risk management plan that is expected to be examined and considered by government regulatory agencies with responsibility released for setting worker and environmental exposure standards and labeling requirements, public comment in approximately 12 months.

Other initiatives, including the Chemical Strategy for Sustainability initiative currently to be undertaken by the EU as part of the Green Deal will potentially require, or increase existing requirements for, toxicological testing and risk assessments of a wide variety of chemicals, including chemicals used or produced by us. 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. The new requirements may necessitate reformulation of products in order to meet customers' demands, which would be a financially burdensome process.

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.

We are subject to financial, regulatory, physical and transition risks associated with climate change or other sustainability matters as well as potential legislation, regulation and international accords to address climate change and other sustainability matters.

Greenhouse gas ("GHG") emissions have become the subject of significant international, national, regional, state and local attention. For example, the EPA, SEC, and European Commission have promulgated or proposed extensive rules concerning reporting of GHG 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 is leading to additional statutory and 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 intended to reduce or mitigate the effects of GHG emissions. Compliance with such legislation, regulation and accords and the associated potential cost is complicated by the fact that various countries and regions are following different approaches and standards to the regulation of climate change.

A number of our operations are within jurisdictions that have or are developing regulatory regimes governing GHG emissions, which may lead to direct and indirect costs on our operations. Some jurisdictions have emissions reduction measures directed at the power or oil and gas sectors, which could result in higher power input costs or reduced energy availability for us. Other regulations that are being implemented or contemplated include the potential for restrictions on GHG emissions, cap and trade emissions trading systems, taxes on GHG emissions, fuel, and energy, or carbon import charges on certain products among other provisions. These may exist in addition to country and corporate-level net-zero GHG emissions pledges. These measures, if and where enacted, may significantly increase our costs of operations or require us to incur significant additional capital costs for the installation of equipment to mitigate GHG emissions for our sites' manufacturing operations.

Physical impacts of that could be associated with climate change, such as increased frequency and severity of hurricanes and floods and impact on sea levels, may also impact our facilities and operations and those of our key suppliers. A number of our sites are located in areas that are exposed to weather events and changing sea levels (such as the Texas Gulf Coast) and that have been impacted by hurricanes and other weather events in the past as described elsewhere in these risk factors. To the extent climate change exacerbates these threats, our operations and supply chains could experience increased levels of disruptions and added costs.

Additionally, increased social, legislative and regulatory focus on climate change and other sustainability matters as well as customer demand for responsibly manufactured products could lead to changes in the behavior of our customers or their end-customers, and could result in reduced customer demand for products made from materials that are perceived to

be significant contributors to greenhouse gas emissions and global climate change. We may fail to accurately react to these trends and refine our product offerings through innovation, or we may not be able to fully address these concerns through changes in manufacturing methods or use of more sustainable materials and processes, which could result in reduced demand for our products.

We closely monitor developments in this area, but there is significant uncertainty regarding what legislative or regulatory requirements may be put in place, which makes it impossible for us to predict the longer-term impact these measures have on our operations. However, we believe that future 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 aspirations, goals, and initiatives related to sustainability, and our public statements and disclosures regarding them, expose us to risks.

We have developed and publicized, and expect to continue to establish, goals, targets, and other objectives related to sustainability matters. These include a GHG intensity reduction target and other environmental targets. Such statements reflect our current plans at the time they are made, and do not constitute a guarantee that they will be achieved. Our ability to track and meet these goals depends on future innovations and technology and the availability of accurate reporting methods. Our efforts to research, establish, accomplish, and accurately report on these goals, targets, and objectives could expose us to operational, reputational, financial, legal, and other risks. Our ability to achieve any stated goal, target, or objective is and will be subject to numerous factors and conditions, many of which are outside of our control, such as evolving regulatory or quasi-regulatory sustainability standards, the ability of suppliers to meet our sustainability and other standards, differing requirements and the pace of changes in technology.

We may face increased scrutiny from the investment community, other stakeholders, regulators, and the media related to our sustainability activities, including the goals, targets, and objectives that we announce, and our methodologies and timelines for pursuing them. If our sustainability practices do not meet regulator, investor or other stakeholder expectations and standards, which continue to evolve and may be conflicting, our reputation, ability to attract or retain employees, and attractiveness as an investment, business partner, or as an acquirer could be negatively impacted, which could in turn adversely impact our business and results of operations. Similarly, our failure or perceived failure to pursue or fulfill our goals, targets, and objectives, to comply with ethical, environmental, or other standards, regulations, or expectations, or to satisfy various reporting standards with respect to these matters, within the timelines that we announce, or at all, could have the same negative impacts, as well as expose us to government enforcement actions and private litigation. Even if we achieve the goals, targets, and objectives we set, we may not realize all of the benefits expected at the time they were established.

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 13 - Environmental](#) and [Note 19 - 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, or the resolution of tax examinations or audits, could materially impact our results.

Our future effective tax rate and related tax balance sheet attributes could be impacted by changes in, or the interpretation of, 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.

Furthermore, a number of countries where we do business, including the U.S. 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. 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. 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.

For example, the Organization of Economic Cooperation and Development (the "OECD"), 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 (i) the shifting of profits among affiliated entities located in different tax jurisdictions and (ii) a global minimum tax of at least 15% of adjusted financial statement income, applied on a country-by-country basis, applicable to multinational groups with annual revenue of EUR750 million or more. The adoption of such changes is contingent upon the independent actions of participating countries to enact implementing domestic legislation. In December 2022, the EU member states voted unanimously to implement the 15% global minimum tax into national legislation, and other countries where we do business, including several EU member states, have either implemented, or are in the process of implementing, the 15% global minimum tax into domestic legislation which will be effective starting in 2024.

In August 2022, the Inflation Reduction Act of 2022 ("IRA") was enacted in the U.S. The IRA created a new book minimum tax, effective for tax years beginning after December 31, 2022, of 15% of adjusted consolidated GAAP pre-tax income for corporations with three-year average adjusted annual book income in excess of \$1.0 billion. The IRA also created an excise tax that is generally equal to 1% of the value of any stock repurchased by us after December 31, 2022.

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.

Our tax returns are have been under audit for the years 2013 through 2015 by the United States, the Netherlands and Germany. These authorities have proposed In September 2021, we received a draft joint audit report proposing adjustments to transfer pricing and the reallocation of income between the related jurisdictions jurisdictions. The relevant tax authorities also proposed to apply these adjustments to open tax years through 2019. While we have reached resolution We were unable to reach an agreement with the Netherlands, relevant tax authorities and therefore these audits continued on a separate jurisdictional basis. In the fourth quarter of 2022, we are currently concluded settlement discussions with the Dutch tax authority, and in the third quarter of 2024, we concluded settlement discussions with the German tax authority related to the German transfer pricing audit. We engaged in continuing discussions with the other taxing authorities tax authority in the United States, and we are currently evaluating all additional potential remedies. If this matter is resolved in a manner inconsistent with our expectations or we are unsuccessful in defending our position, our financial condition and operating results could be adversely impacted. remedies regarding the ongoing examination.

In addition, we are under examination in other certain jurisdictions for other matters for various years, including Mexico, Canada, the United States and Canada. Germany.

We cannot predict with certainty the outcome of tax examinations or audits. 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 or audits 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.

Our success depends on our ability to attract and retain key personnel including our management team. The inability to recruit and retain talented employees or the unexpected loss of such talented employees or key personnel may adversely affect our operations. Like many companies, we have experienced in the last couple of years and continue to experience an increasingly competitive hiring environment for skilled employees at our manufacturing and other sites, which in some cases has increased, or may in the future increase, the cost of retaining or hiring talented employees, particularly in technical manufacturing roles critical to our success.

In addition, we rely on our senior management team specifically, therefore our future success depends in part on our ability to retain those members of senior management and to identify and develop talent to succeed senior management. The hiring and 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 An extended duration strategy in the asset portfolio has been was 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 12 - 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 U.S.

As of December 31, 2023 December 31, 2024, we had 12,410 12,163 employees globally. Approximately 15% 13% of our 4,248 4,085 U.S.-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 U.S. 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 globally and their legal representatives, a strike, work stoppage, or slowdown by our employees, including in connection with renegotiation of labor contracts from time to time, could occur, resulting in a disruption of our operations or higher ongoing labor costs.

Risks Related to Our Indebtedness

Financing the M&M Acquisition significantly increased our indebtedness and interest expense, which could adversely affect us, decrease our business flexibility, diminish our ability to raise additional capital to fund our operations or refinance our existing indebtedness when it matures, adversely affect our credit ratings, and limit our ability to react to changes in the economy or the chemicals industry.

See [Note 11 - Debt](#) in the accompanying consolidated financial statements for further information about our indebtedness. See [Note 12 - Benefit Obligations](#), [Note 13 - Environmental](#) and [Note 19 - Commitments and Contingencies](#) in the accompanying consolidated financial statements for further information about our other obligations.

We incurred approximately \$11.0 billion. As of December 31, 2024, our total debt was \$12.6 billion. Despite our level of indebtedness, we expect to finance the M&M Acquisition, bringing our total outstanding indebtedness to \$13.7 billion at December 31, 2023, compared to \$14.7 billion at December 31, 2022. Also, the amount of additional debt. There may be circumstances in which required payments of cash required to pay principal and/or interest on our increased indebtedness, and thus the demands on debt could adversely affect our cash resources, has significantly increased as a result of the indebtedness flows, our operating results or our ability to finance the M&M Acquisition.

return capital to our shareholders. We have allocated, and intend to continue to allocate, capital to repay and reduce our outstanding debt using cash from operations and proceeds from asset sales or dispositions in cases where we are able to do so on favorable terms. Our ability to reduce our level of indebtedness over time in line with our strategic goals depends on a number of factors including our business performance, macroeconomic and industry conditions, commercial and financing market conditions, and other factors described in these risk factors, and our inability to achieve these objectives could delay or alter our deleveraging plan, or could negatively impact the trading prices of our securities or our credit ratings. In furtherance of our deleveraging efforts, we have paused our share repurchase program and are in the process of evaluating additional cash generation or conservation opportunities. As part of this process, on November 4, 2024, we announced our intent to reduce our quarterly dividend by approximately 95 percent beginning in the first quarter of 2025.

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

- Increasing our vulnerability to general economic and industry conditions, including exacerbating the impact of any adverse business effects that could impact our ability to repay amounts due under existing senior credit agreements (the "Credit Agreements") or the indentures (the "Indentures") governing our outstanding senior unsecured notes (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 or repurchase our common stock, par value \$0.0001 per share ("Common Stock");
- Reducing our flexibility to respond to changing business and economic conditions;
- 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;
- Adversely affecting our ability to comply with restrictive covenants in our debt agreements, which could result in an event of default, including cross-defaults to other debt facilities, if not cured or waived;
- Adversely affecting our future credit ratings, which could increase our future costs of funding, liquidity and access to capital markets; 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.

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

If our cash flows and capital resources are insufficient to fund our debt obligations, we may be forced to reduce or delay capital expenditures, sell assets on unfavorable terms, seek additional capital, or restructure or refinance our indebtedness. These alternative measures may not be successful and may not permit us to meet our scheduled debt service and other obligations. In the absence of such operating results and resources, we could face substantial liquidity problems and might be required to dispose of material assets or operations to meet our debt service and other obligations. We may not be able to complete those dispositions or to obtain the proceeds that we could realize from them, and these proceeds may not be adequate to meet any debt service obligations then due.

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

The Credit Agreements, 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 Agreements 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 Agreements require the maintenance of certain financial ratios. The Indentures contain covenants

including, but not limited to, restrictions on our and certain of our subsidiaries' ability to 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.

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

Such restrictions in the instruments governing 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 any of the Credit Agreements could permit lenders to accelerate the maturity of our indebtedness under such Credit Agreement and to terminate any commitments to lend. If the lenders under any 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.

Our credit ratings are subject to change and may not reflect all risks of investments in our securities.

Our credit ratings are an assessment by rating agencies of our ability to pay our debts when due. Consequently, real or anticipated changes in our credit ratings will generally affect the market value of our securities. These credit ratings may not reflect the potential impact of risks relating to our securities. Agency ratings are not a recommendation to buy, sell or hold any security, and may be revised or withdrawn at any time by the issuing organization. Each agency's rating should be evaluated independently of any other agency's rating. **Any In November 2024, S&P Global Ratings downgraded our long-term credit rating from BBB- to BB+, with a stable outlook and in December 2024 Fitch Ratings affirmed our long-term credit rating of BBB- but revised our rating outlook to negative from stable. On February 12, 2025 Moody's Ratings downgraded our long-term and short-term credit ratings from Baa3 to Ba1 with a negative outlook. We cannot be assured that we will be able to maintain our current credit ratings, and any additional actual or anticipated negative changes or downgrades in our credit ratings or ratings outlook or watch, including any announcement that our ratings are under review for a downgrade, could further increase our corporate borrowing costs and affect the market value of our securities. securities and may have a negative impact on our liquidity, capital position and access to capital markets.**

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

As holding companies, Celanese and Celanese U.S. 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 U.S.'s obligations, including obligations under the Senior Notes and the guarantee of Celanese U.S.'s obligations under the Credit Agreements 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 U.S. 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 U.S. and Celanese. In the event Celanese U.S. and/or Celanese do not receive distributions from our subsidiaries, Celanese U.S. and/or Celanese may be unable to make required payments on the indebtedness under the Credit Agreements, the Indentures, the guarantee of Celanese U.S.'s obligations under the Credit Agreements and the Indentures by Celanese, or our other indebtedness.

Item 1B. Unresolved Staff Comments

None.

Item 1C. Cybersecurity

Cybersecurity Risk Management and Oversight

Strategy for Management of Cybersecurity Risk

Cybersecurity, **protection resilience** and data privacy are important to maintaining our proprietary information and the trust of our customers, suppliers and employees, and we recognize the importance of working to secure our data and information systems from potential cybersecurity and data privacy incidents. We are a large global manufacturer with sites around the world, and we identify and assess our cybersecurity risk through that lens. Securing the execution and control of our manufacturing operations, to the extent implemented through digital technology, is a primary area of focus. We also face risks encountered by substantially all large global companies such as the risks of intellectual property and information being compromised, fraud, **business interruption** and violation of privacy or security laws.

We identify, assess, manage and mitigate cybersecurity risk through a risk management program based on the NIST Cybersecurity Framework that is regularly assessed by a third party cybersecurity consultant. As part of our processes, we perform routine scanning and have an established vulnerability management program and patching policy. We have in our learning management system a comprehensive cybersecurity awareness course that is mandatory for all employees with computers and covers key topics such as identifying workplace cybersecurity hazards and attacks, and our separate CyberSAFE and Data Privacy intranets provide content to help employees identify and avoid cybersecurity and data privacy risks. We also have data privacy educational tools, policies and procedures to help employees prevent, recognize and report data privacy incidents. We perform penetration tests and vulnerability and breach assessments with third-party advisors to support our compliance with laws and regulations including those applicable to chemical manufacturing sites. We also have a third-party risk management program with a formal approach to evaluating and managing risks associated with third-party information technology solutions and software. We maintain cyber/information security insurance to protect against certain expenses and liabilities that may be incurred in the event of an incident.

Cybersecurity, **risk is resilience** and data privacy risks are maintained and managed **on an ongoing basis** as part of our broader enterprise risk management program. Specifically, a risk management workstream focused on our information technology function (including **cybersecurity**) **cybersecurity, resilience and data privacy** is designed to assess, identify and manage **cybersecurity-related cybersecurity- resilience and data privacy-related** risks and mitigation measures.

Our cybersecurity risk program also includes a documented incident response plan to be used in the event of a cybersecurity incident. The incident response plan provides for certain responses based on various factors of a cybersecurity incident, incident and integrates with our enterprise crisis management program.

Governance and Oversight

Primary responsibility for assessing and managing risks from cybersecurity threats resides with our management team, including a Chief Information Officer who has nearly 30 years of information technology experience including leadership roles at multiple large, global and/or publicly-traded companies, and a Chief Information Security Officer who has over 30 years of experience in cybersecurity with large international publicly-traded companies and who holds a Certified Information Systems Security Professional (CISSP) certification. These individuals, together with others on their teams, are informed about the monitoring, prevention, detection, mitigation, and remediation of cybersecurity incidents through their management of and participation in the cybersecurity risk management policies, processes and operations discussed above. They regularly report to and consult with the executive leadership team on such matters.

At the Board level, the full Board and its Environment, Health, Safety, Quality and Public Policy ("EHSQPP") Stewardship Committee (which oversees many of our operational risks related to manufacturing) are both involved in oversight of the Company's management of cybersecurity risk. Management, including the Chief Information Officer and Chief Information Security Officer, updates our EHSQPP Stewardship Committee and full Board on cybersecurity matters quarterly. We also have processes by which certain cybersecurity incidents are escalated within the Company and may be reviewed by a designated management committee and, where appropriate, reported in a timely manner to the Board.

Additional Information

For additional information on the risks we face related to cyber and information security threats, please see the risk factors in Item 1A, Risk Factors titled "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" on page 19 and "We are subject to information or operational technology cybersecurity threats that could materially affect our business" on page 22.

Item 2. Properties

Description of Property

Our corporate headquarters is located in Irving, Texas and we also have administrative offices in Amsterdam, Netherlands; Asturias, Spain; Budapest, Hungary; Hyderabad, India; Kunshan, China; Mexico City, Mexico; Meyrin, Switzerland; Nanjing, China; Shanghai, China; and Sulzbach, Germany. 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 our principal production and other facilities throughout the world as of December 31, 2023 December 31, 2024. These facilities are well-maintained, in good operating condition, are suitable and adequate for their use and have sufficient capacity for our current needs and expected near-term growth.

Geographic Region	Geographic Region	Engineered Materials ⁽¹⁾		Acetyl Chain ⁽¹⁾		Geographic Region				Engineered Materials ⁽¹⁾		Acetyl Chain ⁽¹⁾		Corporate			
	Leased		Leased	Owned	Leased	Owned		Leased	Owned		Leased	Owned	Leased	Owned	Leased	Owned	
North America																	
Europe and Africa																	
Asia-Pacific																	
South America																	
Total																	

(1) Certain geographic locations may contain sites used by multiple segments.

We have also 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 shareholders, 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 13 - Environmental](#) and [Note 19 - 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

Not applicable.

Information about our Executive Officers

The names, ages and biographies of our executive officers as of [February 23, 2024](#) [February 21, 2025](#) are as follows:

Name	Age	Position
Lori J. Ryerkerk	61	Chair of the Board of Directors, Chief Executive Officer and President
Scott A. Richardson	47 48	President, Chief Executive Vice President Officer and Chief Operating Officer Director
Chuck B. Kyrish	52 53	Senior Vice President and Chief Financial Officer
Thomas F. Kelly Todd Elliott	58 59	Senior Vice President, Engineered Materials
Mark C. Murray	53 54	Senior Vice President, Acetyls
Ashley B. Duffie	49 50	Senior Vice President and General Counsel

[Lori J. Ryerkerk](#) [Scott A. Richardson](#) was named [our President and Chief Executive Officer and President](#) and a member of our Board of Directors effective [May 2019](#). In [April 2020](#), she was named Chair 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 [January 1, 2025](#). He served 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 Executive Vice President and Chief Operating Officer for Celanese Corporation [in from November 2023, 2023 until his current role](#). He had previously served as served as Executive Vice President and Chief Financial Officer for Celanese Corporation since 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.

[Chuck B. Kyrish](#) has served as our Senior Vice President and Chief Financial Officer since November 2023. He previously served as Vice President of Corporate Finance from April 2022, with supervisory responsibility for the Company's finance areas including accounting, treasury, internal audit, and tax. He has held previous financial leadership roles at Celanese serving as CFO, Acetyl Chain from January 2020 to April 2022, leading Investor Relations from December 2018 to January 2020 and December 2015 through January 2017 and serving as Treasurer from February 2011 to November 2015 and January 2017 to January 2020. He joined Celanese in 2006 as Financial Risk Manager and was promoted to Assistant Treasurer in 2008. Prior to joining Celanese, he held financial roles at Sabre Corporation and ExxonMobil Corporation. Mr. Kyrish holds a Bachelor of Science degree from the University of Texas at Austin and a Master of Business Administration from Texas Christian University.

[Thomas F. Kelly](#) [Todd Elliott](#) was named [returned to Celanese to serve as](#) Senior Vice President, Engineered Materials in [April 2020, leading February 2025](#). Mr. Elliott first joined Celanese in 1987 in a district sales role. He quickly rose through increasing leadership opportunities in regional sales, business analysis, investor relations, and corporate development. He led the Engineered Materials Acetate Tow business with global responsibility for product and business management, planning and portfolio development, and pipeline management. He had previously served as before becoming Senior Vice President of global sales for both Acetyls and 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 2016. In 2017, he held the roles of became Senior Vice President and

Chief Commercial Officer global commercial leader for Engineered Materials and head of Celanese Europe until 2018. At that time, he was elevated to Senior Vice President of Corporate Development. Acetyls and is credited with transforming the Acetyls operating model to a differentiated focus on

downstream derivatives optionality that has redefined the value of the Acetyls business. He was previously with retired from Celanese from August 2012 in 2020 and had been an independent consultant 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 clients in supply chain, sales the chemicals and manufacturing management with Chemtura, Cabot Microelectronics polymers industry prior to rejoining the Company. Mr. Elliott earned his undergraduate degree at Westminster College and Rohm & Haas. Mr. Kelly also served as a board member of Nucera Solutions, a provider of specialty polymer solutions, from June 2021 through August 2022, and of Vertellus Global Holdings LLC, a supplier of specialty chemical products, from August 2019 through December 2020. He holds a his Master of Business Administration from Drexel University, and Master's and Bachelor's Degrees in Chemical Engineering from Villanova at Fontbonne University.

Mark C. Murray was named Senior Vice President, Acetyls in February 2023 after having served as the interim leader of Celanese's Acetyls Business since November 2022. Before rejoining Celanese in June 2022 as Vice President of Business Strategy and Development, Mr. Murray served as Executive Vice President, Biomaterials and Advanced Technologies at Avantor, a global materials manufacturer and distributor. Mr. Murray previously served in senior commercial and business roles within the Acetyl Chain and Engineered Materials businesses at Celanese from November 2009 through June 2019 and from May 2002 to March 2007. Earlier in his career he served as a consultant with McKinsey & Co. Mr. Murray holds a Bachelor of Science degree in Chemical Engineering from the University of Texas at Austin and a Master of Business Administration from Northwestern University.

Ashley B. Duffie has served as Celanese's Senior Vice President and General Counsel since November 2023. She had previously served as Vice President and Chief Procurement Officer since June 2020, where she was responsible for leading the company's Company's strategy and execution of materials and supply procurement as well as managing supplier relationships. Prior to that role, she has held legal and business leadership positions with Celanese including President and General Counsel of Asia Pacific and China (January 2019 to June 2020), Chief Administrative Officer and General Counsel of Asia Pacific and China (June 2018 to January 2019), Vice President of the Integration Management Office (June 2017 to June 2018) and Chief Compliance Officer (2013 to 2017). She joined Celanese in 2007 as Associate General Counsel, and previously practiced at the law firm of Haynes and Boone, LLP specializing in environmental law, internal corporate investigations, and litigation. She holds a law degree from Vermont Law School and a Bachelor of Business Administration from Southern Methodist University.

PART II

Item 5. Market for the Registrant's Common Equity, Related Shareholder 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 February 9, 2024 February 17, 2025, there were 114 125 holders of record of our Common Stock. A substantially greater number of holders of our common stock are "street name" or beneficial holders, whose shares of record are held by banks, brokers and other financial institutions.

Dividend Policy

The amount available to us to pay cash dividends is not currently restricted by our existing senior credit facilities and our indentures governing our senior unsecured notes. Also, the general corporation law of the State of Delaware imposes 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 14 - Shareholders' Equity](#) in the accompanying consolidated financial statements for further information.

Celanese Purchases of its Equity Securities

We did not repurchase any Common Stock during the three months ended December 31, 2023 December 31, 2024. As of December 31, 2023 December 31, 2024, our Board of Directors had authorized the repurchase of \$6.9 billion of our Common Stock since February 2008, with approximately \$1.1 billion value of shares remaining that may be purchased under the program. See [Note 14 - Shareholders' 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, 2018 December 31, 2019 through December 31, 2023 December 31, 2024 to that of the Standard & Poor's ("S&P") 500 Stock Index and the Dow Jones U.S. 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, 2018 December 31, 2019. 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

2024 Revenue Graph.jpg

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

Recent Sales of Unregistered Securities

Our deferred compensation plan offers certain of our senior employees and directors the opportunity to defer a portion of their compensation in exchange for a future payment amount equal to their deferrals plus or minus certain amounts based upon the market-performance of specified measurement funds selected by the participant. These deferred compensation obligations may be considered securities of Celanese. Participants were required to make deferral elections under the plan prior to January 1 of the year such deferrals will be withheld from their compensation. We relied on the exemption from registration provided by Section 4(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. Reserved

This item is no longer required, as the Company adopted the amendment to Item 301 of Regulation S-K contained in SEC Release No. 33-10890, which became effective on February 10, 2021.

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 U.S." 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 ("U.S. 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 within the meaning of the Private Securities Litigation Reform Act of 1995 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 as of the time that the statements are made, date hereof, 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. 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.

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 business and/or 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:

- 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;
- volatility or changes in the price and availability of raw materials and energy, particularly changes in the demand for, supply of, and market prices of ethylene, methanol, natural gas, carbon monoxide, wood pulp, hexamethylene diamine, Polyamide 66 ("PA66"), polybutylene terephthalate, ethanol, natural gas and fuel oil, and the prices for electricity and other energy sources;
- the ability to pass increases in raw material materials prices, logistics costs and other costs on to customers or otherwise improve margins through price increases;

- the possibility that we will not be able to **timely or effectively continue to integrate realize the anticipated benefits** of the Mobility & Materials business (the "M&M Business") we acquired from DuPont de Nemours, Inc. (the "M&M Acquisition") **in order to realize the anticipated benefits of the M&M Acquisition**, including synergies and growth opportunities, whether as a result of difficulties arising from the operation of the M&M Business or other unanticipated delays, costs, inefficiencies or liabilities;
- additional impairments of goodwill or intangible assets;**
- increased commercial, legal or regulatory complexity of entering into, or expanding our exposure to, certain end markets and geographies;
- risks in the global economy and equity and credit markets and their potential impact on our ability to pay down debt in the future and/or refinance at suitable rates, in a timely manner, or at all;
- risks and costs associated with increased leverage from the M&M Acquisition, including increased interest expense and potential reduction of business and strategic flexibility;
- 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 or divestiture opportunities and to complete such transactions, including obtaining regulatory approvals, consistent with our strategy;
- market acceptance of our products and technology;
- compliance and other costs and potential disruption or interruption of production or operations due to accidents, interruptions in sources of raw materials, transportation, logistics or supply chain disruptions, cybersecurity incidents, terrorism or political unrest, public health crises, **(including, but not limited to, the COVID-19 pandemic)**, or other unforeseen events or delays in construction or operation of facilities, including as a result of geopolitical conditions, the direct or indirect consequences of acts of war or conflict (such as the Russia-Ukraine conflict or **conflicts in the Israel-Hamas conflict Middle East**) 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, **anti-dumping and countervailing duties**, adjustments, changes in estimates or interpretations or the resolution of tax examinations or audits that may impact recorded or future tax impacts and potential regulatory and legislative tax developments in the United States and 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 or other sustainability matters;
- 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;
- our level of indebtedness, which could diminish our ability to raise additional capital to fund operations or limit our ability to react to changes in the economy or the chemical industry, and the success of our deleveraging efforts, as well as any changes to our credit ratings.**
- changes in currency exchange rates and interest rates;**
- tax rates and changes thereto;** and
- various other factors, both referenced and not referenced in this Annual Report.

Many of these factors are macroeconomic in nature and are, therefore, beyond our control. Should one or more of these risks or uncertainties materialize, 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, the dates hereof.**

Results of Operations

Financial Highlights

	Year Ended December 31,
	Year Ended December 31,
	Year Ended December 31,
	Year Ended December 31,
	2023
	2023
	2023
	2024
	2024
	2024
	(In \$ millions, except percentages)
	(In \$ millions, except percentages)
	(In \$ millions, except percentages)

Statement of Operations Data
Net sales
Net sales
Net sales
Gross profit
Gross profit
Gross profit
Selling, general and administrative ("SG&A") expenses
Selling, general and administrative ("SG&A") expenses
Selling, general and administrative ("SG&A") expenses
Other (charges) gains, net
Other (charges) gains, net
Other (charges) gains, net
Gain (loss) on disposition of businesses and assets, net
Gain (loss) on disposition of businesses and assets, net
Gain (loss) on disposition of businesses and assets, net
Operating profit (loss)
Operating profit (loss)
Operating profit (loss)
Equity in net earnings (loss) of affiliates
Equity in net earnings (loss) of affiliates
Equity in net earnings (loss) of affiliates
Non-operating pension and other postretirement employee benefit (expense) income
Non-operating pension and other postretirement employee benefit (expense) income
Non-operating pension and other postretirement employee benefit (expense) income
Interest expense
Interest expense
Interest expense
Interest income
Interest income
Interest income
Dividend income - equity investments
Dividend income - equity investments
Dividend income - equity investments
Earnings (loss) from continuing operations before tax

Earnings (loss) from continuing operations before tax
Earnings (loss) from continuing operations before tax
Earnings (loss) from continuing operations
Earnings (loss) from continuing operations
Earnings (loss) from continuing operations
Earnings (loss) from discontinued operations
Earnings (loss) from discontinued operations
Earnings (loss) from discontinued operations
Net earnings (loss)
Net earnings (loss)
Net earnings (loss)
Net earnings (loss) attributable to Celanese Corporation
Net earnings (loss) attributable to Celanese Corporation
Net earnings (loss) attributable to Celanese Corporation

Other Data

Other Data

Other Data

Depreciation and amortization
Depreciation and amortization
Depreciation and amortization
SG&A expenses as a percentage of Net sales
SG&A expenses as a percentage of Net sales
SG&A expenses as a percentage of Net sales
Operating margin ⁽¹⁾
Operating margin ⁽¹⁾
Operating margin ⁽¹⁾
Other (charges) gains, net
Other (charges) gains, net
Other (charges) gains, net
Restructuring
Restructuring
Restructuring
Asset impairments
Asset impairments
Asset impairments
Plant/office closures
Plant/office closures
Plant/office closures
Total Other (charges) gains, net
Total Other (charges) gains, net
Total Other (charges) gains, net

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

	As of December 31,	
	2023	2022
	2024	2023
	(In \$ millions)	

Balance Sheet Data
Cash and cash equivalents
Cash and cash equivalents
Cash and cash equivalents

Short-term borrowings and current installments of long-term debt - third party and affiliates
Short-term borrowings and current installments of long-term debt - third party and affiliates
Short-term borrowings and current installments of long-term debt - third party and affiliates
Long-term debt, net of unamortized deferred financing costs
Total debt

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, 2023	December 31, 2024	Compared to Year Ended		December 31, 2022	December 31, 2023							
		Volume												
		Volume												
		Volume		Price		Currency		Total		Price		Currency		Total
		(In percentages)												
Engineered Materials														
Acetyl Chain														
Acetyl Chain														
Acetyl Chain														
Total Company														

Consolidated Results

Year Ended December 31, 2023 December 31, 2024 Compared to Year Ended December 31, 2022 December 31, 2023

Net sales increased \$1.3 billion, decreased \$660 million, or 13% 6%, for the year ended December 31, 2023 December 31, 2024 compared to the same period in 2022 2023 primarily due to:

- higher volume, primarily in our Engineered Materials segment related to the M&M Acquisition and the KEPCO restructuring (see Note 4 - Acquisitions, Dispositions and Plant Closures in the accompanying consolidated financial statements for further information) and also in lower pricing, driven by our Acetyl Chain segment due to increased an environment with greater supply than demand, for most of our products in Asia;

partially offset by:

- lower pricing, primarily in our Acetyl Chain segment as market and pricing conditions reverted from increased levels in the prior year and also in well as our Engineered Materials segment due to competitive market dynamics, product mix, and decreased energy surcharges, market considerations, and an unfavorable product mix; and surcharges;
- lower volume in our Acetyl Chain segment due to decreased demand for vinyl acetate monomer ("VAM"), acid and emulsion polymers in the Western Hemisphere.

Operating profit increased \$309 million, or 22%, for the year ended December 31, 2023 compared to the same period in 2022 primarily due to:

- higher Net sales in our Engineered Materials segment;
- a gain of \$515 million in our Engineered Materials segment recognized on primarily due to the formation of the Nutrinova joint venture (see Note 4 - Acquisitions, Dispositions and Plant Closures in the accompanying consolidated financial statements for further information); and reduced demand for elastomers due to weaker automotive demand, partially offset by higher volume, principally for POM in Europe and Asia; and
- lower raw material an unfavorable currency impact, primarily resulting from a weaker Chinese Yuan ("CNY") and sourcing costs in our Acetyl Chain segment, primarily for ethylene, methanol and acid; Japanese Yen ("JPY") relative to the U.S. dollar;

partially offset by:

- higher raw material costs volume in our Acetyl Chain segment for most of our products, primarily methanol, downstream derivative products, acid, and spending VAM.

Operating profit decreased \$2.4 billion, or 141%, for the year ended December 31, 2024 compared to the same period in 2023 primarily due to:

- an unfavorable impact of \$1.7 billion to Other (charges) gains, net primarily in our Engineered Materials segment as a result related to an impairment loss on goodwill of additional production capacity gained through \$1.5 billion and impairment losses on certain trade names, primarily Zytel® (see Note 9 - Goodwill and Intangible Assets, Net and Note 24 - Other (Charges) Gains, Net in the M&M Acquisition; and accompanying consolidated financial statements for further information);
- lower Net sales across our segments; and

- a gain of \$515 million in our Engineered Materials segment recognized on the formation of the Nutrinova joint venture during the year ended December 31, 2023, which did not recur in the current year (see [Note 4 - Acquisitions, Dispositions and Plant Closures](#) in the accompanying consolidated financial statements for further information);

partially offset by:

- lower raw material costs in our Engineered Materials and Acetyl Chain segment segments.

Non-operating pension and other postretirement employee expense increased \$86 decreased \$49 million for the year ended December 31, 2023 December 31, 2024 compared to the same period in 2022 2023 primarily due to higher interest costs of \$66 million and lower expected return on plan assets of \$34 million, partially offset by a decrease in recognized actuarial loss of \$15 \$29 million primarily as a result of a decrease an increase in the weighted average discount rate used to determine benefit obligations from 4.9% 4.5% to 4.5%, 4.8%,

partially offset by lower than expected actual asset returns. See [Note 12 - Benefit Obligations](#) in the accompanying consolidated financial statements for further information.

Our effective income tax benefit rate for the year ended December 31, 2023 December 31, 2024 was 67% (51)% compared to 34% (67)% for the year ended 2022 2023. The higher change in the effective income tax benefit rate for the year ended December 31, 2023 December 31, 2024 compared to the same period in 2022 2023 was primarily due to to:

- prior year impacts that did not recur in the current year, including the relocation of certain intangible assets to better align with the acquired M&M foreign operations, the realignment of our European headquarters and principal operations to Switzerland to achieve operational efficiencies, the release of valuation allowances on U.S. foreign tax credit carryforwards, and the excess of the U.S. GAAP gain over the tax gain from the formation of the Nutrinova joint venture. venture; and
- current year impacts of a non-deductible goodwill impairment loss and recognition of a valuation allowance against certain local country, non-U.S. tax credit carryforwards due to reduced forecasts of earnings in future periods and capital gains tax arising from an internal integration-related restructuring of our acquired China operations to optimize our debt profile.

See [Note 15 - 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, 2023 compared to the year ended December 31, 2022 and for the year ended December 31, 2022 compared to the year ended December 31, 2021 and for the year ended December 31, 2021 compared to the year ended December 31, 2020, 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, 2022 December 31, 2023 and December 31, 2021 December 31, 2022, respectively.

Business Segments

Engineered Materials

	Year Ended December 31,	Year Ended December 31,	Year Ended December 31,
	2023	2023	2023
	2023	2023	2023
	2024	2024	2024
	2024	2024	2024
	2024		
	(In \$ millions, except percentages)		
	(In \$ millions, except percentages)		
	(In \$ millions, except percentages)		

Net sales

Net Sales Variance

Net Sales Variance

Net Sales Variance

Volume
Volume
Volume
Price
Price
Price
Currency
Currency
Currency
Other (charges) gains, net
Other (charges) gains, net
Other (charges) gains, net
Operating profit (loss)
Operating profit (loss)
Operating profit (loss)
Operating margin
Operating margin
Operating margin
Equity in net earnings (loss) of affiliates
Equity in net earnings (loss) of affiliates
Equity in net earnings (loss) of affiliates
Depreciation and amortization
Depreciation and amortization
Depreciation and amortization

Year Ended **December 31, 2023** **December 31, 2024** Compared to Year Ended **December 31, 2022** **December 31, 2023**

Net sales **increased** **decreased** for the year ended **December 31, 2023** **December 31, 2024** compared to the same period in **2022** **2023** primarily due to:

- **higher** **lower** volume, primarily **related to the M&M Acquisition and the KEPCO restructuring (see [Note 4 - Acquisitions, Dispositions and Plant Closures](#) in the accompanying consolidated financial statements for further information);**

partially offset by:

- **lower pricing for most of our products, primarily due to decreased energy surcharges, market considerations, and an unfavorable product mix, particularly in Asia and Europe.**

Operating profit increased for the year ended December 31, 2023 compared to the same period in 2022 primarily due to:

- **higher Net sales; and**
- **a gain of \$515 million recognized on **driven by** the formation of the Nutrinova joint venture (see [Note 4 - Acquisitions, Dispositions and Plant Closures](#) in the accompanying consolidated financial statements for further information);**

and reduced demand for elastomers due to weaker automotive demand, partially offset by:

- **by higher **raw material costs as a result of additional production capacity gained through the M&M Acquisition;** volume for certain products, principally for POM in Europe and **Asia;****
- **higher spending of \$558 million as a result of the M&M Acquisition, which includes selling and administrative, distribution and operating costs.**

Equity in net earnings (loss) of affiliates decreased for the year ended December 31, 2023 compared to the same period in 2022 primarily due to:

- **losses from our DuPont Teijin Films strategic affiliates due to restructuring; and**
- **a decrease in equity investment in earnings of \$35 million from our Ibn Sina strategic affiliate, primarily as a result of reduced oil prices.**

Depreciation and amortization, which is included in Operating profit, increased for the year ended December 31, 2023 compared to the same period in 2022 primarily as a result of the M&M Acquisition.

Acetyl Chain

	Year Ended December 31,		Change	% Change
	2023	2022		
	(In \$ millions, except percentages)			
Net sales	4,884	5,743	(859)	(15.0)%
Net Sales Variance				
<i>Volume</i>	2 %			
<i>Price</i>	(17) %			
<i>Currency</i>	— %			
Operating profit (loss)	1,109	1,447	(338)	(23.4)%
Operating margin	22.7 %	25.2 %		
Dividend income - equity investments	124	132	(8)	(6.1)%
Depreciation and amortization	217	213	4	1.9 %

Year Ended December 31, 2023 Compared to Year Ended December 31, 2022

Net sales decreased for the year ended December 31, 2023 compared to the same period in 2022 primarily due to:

- lower pricing for most of our products, primarily VAM, acid due to competitive market dynamics, product mix, and emulsion polymers, as market and pricing conditions reverted from increased levels in the prior year particularly in Asia and Europe; decreased energy surcharges; and
- lower volume due an unfavorable currency impact, primarily resulting from a weaker JPY and CNY relative to decreased demand for VAM, acid and emulsion polymers in the Western Hemisphere; U.S. dollar.

partially offset by:

- higher pricing for acetate tow; and

- higher volume due to increased demand for most of our products, primarily in Asia.

Operating profit decreased for the year ended December 31, 2023 December 31, 2024 compared to the same period in 2022 2023 primarily due to:

- an unfavorable impact of \$1.7 billion to Other (charges) gains, net primarily related to an impairment loss on goodwill of \$1.5 billion and impairment losses on certain trade names, primarily Zytel® (see Note 9 - Goodwill and Intangible Assets, Net and Note 24 - Other (Charges) Gains, Net in the accompanying consolidated financial statements for further information);
- a gain of \$515 million recognized on the formation of the Nutrinova joint venture during the year ended December 31, 2023, which did not recur in the current year (see Note 4 - Acquisitions, Dispositions and Plant Closures in the accompanying consolidated financial statements for further information); and
- lower Net sales;

partially offset by:

- lower raw material and sourcing materials costs primarily for ethylene, methanol and acid, most of our products.

Other Activities

	Year Ended		Change	% Change
	December 31,			
	2023	2022		
(In \$ millions, except percentages)				
Operating profit (loss)	(505)	(498)	(7)	(1.4)%
Non-operating pension and other postretirement employee benefit (expense) income	(68)	17	(85)	(500.0)%

Year Ended December 31, 2023 Compared to Year Ended December 31, 2022

Operating loss Equity in net earnings (loss) of affiliates increased for the year ended December 31, 2023 December 31, 2024 compared to the same period in 2022 2023 primarily due to:

- an increase in earnings from our Mylar Specialty Films strategic affiliates of \$61 million, primarily due to increased restructuring costs incurred in the year ended December 31, 2023, which did not recur in the current year.

Acetyl Chain

	Year Ended		Change	% Change
	December 31,			
	2024	2023		
(In \$ millions, except percentages)				
Net sales	4,763	4,884	(121)	(2.5)%
Net Sales Variance				
<i>Volume</i>	4 %			
<i>Price</i>	(6) %			
<i>Currency</i>	— %			
Operating profit (loss)	951	1,109	(158)	(14.2)%
Operating margin	20.0 %	22.7 %		
Dividend income - equity investments	127	124	3	2.4 %
Depreciation and amortization	244	217	27	12.4 %

Year Ended December 31, 2024 Compared to Year Ended December 31, 2023

Net sales decreased for the year ended December 31, 2024 compared to the same period in 2023 primarily due to:

- lower pricing for most of our products globally, due to an environment with greater supply than demand during the year ended December 31, 2024;

partially offset by:

- higher functional volume for most of our products, primarily methanol, downstream derivative products, acid, and VAM.

Operating profit decreased for the year ended December 31, 2024 compared to the same period in 2023 primarily due to:

- lower Net sales; and
- higher spending of \$106 \$40 million, primarily as a result of increased plant operating and maintenance expenses, including costs at our new acetic acid unit at Clear Lake, Texas, and plant turnaround costs related to additional sites and employees gained through the M&M Acquisition; our joint venture, Fairway Methanol LLC;

partially offset by:

- lower merger raw material and acquisition project spending of \$66 million; sourcing costs, primarily for carbon monoxide and methanol.

Other Activities

	Year Ended		Change	% Change
	December 31,			
	2024	2023		
(In \$ millions, except percentages)				
Operating profit (loss)	(469)	(505)	36	7.1 %
Non-operating pension and other postretirement employee benefit (expense) income	(28)	(68)	40	58.8 %

Year Ended December 31, 2024 Compared to Year Ended December 31, 2023

Operating loss decreased for the year ended December 31, 2024 compared to the same period in 2023 primarily due to:

- a favorable currency impact lower functional spending and incentive compensation cost of \$33 million.

Non-operating pension and other postretirement employee expense increased decreased for the year ended December 31, 2023 December 31, 2024 compared to the same period in 2022 2023 primarily due to:

- higher interest costs of \$66 million and lower expected return on plan assets of \$34 million, partially offset by a decrease in recognized the actuarial loss of \$15 \$29 million primarily as a result of a decrease an increase in the weighted average discount rate used to determine benefit obligations from 4.9% 4.5% to 4.5%. 4.8%, partially offset by lower than expected actual asset returns. See [Note 12 - 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, facilities. As of **December 31, 2023** **December 31, 2024**, we have \$1.75 billion available for borrowing under our senior U.S. unsecured revolving credit facility, and \$34 \$171 million available for borrowing under our separate China Revolving Credit Facility Facilities (defined below) and up to \$1.0 billion under the November 2024 U.S. Term Loan Credit Agreement (defined below), if required, in meeting our working capital needs and other contractual obligations. In addition, we held cash and cash equivalents of \$1.8 billion \$962 million as of **December 31, 2023** **December 31, 2024**. 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.

On **October 31, 2023** **February 29, 2024**, we announced the **planned intended** closure of our Polyamide 66 ("PA66") facility in Mechelen, Belgium to optimize production costs across our global network. This operation is included in the Engineered Materials segment. We fully ceased operations during the three months ended December 31, 2024. We expect to incur additional exit and shutdown costs related to the closure of the facility of approximately \$20 million, inclusive of estimated employee termination costs, through 2028. See [Note 4 - Acquisitions, Dispositions and Plant Closures](#) in the accompanying consolidated financial statements.

In October 2023, we announced the intended closure of our PA66 and High-Performance Nylon ("HPN") polymerization units at our facility in Uentrop, Germany to optimize production costs across our global network. These operations are included in the Engineered Materials segment and we expect to complete the closure in 2024. segment. We expect to incur additional exit and shutdown costs related to the closure fully ceased operation of the PA66 polymerization unit and partially ceased operation of the HPN polymerization units during the year ended December 31, 2024. See [Note 4 - Acquisitions, Dispositions and Plant Closures](#) in Uentrop, Germany of approximately \$70 million in 2024, inclusive of estimated employee termination costs, the accompanying consolidated financial statements.

On **September 27, 2023**, **In September 2023**, we formed a food ingredients joint venture with Mitsui & Co., Ltd. ("Mitsui") under the name Nutrinova. We contributed receivables, inventory, property, plant and equipment, certain other assets, liabilities, technology and employees of our food ingredients business while retaining a 30% interest in the joint venture. Mitsui acquired the remaining 70% interest in the food ingredients business for a purchase price of \$503 million, subject to transaction adjustments. We accounted for our interest in the joint venture as an equity method investment, and our portion of the results will continue to be included in the Engineered Materials segment. For further information regarding the food ingredients joint venture, see [Note 4 - Acquisitions, Dispositions and Plant Closures](#) in the accompanying consolidated financial statements.

On **November 1, 2022**,

In **November 2022**, we acquired a majority of the M&M Business for a purchase price of \$11.0 billion, subject to transaction adjustments, in an all-cash transaction. For further information regarding the acquisition and related financing

transactions, see *Debt and Other Obligations* in this [Liquidity and Capital Resources](#) and [Note 4 - Acquisitions, Dispositions and Plant Closures](#) in the accompanying consolidated financial statements for further information.

Our incurrence of debt to finance the purchase price for the M&M Acquisition has increased our leverage and our ratio of indebtedness to consolidated EBITDA as set forth in our senior unsecured credit facilities. We believe that cash flows from our operations, together with synergy opportunities from the M&M Acquisition and cost reduction initiatives, will support our deleveraging efforts over the next few years. However, we expect the weakened demand environment, as discussed below, to continue to adversely impact our cash generation in the near-term. In furtherance of these our deleveraging efforts, we have paused our share repurchase program and are in the process of evaluating additional cash generation opportunities which or conservation opportunities. As part of this process, on November 4, 2024, we announced our intent to reduce our quarterly dividend by approximately 95 percent beginning in the first quarter of 2025. We will continue to evaluate our dividend policy, taking into account our ability to return to a balanced capital allocation strategy. Our deleveraging efforts may also include, in addition to the food ingredients joint venture described above, additional other opportunistic dispositions or monetization of other product or business lines or other assets. We are committed to rapid deleveraging and to maintaining our investment grade debt rating.

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, further reducing or pausing dividend payments, 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 capital expenditures were \$568 \$435 million for the year ended **December 31, 2023** **December 31, 2024**. We continue to prioritize focus our near-term capital expenditures on required maintenance projects that drive growth and productivity in the near term improvements, as we continue to prioritize deleveraging and expect total capital expenditures to be approximately \$400 \$300 million to \$350 million in 2024, primarily due to certain investments in growth opportunities and productivity improvements. 2025. In Engineered Materials, at our Nanjing, China facility, our expansions of (1) the compounding plant is in construction and we are accelerating completion to meet demand and (2) the new liquid crystal polymer ("LCP") plant are on schedule and is in construction and at remains on schedule under a delayed timeline. At our Bishop, Texas facility, our debottleneck of the ultra-high molecular weight polyethylene ("UHMW-PE") unit is on schedule and in detailed engineering design/construction. design while construction is delayed in line with expected demand growth. Our energy optimization productivity and greenhouse gas reduction project at our polyoxymethylene ("POM") unit in Frankfurt, Germany is on schedule and in detailed engineering design. In the Acetyl Chain, our planned expansion of our acetic acid unit at Clear Lake, Texas is on track to be commissioned and started in the first quarter of 2024. The other major projects that support the Acetyl Chain are in various stages of construction or commissioning and on schedule. These projects include our planned expansions of (1) our vinyl acetate ethylene ("VAE") emulsions units in Nanjing, China, and (2) our VAE emulsion plant in Frankfurt, Germany. The sustainable production Germany is in construction and on schedule for start-up in the second half of methanol ("MeOH") through carbon capture utilization at our Fairway joint venture MeOH unit in Clear Lake, Texas,

using captured carbon dioxide as feedstock, was successfully commissioned and started in December 2023. The announced expansion of our vinyl acetate monomer ("VAM") plant in Bay City, Texas is on temporary hold. 2025. We continue to see the incremental capacity from investments made in recent years strengthen the growth and reliability, while lowering the carbon footprint, of our manufacturing network reliability to best serve our customers.

We did not repurchase any Common Stock during the year ended December 31, 2023 December 31, 2024.

On a stand-alone basis, Celanese and its immediate 100% owned subsidiary, Celanese U.S., 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 U.S. 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, South Korea, 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 covenants in the existing Global Credit Agreements (defined below, and as amended to date) and expect to remain in compliance based on our current expectation of future results of operations and planned cash generation activities. If the actual future results of our operations and cash generation activities differ materially from these expectations, we may be required to seek an amendment to or waiver of any impacted covenants, which may increase our borrowing costs under the existing Global Credit Agreements.

Cash Flows

Cash and cash equivalents increased \$297 decreased \$843 million to \$1.8 billion \$962 million as of December 31, 2023 December 31, 2024 compared to December 31, 2022 December 31, 2023. As of December 31, 2023 December 31, 2024, \$1.5 billion \$627 million of the \$1.8 billion \$962 million of cash and cash equivalents was held by our foreign subsidiaries. Under the Tax Cuts and Jobs Act, we have incurred a prior year charge associated with the deemed repatriation of previously unremitted foreign earnings, including foreign held cash, earnings. These funds are largely accessible without additional material tax consequences, if needed in the U.S., to fund operations. See Note 15 - Income Taxes in the accompanying consolidated financial statements for further information.

Year Ended December 31, 2023 December 31, 2024 Compared to Year Ended December 31, 2022 December 31, 2023

• Net Cash Provided by (Used in) Operating Activities

Net cash provided by operating activities increased \$80 decreased \$933 million to \$1.9 billion \$966 million for the year ended December 31, 2023 December 31, 2024 compared to \$1.8 \$1.9 billion for the same period in 2022 2023, primarily due to:

- favorable unfavorable trade working capital of \$642 \$654 million, primarily related due to inventory reduction due reductions compared to aligning inventory and those in the prior year driven by balancing production levels to with demand and lower raw materials and inventory costs, and the timing of settlement of trade payables during the year ended December 31, 2024;
 - a decrease in Net earnings, excluding the non-cash impacts of impairment losses, primarily due to the goodwill impairment loss of \$1.5 billion in the Engineered Materials segment, (see Note 9 - Goodwill and collections Intangible Assets, Net in the accompanying consolidated financial statements for further information), deferred income taxes of trade receivables \$1.2 billion and the gain of \$515 million recognized on the formation of the Nutrinova joint venture during the year ended December 31, 2023, which did not recur in the current year (see Note 4 - Acquisitions, Dispositions and Plant Closures in the accompanying consolidated financial statements for further information); and
 - cash receipts of non-trade receivables of \$346 million, primarily related to the receivable balances arising from the M&M Acquisition and other transaction activities;
- partially offset by:
- an increase in cash interest taxes paid of \$639 \$112 million.

• Net Cash Provided by (Used in) Investing Activities

Net cash used in investing activities increased \$336 million related to \$470 million for the year ended December 31, 2024 compared to \$134 million for the same period in 2023, primarily to the debt incurred to finance the M&M Acquisition; and due to:

- a decrease in earnings performance, net cash inflow of \$461 million recognized during the gain recognized on year ended December 31, 2023 related to the formation of the Nutrinova joint venture (see Note 4 - Acquisitions, Dispositions and Plant Closures in the accompanying consolidated financial statements for further information);
- ### • Net Cash Provided by (Used in) Investing Activities
- Net cash used in investing activities decreased \$11.0 billion to \$134 million for the year ended December 31, 2023 compared to \$11.1 billion for the same period in 2022, primarily due to:

- a cash outflow of \$10.6 billion related to the M&M Acquisition in November 2022, which did not recur in the current year. See [Note 4 - Acquisitions, Dispositions and Plant Closures](#) in the accompanying consolidated financial statements for further information; and

partially offset by:

- a cash inflow decrease of \$461 million related to \$133 million in capital expenditures during the formation of the Nutrinova joint venture (see [Note 4 - Acquisitions, Dispositions and Plant Closures](#) in the accompanying consolidated financial statements for further information) year ended December 31, 2024.
- **Net Cash Provided by (Used in) Financing Activities**

Net cash used in financing activities increased \$11.7 billion decreased \$143 million to \$1.5 \$1.3 billion for the year ended December 31, 2023 December 31, 2024 compared to net cash provided by financing activities of \$10.3 \$1.5 billion for the same period in 2022, 2023, primarily due to:

- a decrease in net proceeds of payments on long-term debt, primarily due to the Tender Offer (defined below) our cash tender offer of \$2.25 billion completed in August 2023, payment in full of the 3-year Term Loans (defined below) delayed-draw term loans of \$750 \$870 million and repayment at maturity of the 1.125% senior unsecured notes during the year ended December 31, 2023, and issuance of the Acquisition Notes (defined below), borrowings under the 3-year and 5-year Term Loans (defined below) during the year ended December 31, 2022 (see [Note 11 - Debt](#) in the accompanying consolidated financial statements for further information), which that did not recur in the current year; and
- an increase in net payments on short-term debt, primarily as a result of payments on our revolving credit facilities and payment in full of the 364-day Term Loans (defined below);

year, partially offset by:

- an increase in net proceeds of long-term debt, primarily due to the 2023 Offering (defined below) of \$3.0 billion in principal amount during the year ended December 31, 2023 and repayment by repayments at maturity of the 4.625% 5.900% and 3.500% senior unsecured notes during the year ended December 31, 2022 December 31, 2024; and
- a decrease in net payments on short-term debt, primarily due to borrowings driven by a payment of \$500 million on our March 2022 U.S. Term Loan Credit Agreement (defined below) during the year ended December 31, 2023, which did not recur in the current year, partially offset by an increase in net payments on our revolving credit facilities of \$74 million;

partially offset by:

- a decrease in proceeds of long-term debt, primarily due to the issuance of certain senior unsecured notes of \$3.0 billion during the year ended December 31, 2023, that did not recur in the current year, partially offset by current year borrowings on working capital loan facilities in China; and
- an increase in net payments on our China Working Capital Term Loan Agreement (defined below) during the year ended December 31, 2023 and borrowing under the senior unsecured revolving credit facility related to the M&M Acquisition in November 2022.

In addition, exchange rates had an unfavorable impact of \$12 million on cash and cash equivalents and a favorable impact of \$4 million on cash and cash equivalents for the years ended December 31, 2023 and 2022, respectively.

Debt and Other Obligations

• Senior Credit Facilities

In March 2022, we entered into a term loan credit agreement (the (as amended to date, the "March 2022 U.S. Term Loan Credit Agreement"), pursuant to which lenders provided a tranche of delayed-draw term loans due 364 days from issuance in an amount equal to \$500 million (the "364-day Term Loans") and a tranche of delayed-draw term loans due 5 years from issuance in an amount equal to \$1.0 billion (the "5-year Term Loans"). In September

Also in March 2022, we entered into an additional term loan a new revolving credit agreement (the "September 2022 U.S. Term Loan (as amended to date, the "U.S. Revolving Credit Agreement" and, together with the March 2022 U.S. Term Loan Credit Agreement the "U.S. Term Loan Credit Agreements"), pursuant to which lenders have provided delayed-draw term loans due 3 years from issuance in an amount equal to \$750 million (the "3-year Term Loans" and collectively with the 364-day Term Loans and the 5-year Term Loans, the "U.S. Term Loan Facility"). The U.S. Term Loan Facility was fully drawn during the three months ended December 31, 2022. The 364-day Term Loans and 3-year Term Loans have been fully repaid.

Also in March 2022, we entered into a new revolving credit agreement (the "U.S. Revolving Credit Agreement" and, together with the U.S. Term Loan Credit Agreements the "U.S. Credit Agreements") consisting of a \$1.75 billion senior unsecured revolving credit facility (with a letter of credit sublimit), maturing in 2027. The proceeds of a \$365 million borrowing under the new senior unsecured revolving credit facility were used to repay and terminate our then-existing revolving credit facility.

On February 21, 2023, August 9, 2023, February 16, 2024, November 1, 2024 and February 16, 2024 February 17, 2025, we amended certain covenants in certain of the U.S. Credit Agreements, including financial ratio maintenance covenants.

On August 9, 2023, we amended certain covenants in the March 2022 The U.S. Term Loan Credit Agreement to permit refinancing certain senior notes without requiring a mandatory prepayment under the March 2022 U.S. Term Loan Credit Agreement.

The March 2022 U.S. Term Loan Credit Agreement and the U.S. Revolving Credit Agreement Agreements are and the September 2022 U.S. Term Loan Credit Agreement was, guaranteed by Celanese, Celanese U.S. and domestic subsidiaries together representing substantially all of the Company's our U.S. assets and business operations (the "Subsidiary Guarantors").

On January 4, 2023, In January 2023, Celanese (Shanghai) International Trading Co., Ltd ("CSIT"), a fully consolidated subsidiary, entered into a restatement of an existing credit facility agreement (the "China CSIT Revolving Credit Agreement") to upsize and modify the facility thereunder to consist of an aggregate CNY1.75 billion uncommitted senior unsecured revolving credit facility available under two tranches (with overdraft, bank guarantee and documentary credit sublimits) (the "China Revolving Credit CSIT January 2023 Facility"). Obligations bear interest at certain fixed and floating rates. On April 7, 2024, the CSIT January 2023 Facility was reduced to CNY750 million and on December 19, 2024, the CSIT January 2023 Facility was reduced to CNY550 million. The China CSIT Revolving Credit Agreement is guaranteed by Celanese U.S.

On January 6, 2023, Also in January 2023, CSIT entered into a senior unsecured working capital loan contract for CNY800 million (the "China Working Capital Term Loan Agreement," together with the China Revolving Credit Agreement, the "China Credit Agreements," and the China Credit Agreements together with the U.S. Credit Agreements, the "Global Credit Agreements" Agreement"), payable 12 months from withdrawal date and bearing interest at 0.5% less than certain interbank rates. The loan under the China Working Capital Term Loan Agreement was fully drawn on January 10, 2023 in January 2023 and was supported fully repaid during the three months ended March 31, 2024.

In December 2023, Celanese (Nanjing) Chemical Co., Ltd. ("CNC") entered into a senior unsecured working capital loan agreement for CNY800 million, payable on December 25, 2026 and bearing interest at 2.8% (the "CNC Working Capital Loan Agreement"). The loan under the CNC Working Capital Loan Agreement was fully drawn during the three months ended March 31, 2024.

On June 28, 2024, CNC entered into a senior unsecured working capital loan agreement for CNY800 million, payable in installments until June 28, 2027 and bearing interest at 2.75% (the "CNC Three Year Working Capital Loan Agreement"). The CNC Three Year Working Capital Loan Agreement was partially drawn during the year ended December 31, 2024.

On November 1, 2024, we entered into a senior unsecured term loan credit agreement (the "November 2024 U.S. Term Loan Credit Agreement"), pursuant to which the lenders provided a delayed-draw term loan due 364 days from the date of borrowing in an amount up to \$1.0 billion. Amounts outstanding under the November 2024 U.S. Term Loan Credit Agreement will accrue interest at a rate equal to the Secured Overnight Financing Rate with an interest period of one or three months ("Term SOFR") plus a margin of 1.300% to 2.250% per annum, or the base rate plus a margin of 0.300% to 1.250%, in each case, based on the Company's senior unsecured debt rating, subject to further changes based on such ratings. The commitments under the November 2024 U.S. Term Loan Credit Agreement will terminate by March 15, 2025. The loan under the November 2024 U.S. Term Loan Credit Agreement was not drawn during the year ended December 31, 2024.

On December 10, 2024, CNC entered into a letter of comfort from us. credit facility agreement (the "CNC Revolving Credit Agreement," together with the CNC Three Year Working Capital Loan Agreement, the CSIT Revolving Credit Agreement, the China Working Capital Term Loan Agreement and the CNC Working Capital Loan Agreement, the "China Credit Agreements," and the China Credit Agreements together with the U.S. Credit Agreements, the "Global Credit Agreements")) for a CNY1.0 billion uncommitted senior unsecured revolving credit facility (the "CNC December 2024 Facility", and together with the CSIT January 2023 Facility and any other revolving credit facilities available to the Company's subsidiaries in China, the "China Revolving Credit Facilities"). Obligations bear interest at certain floating rates. We expect the China Credit Agreements will facilitate our efficient repatriation of cash to the U.S. to repay debt and effectively redomicile a portion of our U.S. debt to China at a lower average interest rate.

On February 6, 2025, we drew \$300 million from our U.S. Revolving Credit Facility. This borrowing and cash on hand were used primarily to repay in full our senior unsecured notes due 2025, with an interest rate of 1.250%, due on February 11, 2025, and for general corporate purposes.

• 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	Senior Notes	Issue Date	Principal	Interest Rate	Interest Pay Dates	Maturity Date	Senior Notes	Issue Date	Principal	Interest Rate	Interest Pay Dates
(In millions)											
3.500% Notes											
1.250% Notes											
3.500% Notes											
1.250% Notes											
3.500% Notes	May 2019	\$500	3.500	May 8	November 8	May 8, 2024					
5.900% Notes	July 2022	\$2,000	5.900	January 5	July 5	July 5, 2024					

1.250% Notes	1.250% Notes	December 2017	€300	1.250	February 11		February 11, 2025		December 2017	€300	1.250 ⁽¹⁾	February 11
6.050% Notes	6.050% Notes	July 2022	\$1,750	6.050	March 15	September 15	March 15, 2025	6.050% Notes	July 2022	\$1,000	6.050	March 15
4.777% Notes	4.777% Notes	July 2022	€1,000	4.777	July 19		July 19, 2026	4.777% Notes	July 2022	€1,000	4.777	July 19
1.400% Notes	1.400% Notes	August 2021	\$400	1.400	February 5	August 5	August 5, 2026	1.400% Notes	August 2021	\$400	1.400	February 5
2.125% Notes	2.125% Notes	November 2018	€500	2.125	March 1		March 1, 2027	2.125% Notes	November 2018	€500	2.125	March 1
6.165% Notes	6.165% Notes	July 2022	\$2,000	6.165	January 15	July 15	July 15, 2027	6.165% Notes	July 2022	\$2,000	6.165	January 15
0.625% Notes	0.625% Notes	September 2021	€500	0.625	September 10		September 10, 2028	0.625% Notes	September 2021	€500	0.625	September 10
6.350% Notes	6.350% Notes	August 2023	\$1,000	6.350	May 15	November 15	November 15, 2028	6.350% Notes	August 2023	\$1,000	6.350 ⁽²⁾	May 15
5.337% Notes	5.337% Notes	July 2022	€500	5.337	January 19		January 19, 2029	5.337% Notes	July 2022	€500	5.337	January 19
6.330% Notes	6.330% Notes	July 2022	\$750	6.330	January 15	July 15	July 15, 2029	6.330% Notes	July 2022	\$750	6.330	January 15
6.550% Notes	6.550% Notes	August 2023	\$999	6.550	May 15	November 15	November 15, 2030	6.550% Notes	August 2023	\$999	6.550 ⁽²⁾	May 15
6.379% Notes	6.379% Notes	July 2022	\$1,000	6.379	January 15	July 15	July 15, 2032	6.379% Notes	July 2022	\$1,000	6.379	January 15
6.700% Notes	6.700% Notes	August 2023	\$1,000	6.700	May 15	November 15	November 15, 2033	6.700% Notes	August 2023	\$1,000	6.700 ⁽²⁾	May 15

⁽¹⁾ The 1.250% Notes were repaid in full on February 11, 2025.

⁽²⁾ On November 14, 2024, S&P Global Ratings downgraded our credit rating to BB+, which had the effect of increasing the interest rates by 25 basis points on the senior unsecured notes due 2028, senior unsecured notes due 2030 and senior unsecured notes due 2033 to 6.600%, 6.800% and 6.950%, respectively, effective November 15, 2024.

The Senior Notes were issued by Celanese U.S. and are guaranteed on a senior unsecured basis by Celanese and the Subsidiary Guarantors. Celanese U.S. 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 July 2022, August 2023, Celanese U.S. completed an a public offering of \$7.5 billion aggregate principal amount of senior unsecured notes of various maturities in a public offering registered under the Securities Act (the "Acquisition USD Notes" as follows (collectively, the "2023 Offering"). :

Maturity Date	Aggregate Principal Amount Issued	Discount to Par	Interest Rate
	(In \$ millions)		
November 15, 2028	1,000	99.986%	6.350%
November 15, 2030	999	99.950%	6.550%
November 15, 2033	1,000	99.992%	6.700%

Also in July 2022, Celanese U.S. completed an offering of €1.5 billion in aggregate principal amount of euro-denominated senior unsecured notes in a public offering registered under the Securities Act (collectively, the "Acquisition Euro Notes" and together with the Acquisition USD Notes, the "Acquisition Notes"). Fees and expenses of the offering of the Acquisition Notes, inclusive of underwriting discounts, were \$65 million. Net proceeds from the sale of the Acquisition Notes were used to fund the purchase price for the M&M Acquisition, with any remaining proceeds being used for general corporate purposes.

The entry into the U.S. Term Loan Credit Agreements and the offerings of the Acquisition Notes reduced availability under the Bridge Facility to zero, and we terminated the Bridge Facility. During the year ended December 31, 2022, we paid \$66 million in fees related to the Bridge Facility commitment, amortizing these fees to interest expense.

On August 24, 2023, Celanese U.S. completed an offering of \$3.0 billion aggregate principal amount of senior unsecured notes of various maturities in a public offering registered under the Securities Act (the "2023 Offering"). Deferred financing costs related to the August 2023 Offering, including underwriting discounts, were \$26 million.

On August 25, 2023, Celanese U.S. completed a cash tender offer for \$2.25 billion in aggregate principal amount (the "Tender Offer") as follows:

Maturity Date	
Maturity Date	
Maturity Date	
	(In \$ millions)
	(In \$ millions)
	(In \$ millions)
June 30, 2024	
June 30, 2024	
June 30, 2024	
July 5, 2024	
July 5, 2024	
July 5, 2024	
March 15, 2025	
March 15, 2025	
March 15, 2025	
April 30, 2024	
April 30, 2024	
April 30, 2024	
May 8, 2024	
May 8, 2024	
May 8, 2024	

The net proceeds from the 2023 Offering were used (i) to fund the Tender Offer and (ii) for the repayment of other outstanding indebtedness, including the payment in full of the 364-day Term Loans and the 3-year Term Loans.

indebtedness.

• Accounts Receivable Securitization Purchasing Facility

On June 1, 2023, In June 2023, we entered into an amendment to the amended and restated receivables purchase agreement under our U.S. accounts receivable purchasing facility among certain of our subsidiaries, our wholly-owned, "bankruptcy remote" special purpose subsidiary ("SPE") and certain global financial institutions ("Purchasers"). We de-recognized \$1.4 \$1.5 billion and \$1.1 \$1.4 billion of accounts receivable under this agreement for the years ended December 31, 2023 December 31, 2024 and 2022, 2023, respectively, and collected \$1.3 \$1.5 billion and \$1.1 \$1.3 billion of accounts receivable sold under this agreement during the same periods. Unsold U.S. accounts receivable of \$109 \$139 million were pledged by the SPE as collateral to the Purchasers as of December 31, 2023 December 31, 2024.

• Factoring and Discounting Agreements

We have factoring agreements in Europe, Japan, Singapore and Singapore China with financial institutions. We de-recognized \$423 \$700 million and \$320 \$423 million of accounts receivable under these factoring agreements for the years ended December 31, 2023 December 31, 2024 and 2022, 2023, respectively, and collected \$407 \$640 million and \$325 \$407 million of accounts receivable sold under these factoring agreements during the same periods.

In March 2021, we entered into a letter of credit We have master discounting agreement in Singapore with a financial institution. We de-recognized \$8 million and \$50 million of accounts receivable under this agreement for the years ended December 31, 2023 and 2022, respectively.

On December 15, 2023, we entered into a Master Discounting Agreement agreements (the "Master Discounting Agreement" Agreements") with a financial institution institutions in China to discount, on a non-recourse basis, banker's acceptance drafts ("BADs"), classified as accounts receivable. We received \$100 million and \$45 million from the accounts receivable transferred under the Master Discounting Agreement Agreements as of December 31, 2023. The impacts of discounting are not material to the Company's results of operations, cash flows or financial position. December 31, 2024 and 2023.

Covenants

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, 2023 December 31, 2024. On February 21, 2023 February 17, 2025, November 1, 2024, February

16, 2024, August 9, 2023 and February 16, 2024 February 21, 2023, we amended certain covenants including the financial ratio covenant, included in the U.S. Credit Agreements. Agreements, including financial ratio maintenance covenants.

See [Note 11 - Debt](#) in the accompanying consolidated financial statements for further information.

Guarantor Financial Information

We have outstanding senior unsecured notes, issued in public offerings registered under the Securities Act of 1933, as amended (collectively, the "Senior Notes"). The Senior Notes were issued by Celanese U.S. ("Issuer") and are guaranteed by Celanese Corporation ("Parent Guarantor") and the Subsidiary Guarantors (collectively the "Obligor Group"). See [Note 11 - Debt](#) in the accompanying consolidated financial statements for further information. The Issuer and Subsidiary Guarantors are 100% owned subsidiaries of the Parent Guarantor. 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 existing U.S. Credit Agreements (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 holds the stock of its immediate 100% owned subsidiary, the Issuer, but has no material consolidated assets. 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 existing U.S. Credit Agreements, 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.

For cash management purposes, we transfer cash among 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, the existing U.S. Credit Agreements, 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, 2023 2024	
	(In \$ millions)	
Net sales to third parties	1,826	1,819
Net sales to non-guarantor subsidiaries	1,048	1,140
Total net sales	2,874	2,959
Gross profit	561	558
Earnings (loss) from continuing operations	1,464	(367)
Net earnings (loss)	1,456	(374)
Net earnings (loss) attributable to the Obligor Group	1,456	(374)

	As of December 31,	
	2023	2022
	2024	2023
	(In \$ millions)	

Receivables from non-guarantor subsidiaries
Receivables from non-guarantor subsidiaries
Receivables from non-guarantor subsidiaries
Other current assets
Total current assets
Goodwill

Other noncurrent assets
Total noncurrent assets
Current liabilities due to non-guarantor subsidiaries
Current liabilities due to affiliates
Other current liabilities
Total current liabilities
Noncurrent liabilities due to non-guarantor subsidiaries
Other noncurrent liabilities
Total noncurrent liabilities

Share Capital

On [February 7, 2024](#) [February 12, 2025](#), we declared a quarterly cash dividend of [\\$0.70](#) [\\$0.03](#) per share on our Common Stock amounting to approximately [\\$76](#) [\\$3](#) million. The cash dividend will be paid on [March 5, 2024](#) [March 11, 2025](#) to holders of record as of [February 20, 2024](#) [February 25, 2025](#). As disclosed above, as part of our deleveraging efforts, we announced our intent to reduce our quarterly dividend by approximately 95 percent beginning in the first quarter of 2025. We will continue to evaluate our dividend policy, taking into account our ability to return to a balanced capital allocation policy.

Our Board of Directors has authorized the aggregate repurchase of \$6.9 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, 2023](#) [December 31, 2024](#), we did not repurchase any shares of our Common Stock. As of [December 31, 2023](#) [December 31, 2024](#), we had \$1.1 billion remaining under authorizations by our Board of Directors. [As discussed above, as part of our deleveraging efforts, we have paused our share repurchase program.](#)

See [Note 14 - Shareholders' Equity](#) in the accompanying consolidated financial statements for further information.

Contractual Obligations, Guarantees and Commitments

We calculated [\\$3.3](#) [\\$2.5](#) billion of all future interest payments on debt and other obligations using the rate in effect on [December 31, 2023](#) [December 31, 2024](#) and [\\$495](#) [\\$493](#) million of all future pension and other postretirement funding obligations. We have directly guaranteed various debt obligations under agreements with third parties related to certain equity affiliates. As of [December 31, 2023](#) [December 31, 2024](#), we have directly guaranteed \$145 million and €31 million of such obligations.

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

In the accompanying consolidated financial statements, see [Note 10 - Current Other Liabilities](#) for current asset retirement obligations, [Note 11 - Debt](#) for a description of the guarantees under our Senior Notes and Credit Agreement, [Note 12 - Benefit Obligations](#) for a description of the pension and other postretirement funding obligations, [Note 13 - Environmental](#) for a description of environmental obligations, [Note 15 - Income Taxes](#) for a description of uncertain tax positions, [Note 16 - Leases](#) for lease obligations and [Note 19 - Commitments and Contingencies](#) for a discussion of commitments and contingencies related to legal and regulatory proceedings.

Market Risks

See [Item 7A. Quantitative and Qualitative Disclosure about Market Risk](#) for further information.

Business Environment

[During the three months ended December 31, 2024, we experienced a sustained decrease in our share price, following downward revisions in forecast earnings and our announcement to reduce our quarterly dividend by approximately 95% beginning in the first quarter of 2025 to redeploy cash toward debt reduction, and a challenging demand environment. We continued faced extended weakness in the macroeconomic environment, with downturns in the Western Hemisphere automotive and industrial end-markets, impacting our Engineering Materials segment, as well as persistent demand weakness in paints, coatings, and construction, impacting our Acetyl Chain segment, which deepened general demand softness. We are committed to experience destocking taking actions that are expected to improve our earnings, accelerate deleveraging, and increase shareholder returns in addition this challenging, and any, environment. We also intend to volatile underlying demand conditions across several end-markets in 2023. We continue to closely monitor the impact of, and responses to, geopolitical effects on demand conditions and the supply chain. Demand conditions and moderating raw material costs resulted in elevated industry competitive dynamics and continuing pricing pressure across end-markets. We expect demand challenges to persist and to pressure pricing, which effects we anticipate to be partially offset by improvement in input costs across the year.](#)

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 U.S. 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.

• **Purchase Accounting**

We recognize 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 our 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. We calculate the fair value of the identifiable tangible and intangible assets acquired and liabilities assumed to allocate the purchase price at the acquisition date. We may use the assistance of third-party valuation consultants. See [Note 4 - Acquisitions, Dispositions and Plant Closures](#) in the accompanying consolidated financial statements for further information.

• **Recoverability of Long-Lived Assets**

Recoverability of Goodwill and Indefinite-Lived Intangible 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 another 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 the income approach based on a discounted cash flow model incorporating discount rates commensurate with the risks involved, involved or a combination of the income approach and the market approach using the guideline public company method. The key assumptions used in the discounted cash flow valuation model include discount rates, revenue growth rates, tax rates, cash flow projections and terminal value rates. Discount rates, revenue 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. Revenue growth rates and cash flow projections are based on historical trends and expected growth drivers such as macroeconomic trends in the industries and territories in which the reporting units operate.

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, revenue growth rates, tax rates, sales projections and terminal value rates. Discount rates, royalty rates, revenue growth rates, tax 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 using the most recent third party valuations and are periodically substantiated by third-party valuation consultants. Revenue growth rates and sales projections are based on historical trends and expected growth drivers such as macroeconomic trends in the industries and territories in which the indefinite-lived intangible assets operate. Tax rates consider the operating structure of the Company and tax rates in jurisdictions in which the indefinite-lived intangible assets operate.

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.

During the three months ended September 30, 2024, the Company completed its annual goodwill impairment test. The results of the test indicated the estimated fair value for each of the Company's reporting units exceeded the carrying amount of the underlying assets. Although no impairment of the engineered materials reporting unit was identified during the nine months ended September 30, 2024, the estimated fair value exceeded its carrying value by less than 10% as of September 30, 2024.

During the three months ended December 31, 2024, the Company experienced a significant and sustained decrease in the Company's share price. Further, due to extended weakness in the macroeconomic environment, specifically the auto and industrial end-markets, which deepened general demand softness during the three months ended December 31, 2024, thereby impacting pricing and volume, the Company updated its engineered materials reporting unit forecast model for the 2025 fiscal year which showed additional deterioration in the projected financial results for the 2025 fiscal year compared to the analyses prepared during the three months ended September 30, 2024. While the long-term projections beyond 2025 include recovery, the lower projections in 2025 do have an impact on the forecast model beyond 2025 by applying forecasted growth rates to a lower anticipated 2025 base revenue. The updated 2025 projections continue to reflect industry wide challenges including demand softness across the majority of end uses resulting in lower pricing. Based on the sustained decrease in the share price and the downward revisions to projections, the Company determined that there were indicators that the engineered materials reporting unit's goodwill may be impaired. As a result, the Company performed an interim quantitative test of the engineered materials reporting unit during the three months ended December 31, 2024. The results of the test determined that the carrying amount of the engineered materials reporting unit exceeded its estimated fair value primarily due to the downward adjustments in the forecast model, as well as an increase in the discount rate. As such, the Company recorded a non-cash goodwill impairment loss of \$1.5 billion in the Engineered Materials segment. As of December 31, 2024, the engineered materials reporting unit had goodwill of \$5.0 billion.

In connection with the Company's annual indefinite-lived intangible assets impairment test during the three months ended September 30, 2024, the Company recorded a non-cash impairment loss of \$34 million to impair the net book value of certain trade names, primarily Zytel®, included in the Engineered Materials segment.

Additionally, in conjunction with the goodwill impairment test in the three months ended December 31, 2024, the Company performed an interim impairment test of the indefinite-lived intangible assets assigned to the engineered materials reporting unit and determined certain trade names were impaired. As a result, the Company recorded a non-cash impairment loss of \$83 million to impair the net book value of certain trade names, primarily Zytel®, included in the Engineered Materials segment.

See [Note 9 - Goodwill and Intangible Assets, Net](#) in the accompanying consolidated financial statements for further information.

• **Benefit Obligations**

Various assumptions are used in the calculation of the actuarial valuation of the employee benefit plans. These key assumptions include the discount rate and expected long-term rates of return on plan assets. The actuarial assumptions used may differ materially from actual results due to changing market and economic conditions. 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 12 - Benefit Obligations](#) in the accompanying consolidated financial statements for further information.

The estimated change in pension net periodic benefit cost and projected benefit obligations that would occur in 2024 2025 from a change in the indicated assumptions are as follows:

Change in Rate		Change in Rate	Impact on Net Periodic Benefit Cost	Impact on Projected Benefit Obligations	Change in Rate	Impact on Net Periodic Benefit Cost	Impact on Projected Benefit Obligations			
(In \$ millions)										
U.S. Pension Benefits										
Decrease in the discount rate										
Decrease in the discount rate										
Decrease in the discount rate										
Decrease in the long-term expected rate of return on plan assets ⁽¹⁾	Decrease in the long-term expected rate of return on plan assets ⁽¹⁾	0.5 %	10	N/A	N/A	Decrease in the long-term expected rate of return on plan assets ⁽¹⁾	0.5 %	9	N/A	N/A
Non-U.S. Pension Benefits										
Decrease in the discount rate										
Decrease in the discount rate										
Decrease in the discount rate										
Decrease in the long-term expected rate of return on plan assets	Decrease in the long-term expected rate of return on plan assets	0.5 %	3	N/A	N/A	Decrease in the long-term expected rate of return on plan assets	0.5 %	3	N/A	N/A

⁽¹⁾ Excludes nonqualified pension plans.

• **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.

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 15 - 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 17 - 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 U.S. dollar. Fluctuations in the value of these currencies against the U.S. 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 U.S. dollar results in a decline in the U.S. 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 U.S. dollar would result in an opposite effect. We estimate that a 10% change in the euro/U.S. dollar and CNY/U.S. dollar exchange rates would impact our earnings for the year ended December 31, 2024 by \$19 \$26 million and \$31 \$55 million, respectively.

Item 8. Financial Statements and Supplementary Data

The selected quarterly financial data is no longer required, as the Company adopted the amendment to Item 302 of Regulation S-K contained in SEC Release No. 33-10890, which became effective on February 10, 2021. There were no material retrospective changes to any quarters in the two most recent fiscal years that would require this disclosure.

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, 2023 December 31, 2024, 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, 2023 December 31, 2024, 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, 2023 December 31, 2024. 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 6264](#).

Item 9B. Other Information

(c) Trading Plans

During the quarter three months ended December 31, 2023 December 31, 2024, no director or Section 16 officer adopted or terminated any Rule 10b5-1 trading plans or "non-Rule 10b5-1 trading arrangements" as defined in Item 408 of Regulation S-K, except as described in the table below:

Type of Trading Arrangement							
Name and Position	Action	Applicable Date	Rule 10b5-1*	Non-Rule 10b5-1**	Aggregate Number of Shares of Common Stock to be Sold	Aggregate Number of Shares of Common Stock to be Purchased	Duration of Trading Arrangement ⁽¹⁾
Scott A. Richardson, Executive Vice President and Chief Operating Officer	Adoption	December 13, 2023	x		4,000	—	March 14, 2024 - June 28, 2024

* Contract, instruction or written plan intended to satisfy the affirmative defense conditions of Rule 10b5-1(c) under the Exchange Act.

** "Non-Rule 10b5-1 trading arrangement" as defined in Item 408(c) of Regulation S-K under the Exchange Act.

⁽¹⁾ The plan expires on June 28, 2024, or upon the earlier completion of all authorized transactions under the plan. S-K.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

Not applicable.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The information required by this Item 10 is incorporated herein by reference from the subsections of "Governance," captioned "Item 1: Election of Directors," "Director Nominees," "Board and Committee Governance," "Additional Governance Matters" and the sections "Stock Ownership Information" and "Questions and Answers — Company Documents, Communications and Shareholder Proposals" sections of the Company's definitive proxy statement for the 2024 2025 annual meeting of shareholders to be filed with the Securities and Exchange Commission pursuant to Regulation 14A under the Securities Exchange Act of 1934, as amended (the "2024 2025 Proxy Statement"). With regard to the information required by this Item regarding compliance with Section 16(a) of the Exchange Act, we will provide disclosure of delinquent Section 16(a) reports, if any, in the 2024 2025 Proxy Statement under "Delinquent Section 16(a) Reports" and such disclosure, if any, is incorporated herein by reference. Information about executive officers of the Company is contained in Part I of this Annual Report. A copy of our insider trading policy is filed as Exhibit 19.1 to this Form 10-K.

Codes of Ethics

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

Item 11. Executive Compensation

The information required by this Item 11 is incorporated herein by reference from the section "Governance – Director Compensation" and the subsections of "Executive Compensation" captioned "Compensation Discussion and Analysis," "Compensation Risk Assessment," "Compensation and Management Development Committee Report," "Compensation Tables," "CEO Pay Ratio" and "Pay Versus Performance" of the 2024 2025 Proxy Statement.

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

The information with respect to beneficial ownership and equity compensation plans required by this Item 12 is incorporated herein by reference from the subsections of "Stock Ownership Information" captioned "Principal Shareholders and Beneficial Owners" and "Securities Authorized for Issuance Under Equity Compensation Plans" in the 2024 2025 Proxy Statement.

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 — Director Independence and Related Person Transactions" section of the 2024 2025 Proxy Statement.

Item 14. Principal Accounting Fees and Services

Our independent registered public accounting firm is KPMG LLP, Dallas, TX, Auditor Firm ID: 185.

The information required by this Item 14 is incorporated herein by reference from the "Audit Matters — Item 2: Ratification of Appointment of Independent Registered Public Accounting Firm" section of the 2024 2025 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 62](#) of this Annual Report.

	Page Number
Report of Independent Registered Public Accounting Firm	62 64
Consolidated Statements of Operations	64 67
Consolidated Statements of Comprehensive Income (Loss)	65 68
Consolidated Balance Sheets	66 69
Consolidated Statements of Equity	67 70
Consolidated Statements of Cash Flows	68 71
Notes to the Consolidated Financial Statements	69 72

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).
3.1(d)	Certificate of Amendment to the Second Amended and Restated Certificate of Incorporation of Celanese Corporation dated as of May 13, 2024 (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K filed with the SEC on May 15, 2024).
3.2	Seventh Amended and Restated By-laws, effective as of November 2, 2022 (incorporated by reference to Exhibit 3.1 to the Quarterly Report on Form 10-Q filed with the SEC on November 4, 2022).
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 filed with the SEC on May 6, 2011).
4.3	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).

Exhibit Number	Description
4.4	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).

Exhibit
Number 4.5

	Description
4.5	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).
4.6	Tenth Supplemental Indenture, dated as of August 5, 2021, 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 August 5, 2021).
4.74.6	Eleventh Supplemental Indenture, dated as of September 10, 2021, among Celanese US Holdings LLC, Celanese Corporation, the subsidiary guarantors party thereto and 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 September 10, 2021).
4.84.7	Twelfth Supplemental Indenture, dated as of July 14, 2022, among Celanese US Holdings LLC, Celanese Corporation, the subsidiary guarantors party thereto, U.S. Bank Trust Company, National Association, as series trustee and Computershare Trust Company, N.A. (as successor trustee to Wells Fargo Bank, National Association), as base trustee (incorporated by reference to Exhibit 4.2 to the Current Report on Form 8-K filed with the SEC on July 14, 2022).
4.94.8	Thirteenth Supplemental Indenture, dated as of July 19, 2022, among Celanese US Holdings LLC, Celanese Corporation, the subsidiary guarantors party thereto, U.S. Bank Trust Company, National Association, as series trustee, registrar and transfer agent, Computershare Trust Company, N.A. (as successor trustee to Wells Fargo Bank, National Association), as base trustee, and Elavon Financial Services DAC, UK Branch, as paying agent (incorporated by reference to Exhibit 4.2 to the Current Report on Form 8-K filed with the SEC on July 19, 2022).
4.104.9	Fourteenth Supplemental Indenture, dated as of August 24, 2023, among Celanese US Holdings LLC, Celanese Corporation, the subsidiary guarantors party thereto, U.S. Bank Trust Company, National Association, as series trustee and Computershare Trust Company, N.A. (as successor trustee to Wells Fargo Bank, National Association), as base trustee (incorporated by reference to Exhibit 4.2 to the Current Report on Form 8-K filed with the SEC on August 24, 2023).
4.11*4.10*	Description of the Company's Securities Registered Under Section 12 of the Securities Exchange Act of 1934.
10.1†10.1	Credit Agreement, dated as of March 18, 2022, by and among Celanese Corporation, Celanese US Holdings LLC, Celanese Europe B.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 March 24, 2022).
10.1(a)	First Amendment to Credit Agreement, dated as of February 21, 2023, by and among Celanese Corporation, Celanese US Holdings LLC, Celanese Europe B.V., the subsidiary guarantors party thereto, each lender party thereto, and Bank of America, N.A., as Administrative Agent, amending that certain Credit Agreement dated as of March 18, 2022 (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the SEC on February 23, 2023).
10.1(b)	Second Amendment to Credit Agreement, dated as of February 16, 2024, by and among Celanese Corporation, Celanese US Holdings LLC, Celanese Europe B.V., the subsidiary guarantors party thereto, each lender party thereto, and Bank of America, N.A., as Administrative Agent, amending that certain Credit Agreement dated as of March 18, 2022 (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the SEC on February 20, 2024).
10.1(c)	Third Amendment to Credit Agreement, dated as of November 1, 2024, by and among Celanese Corporation, Celanese US Holdings LLC, Celanese Europe B.V., the subsidiary guarantors party thereto, each lender party thereto, and Bank of America, N.A., as Administrative Agent, amending that certain Credit Agreement dated as of March 18, 2022 (incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K filed with the SEC on November 4, 2024).
10.1(d)	Fourth Amendment to Credit Agreement, dated as of February 17, 2025, by and among Celanese Corporation, Celanese US Holdings LLC, Celanese Europe B.V., the subsidiary guarantors party thereto, each lender party thereto, and Bank of America, N.A., as Administrative Agent, amending that certain Credit Agreement dated as of March 18, 2022 (incorporated by reference to Exhibit 10.3 to the Current Report on Form 8-K filed with the SEC on February 17, 2025).

[of March 18, 2022 \(incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K filed with the SEC on February 18, 2025\).](#)

10.2† Exhibit Number	Description
10.2	Term Loan Credit Agreement, dated as of March 18, 2022, by and among Celanese Corporation, Celanese US Holdings LLC, each lender from time to time party thereto, and 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 10.2 to the Current Report on Form 8-K Filed with the SEC on March 24, 2022).
10.2(a)	First Amendment to Credit Agreement, dated as of February 21, 2023, by and among Celanese Corporation, Celanese US Holdings LLC, the subsidiary guarantors party thereto, each lender party thereto, and Bank of America, N.A., as Administrative Agent, amending that certain Term Loan Credit Agreement dated as of March 18, 2022 (incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K filed with the SEC on February 23, 2023).
Exhibit Number	Description
10.2(b)	Second Amendment to Credit Agreement, dated as of August 9, 2023, by and among Celanese Corporation, Celanese US Holdings LLC, the subsidiary guarantors party thereto, each lender party thereto, and Bank of America, N.A., as Administrative Agent, amending that certain Term Loan Credit Agreement dated as of March 18, 2022 (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q file with the SEC on November 8, 2023).
10.2(c)	Third Amendment to Credit Agreement, dated as of February 16, 2024, by and among Celanese Corporation, Celanese US Holdings LLC, the subsidiary guarantors party thereto, each lender party thereto, and Bank of America, N.A., as Administrative Agent, amending that certain Term Loan Credit Agreement dated as of March 18, 2022 (incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K filed with the SEC on February 20, 2024).
10.2(d)	Fourth Amendment to Credit Agreement, dated as of November 1, 2024, by and among Celanese Corporation, Celanese US Holdings LLC, the subsidiary guarantors party thereto, each lender party thereto, and Bank of America, N.A., as Administrative Agent, amending that certain Term Loan Credit Agreement dated as of March 18, 2022 (incorporated by reference to Exhibit 10.3 to the Current Report on Form 8-K filed with the SEC on November 4, 2024).
10.2(e)	Fifth Amendment to Credit Agreement, dated as of February 17, 2025, by and among Celanese Corporation, Celanese US Holdings LLC, the subsidiary guarantors party thereto, each lender party thereto, and Bank of America, N.A., as Administrative Agent, amending that certain Term Loan Credit Agreement dated as of March 18, 2022 (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the SEC on February 18, 2025).
10.3	Term Loan Credit Agreement, date as of November 1, 2024, by and among Celanese Corporation, Celanese US Holdings LLC, each lender from time to time party thereto, and Bank of America N.A., as administrative agent (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the SEC on November 4, 2024).
10.3(a)	First Amendment to Credit Agreement, dated as of February 17, 2025, by and among Celanese Corporation, Celanese US Holdings LLC, each lender party thereto, and Bank of America, N.A., as Administrative Agent, amending that certain Term Loan Credit Agreement dated as of November 1, 2024 (incorporated by reference to Exhibit 10.3 to the Current Report on Form 8-K filed with the SEC on February 18, 2025).
10.3†10.4†	Celanese Corporation 2008 Deferred Compensation Plan (incorporated by reference to Exhibit 10.6 to the Annual Report on Form 10-K filed on February 29, 2008).
10.4(a)10.5(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 filed with the SEC on April 23, 2009).
10.4(b)10.5(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 filed with the SEC on February 7, 2014).
10.4(c)10.5(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).
10.4(d)10.5(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).
10.4(e)10.5(e)†	Amendment Number Five to the Celanese Corporation Deferred Compensation Plan dated December 28, 2020 incorporated by reference to Exhibit 10.2(e) to the Annual Report on Form 10-K filed with the SEC on February 11, 2021).

10.5‡	Exhibit Number	Description
10.6‡		Celanese Corporation 2009 Employee Stock Purchase Program (incorporated by reference to Exhibit 4.5 to the Registration Statement on Form S-8 filed on April 23, 2009).
10.6‡10.7‡		Celanese Corporation Amended and Restated 2018 Global Incentive Plan, effective as of April 20, 2023 (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the SEC on April 25, 2023).
10.7(a)10.8(a)‡		Form of 2021 Executive Officer 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, 2021).
10.7(b)‡		Form of 2021 Time-Based Restricted Stock Unit Award Agreement (incorporated by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q filed with the SEC on April 23, 2021).
10.7(c)‡		Form of 2021 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, 2021).
10.7(d)‡		Form of 2022 Performance-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 29, 2022).
10.7(e)10.8(b)‡		Form of 2022 Performance-Based Restricted Stock Unit Award Agreement for Chief Executive Officer (incorporated by reference to Exhibit 10.5 to the Quarterly Report on Form 10-Q filed with the SEC on April 29, 2022).
10.7(f)10.8(c)‡		Form of 2022 Time-Based Restricted Stock Unit Award Agreement (incorporated by reference to Exhibit 10.6 to the Quarterly Report on Form 10-Q filed with the SEC on April 29, 2022).
10.7(g)10.8(d)‡		Form of 2022 Time-Based Time-Based Restricted Stock Unit Award Agreement for Chief Executive Officer (incorporated by reference to Exhibit 10.7 to the Quarterly Report on Form 10-Q filed with the SEC on April 29, 2022).
10.7(h)10.8(e)‡		Form of 2022 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, 2022).
10.7(i)10.8(f)‡		Form of 2023 Performance-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 May 10, 2023).

Exhibit Number	Description
10.7(j)†	Form of 2023 Performance-Based Restricted Stock Unit Award Agreement for Chief Executive Officer (incorporated by reference to Exhibit 10.5 to the Quarterly Report on Form 10-Q filed with the SEC on May 10, 2023).
10.7(k)10.8(h)†	Form of 2023 Time-Based Stock Option Award Agreement (incorporated by reference to Exhibit 10.6 to the Quarterly Report on Form 10-Q filed with the SEC on May 10, 2023).
10.7(l)10.8(i)†	Form of 2023 Time-Based Stock Option Award Agreement for Chief Executive Officer (incorporated by reference to Exhibit 10.7 to the Quarterly Report on Form 10-Q filed with the SEC on May 10, 2023).
10.7(m)10.8(j)†	Form of 2023 Time-Based Restricted Stock Unit Award Agreement (for non-employee directors) (incorporated by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q filed with the SEC on August 8, 2023).
10.8(a)10.8(k)†	Form of 2024 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 May 10, 2024).
10.8(l)†	Form of 2024 Performance-Based Restricted Stock Unit Award Agreement for Chief Executive Officer (incorporated by reference to Exhibit 10.4 to the Quarterly Report on Form 10-Q filed with the SEC on May 10, 2024).
10.8(m)†	Form of 2024 Time-Based Stock Option Award Agreement (incorporated by reference to Exhibit 10.5 to the Quarterly Report on Form 10-Q filed with the SEC on May 10, 2024).
10.8(n)†	Form of 2024 Time-Based Stock Option Award Agreement for Chief Executive Officer (incorporated by reference to Exhibit 10.6 to the Quarterly Report on Form 10-Q filed with the SEC on May 10, 2024).
10.8(o)†	Form of 2024 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 August 2, 2024).
10.9(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 filed with the SEC on February 12, 2013).
10.8(b)10.9(b)†	Executive Severance Benefits Plan, amended effective October 18, 2017 (incorporated by reference to Exhibit 10.9(b) to the Annual Report on Form 10-K filed with the SEC on February 9, 2018).
10.8(c)10.9(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).
10.9(a)10.10†	Designated Roles Member Severance Benefits Plan dated December 9, 2024 (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the SEC on December 12, 2024).
10.11(a)*†	Agreement and General Release, dated November 1, 2023 December 27, 2024 between Celanese Corporation and Anne L. Puckett, Lori J. Ryerkerk.
10.9(b)10.11(b)†	Amended and Restated Offer Letter, dated February 5, 2020 December 9, 2024, between Celanese Corporation and Lori J. Ryerkerk, Scott A. Richardson (incorporated by reference to Exhibit 10.6 10.1 to the Quarterly Current Report on Form 10-Q 8-K filed with the SEC on April 28, 2020 December 9, 2024).

10.9(c)†	
Exhibit Number	Description
10.10(a) 10.12(a)†	Settlement Agreement, dated February 13, 2023, between Celanese Corporation and John Fotheringham (incorporated by reference to Exhibit 10.3 to the Quarterly Report on Form 10-Q filed with the SEC on August 8, 2023).
10.10(b) 10.12(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).
10.12(c)†	Amended and Restated Change in Control Agreement between Celanese Corporation and Scott A. Richardson (incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K filed with the SEC on December 9, 2024).
10.10(b) 10.12(c).1*†	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).
10.11† 10.13†	Amended Schedule of Participants to Form of Non-CEO Amended and Restated Change in Control Agreement, Agreement.
10.12† 10.14†	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 filed with the SEC on January 26, 2009).
10.12(a) 10.14(a)†	Celanese Americas Supplemental Retirement Savings Plan, as amended and restated effective January 1, 2014 (incorporated by reference to Exhibit 10.14(a) to the Annual Report on Form 10-K filed with the SEC on February 6, 2015).
10.13† 10.15†	Amendment Number One to the Celanese Americas Supplemental Retirement Savings Plan, as amended and restated effective January 1, 2014, dated December 28, 2020 (incorporated by reference to Exhibit 10.11(a) to the Annual Report on Form 10-K filed with the SEC on February 11, 2021).
10.13(a) 10.15(a)†	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).
10.13(b) 10.15(b)†	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).
10.14*† 10.16*†	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).
19.1*	Summary of Non-Employee Director Compensation.
21.1*	Insider Trading Policy and Procedures.
	List of Subsidiaries of Celanese Corporation.

Exhibit Number	Description
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.
97*	Celanese Corporation Incentive-Based Compensation Recoupment (Clawback) Policy, Policy.
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.

Exhibit Number	Description
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, 2023 December 31, 2024 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 SCOTT A.
RICHARDSON
Name: Lori J. Ryerkerk Scott A. Richardson
Title: Chair of the Board of Directors, President, Chief
Executive Officer and PresidentDirector
Date: February 23, 2024 21, 2025

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Chuck B. Kyriash and Aaron M. McGilvray, 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 U.S. Securities and Exchange Commission in connection with the Annual Report on Form 10-K for the fiscal year ended December 31, 2023 December 31, 2024 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.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
/s/ LORI J. RYERKERK SCOTT A. RICHARDSON Lori J. Ryerkerk Scott A. Richardson	Chair of the Board of Directors, President, Chief Executive Officer and President Director (Principal Executive Officer)	February 23, 2024 21, 2025
/s/ CHUCK B. KYRISH Chuck B. Kyrish	Senior Vice President and Chief Financial Officer (Principal Financial Officer)	February 23, 2024 21, 2025
/s/ AARON M. MCGILVRAY Aaron M. McGilvray	Vice President, Finance, Controller and Chief Accounting Officer (Principal Accounting Officer)	February 23, 2024 21, 2025
/s/ JEAN S. BLACKWELL BRUCE E. CHINN Jean S. Blackwell	Director	February 23, 2024 21, 2025
/s/ WILLIAM M. BROWN William M. Brown Bruce E. Chinn	Director	February 23, 2024
/s/ EDWARD G. GALANTE Edward G. Galante	Director Chairman of the Board of Directors	February 23, 2024 21, 2025
/s/ TIMOTHY GO Timothy Go	Director	February 21, 2025
/s/ KATHRYN M. HILL Kathryn M. Hill	Director	February 23, 2024 21, 2025
/s/ DAVID F. HOFFMEISTER David F. Hoffmeister	Director	February 23, 2024 21, 2025

<u>Signature</u>	<u>Title</u>	<u>Date</u>
/s/ JAY V. IHLENFELD Jay V. Ihlenfeld	Director	February 23, 2024 21, 2025
/s/ DEBORAH J. KISSIRE Deborah J. Kissire	Director	February 23, 2024 21, 2025
/s/ CHRISTOPHER KUEHN Christopher Kuehn	Director	February 21, 2025
/s/ MICHAEL KOENIG Michael Koenig	Director	February 23, 2024 21, 2025
/s/ GANESH MOORTHY Ganesh Moorthy	Director	February 23, 2024 21, 2025
/s/ KIM K.W. RUCKER Kim K.W. Rucker	Director	February 23, 2024 21, 2025

CELANESE CORPORATION AND SUBSIDIARIES
INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Report of Independent Registered Public Accounting Firm	62 64
Consolidated Statements of Operations for the years ended December 31, 2023 December 31, 2024, 2022 2023 and 2021 2022	64 67
Consolidated Statements of Comprehensive Income (Loss) for the years ended December 31, 2023 December 31, 2024, 2022 2023 and 2021 2022	65 68
Consolidated Balance Sheets as of December 31, 2023 December 31, 2024 and 2022 2023	66 69
Consolidated Statements of Equity for the years ended December 31, 2023 December 31, 2024, 2022 2023 and 2021 2022	67 70
Consolidated Statements of Cash Flows for the years ended December 31, 2023 December 31, 2024, 2022 2023 and 2021 2022	68 71
Notes to the Consolidated Financial Statements	69 72
1. Description of the Company and Basis of Presentation	69 72
2. Summary of Accounting Policies	69 72
3. Recent Accounting Pronouncements	79 81
4. Acquisitions, Dispositions and Plant Closures	79 83
5. Receivables, Net	81 84
6. Inventories	82 85
7. Investments in Affiliates	82 85
8. Property, Plant and Equipment, Net	84 87
9. Goodwill and Intangible Assets, Net	84 87
10. Current Other Liabilities	86 90
11. Debt	87 91
12. Benefit Obligations	92 95
13. Environmental	99 102
14. Shareholders' Equity	102 105
15. Income Taxes	103 107
16. Leases	108 112
17. Derivative Financial Instruments	110 114
18. Fair Value Measurements	112 116
19. Commitments and Contingencies	114 118
20. Supplemental Cash Flow Information	116 120
21. Segment Information	116 120
22. Revenue Recognition	119 124
23. Earnings (Loss) Per Share	120 125
24. Other (Charges) Gains, Net	120 125

Report of Independent Registered Public Accounting Firm

To the Shareholders 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, 2023](#) [December 31, 2024](#) and [2022](#), 2023, 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, 2023](#) [December 31, 2024](#), 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, 2023](#) [December 31, 2024](#), 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, 2023](#) [December 31, 2024](#) and [2022](#), 2023, and the results of its operations and its cash flows for each of the years in the three-year period ended [December 31, 2023](#) [December 31, 2024](#), 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, 2023](#) [December 31, 2024](#) based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

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 Matter Matters

The critical audit matter matters communicated below is a matter are matters arising from the current period audit of the consolidated financial statements that was were communicated or required to be communicated to the audit committee and that: (1) relates 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 a critical audit matter 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 matter matters below, providing a separate opinion opinions on the critical audit matter matters or on the accounts or disclosures to which it relates, they relate.

Evaluation of the Company's application of multinational income tax regulations

As discussed in Note 15 to the consolidated financial statements, the Company recorded \$790 \$510 million of income tax benefit provision for the year ended December 31, 2023 December 31, 2024. Because of the 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 of 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.

Assessment of goodwill for impairment

As discussed in Notes 2 and 9 to the consolidated financial statements, the Company tests goodwill for impairment at least annually and whenever events or changes in circumstances indicate that the carrying amount of a reporting unit may not be fully recoverable. The Company's goodwill impairment test uses a weighting of the income and market approach to estimate a reporting unit's fair value. The income approach is based on a discounted cash flow analysis and involves the use of assumptions,

including projections of revenues and expenses, revenue growth rates, and the selection of discount rates. In the fourth quarter of 2024, the Company recorded an impairment of goodwill in the engineered materials reporting unit of \$1,517 million. The total goodwill balance as of December 31, 2024 was \$5,387 million, of which \$5,025 million relates to the engineered materials reporting unit.

We identified the evaluation of the fair value of the engineered materials reporting unit as a critical audit matter. There was a high degree of subjective auditor judgment in evaluating the key assumptions used in the discounted cash flow analysis used to estimate the fair value of the engineered materials reporting unit. Specifically, minor changes to key assumptions, including projected revenue, revenue growth rates and the discount rate, could have had a significant effect on the Company's assessment of the fair value of the reporting unit. Additionally, the use of professionals with specialized skills and knowledge was required to assess these key assumptions.

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 over the Company's goodwill impairment process. This included controls related to the determination of the estimated fair value of the reporting unit and the development of the key assumptions. We evaluated the projected revenue by comparing it to the historical results of the reporting unit and assessing the impacts of internal and/or external economic factors. In addition, we involved valuation professionals with specialized skills and knowledge, who assisted in:

- evaluating the revenue growth rates by comparing them with projected revenue growth rates of peer companies based on publicly available market data
- evaluating the discount rate by comparing it to a discount rate that was independently developed using publicly available market data for comparable companies.

/s/ KPMG LLP

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

Dallas, Texas
February 23, 2024 21, 2025

CELANESE CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS

	Year Ended December 31,		
	2023	2022	2021
	2024	2023	2022
(In \$ millions, except share and per share data)			
Net sales			
Cost of sales			
Gross profit			
Selling, general and administrative expenses			
Amortization of intangible assets			
Research and development expenses			
Other (charges) gains, net			
Foreign exchange gain (loss), net			
Gain (loss) on disposition of businesses and assets, net			
Operating profit (loss)			
Equity in net earnings (loss) of affiliates			
Non-operating pension and other postretirement employee benefit (expense) income			
Interest expense			
Refinancing expense			
Interest income			
Dividend income - equity investments			
Other income (expense), net			
Other income (expense), net			
Other income (expense), net			
Earnings (loss) from continuing operations before tax			
Income tax (provision) benefit			
Earnings (loss) from continuing operations			

Earnings (loss) from operation of discontinued operations
Income tax (provision) benefit from discontinued operations
Income tax (provision) benefit from discontinued operations
Income tax (provision) benefit from discontinued operations
Earnings (loss) from discontinued operations
Net earnings (loss)
Net (earnings) loss attributable to noncontrolling interests
Net earnings (loss) available to Celanese Corporation
Net earnings (loss) available to Celanese Corporation
Net earnings (loss) available to Celanese Corporation
Amounts attributable to Celanese Corporation
Earnings (loss) from continuing operations
Earnings (loss) from continuing operations
Earnings (loss) from continuing operations
Earnings (loss) from discontinued operations
Net earnings (loss)
Earnings (loss) per common share - basic
Continuing operations
Continuing operations
Continuing operations
Discontinued operations
Net earnings (loss) - basic
Earnings (loss) per common share - diluted
Continuing operations
Continuing operations
Continuing operations
Discontinued operations
Net earnings (loss) - diluted
Weighted average shares - basic
Weighted average shares - diluted

See the accompanying notes to the consolidated financial statements.

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

	Year Ended December 31,		
	2023	2022	2021
	2024	2023	2022
(In \$ millions)			
Net earnings (loss)			
Other comprehensive income (loss), net of tax			
Foreign currency translation gain (loss)			
Foreign currency translation gain (loss)			
Foreign currency translation gain (loss)			
Gain (loss) on derivative hedges			
Pension and postretirement benefits			
Total other comprehensive income (loss), net of tax			
Total comprehensive income (loss), net of tax			
Comprehensive (income) loss attributable to noncontrolling interests			
Comprehensive income (loss) attributable to Celanese Corporation			

See the accompanying notes to the consolidated financial statements.

CELANESE CORPORATION AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

		As of December 31,	
		2023	2022
		2024	2023
		(In \$ millions, except share data)	
ASSETS			
Current Assets			
Current Assets			
Current Assets			
Cash and cash equivalents			
Trade receivables - third party and affiliates			
Non-trade receivables, net			
Inventories			
Other assets			
Other assets			
Other assets			
Total current assets			
Investments in affiliates			
Property, plant and equipment (net of accumulated depreciation - 2023: \$4,080; 2022: \$3,687)			
Property, plant and equipment (net of accumulated depreciation - 2024: \$4,562; 2023: \$4,080)			
Operating lease right-of-use assets			
Deferred income taxes			
Other assets			
Goodwill			
Intangible assets, net			
Total assets			
LIABILITIES AND EQUITY			
Current Liabilities			
Current Liabilities			
Current Liabilities			
Short-term borrowings and current installments of long-term debt - third party and affiliates			
Trade payables - third party and affiliates			
Other liabilities			
Income taxes payable			
Income taxes payable			
Income taxes payable			
Total current liabilities			
Long-term debt, net of unamortized deferred financing costs			
Deferred income taxes			
Uncertain tax positions			
Benefit obligations			
Operating lease liabilities			
Other liabilities			
		Commitments and Contingencies	Commitments and Contingencies
Shareholders' Equity			

Preferred stock, \$0.01 par value, 100,000,000 shares authorized (2023 and 2022: 0 issued and outstanding)	
Preferred stock, \$0.01 par value, 100,000,000 shares authorized (2023 and 2022: 0 issued and outstanding)	
Preferred stock, \$0.01 par value, 100,000,000 shares authorized (2023 and 2022: 0 issued and outstanding)	
Common stock, \$0.0001 par value, 400,000,000 shares authorized (2023: 170,476,740 issued and 108,906,426 outstanding; 2022: 170,135,425 issued and 108,473,932 outstanding)	
Preferred stock, \$0.01 par value, 100,000,000 shares authorized (2024 and 2023: 0 issued and outstanding)	
Preferred stock, \$0.01 par value, 100,000,000 shares authorized (2024 and 2023: 0 issued and outstanding)	
Preferred stock, \$0.01 par value, 100,000,000 shares authorized (2024 and 2023: 0 issued and outstanding)	
Common stock, \$0.0001 par value, 400,000,000 shares authorized (2024: 170,827,196 issued and 109,327,556 outstanding; 2023: 170,476,740 issued and 108,906,426 outstanding)	
Treasury stock, at cost (2023: 61,570,314 shares; 2022: 61,661,493 shares)	
Treasury stock, at cost (2023: 61,570,314 shares; 2022: 61,661,493 shares)	
Treasury stock, at cost (2023: 61,570,314 shares; 2022: 61,661,493 shares)	
Treasury stock, at cost (2024: 61,499,640 shares; 2023: 61,570,314 shares)	
Treasury stock, at cost (2024: 61,499,640 shares; 2023: 61,570,314 shares)	
Treasury stock, at cost (2024: 61,499,640 shares; 2023: 61,570,314 shares)	
Additional paid-in capital	
Retained earnings	
Accumulated other comprehensive income (loss), net	
Total Celanese Corporation shareholders' equity	
Noncontrolling interests	
Total equity	
Total liabilities and equity	

See the accompanying notes to the consolidated financial statements.

CELANESE CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF EQUITY

	Year Ended December 31,											
	2023		2022		2021							
	2024		2023		2022							
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount
(In \$ millions, except share data)												
Common Stock												
Common Stock												
Common Stock												
Balance as of the beginning of the period												
Balance as of the beginning of the period												
Balance as of the beginning of the period												
Stock option exercises												
Purchases of treasury stock												
Stock awards												
Stock awards												
Stock awards												
Balance as of the end of the period												
Treasury Stock												
Balance as of the beginning of the period												
Balance as of the beginning of the period												
Balance as of the beginning of the period												
Purchases of treasury stock, including related fees												
Issuance of treasury stock under stock plans												

Issuance of treasury stock under stock plans
Issuance of treasury stock under stock plans
Balance as of the end of the period
Balance as of the end of the period
Balance as of the end of the period
Additional Paid-In Capital
Balance as of the beginning of the period
Balance as of the beginning of the period
Balance as of the beginning of the period
Stock-based compensation, net of tax
Stock-based compensation, net of tax
Stock-based compensation, net of tax
Balance as of the end of the period
Balance as of the end of the period
Stock option exercises, net of tax
Balance as of the end of the period
Retained Earnings
Balance as of the beginning of the period
Balance as of the beginning of the period
Balance as of the beginning of the period
Net earnings (loss) attributable to Celanese Corporation
Common stock dividends
Balance as of the end of the period
Balance as of the end of the period
Balance as of the end of the period
Accumulated Other Comprehensive Income (Loss), Net
Balance as of the beginning of the period
Balance as of the beginning of the period
Balance as of the beginning of the period
Other comprehensive income (loss), net of tax
Balance as of the end of the period
Total Celanese Corporation shareholders' equity
Noncontrolling Interests
Balance as of the beginning of the period
Balance as of the beginning of the period
Balance as of the beginning of the period
Net earnings (loss) attributable to noncontrolling interests
Distributions/dividends to noncontrolling interests
Distributions/dividends to noncontrolling interests
Other comprehensive income (loss), net of tax
Other comprehensive income (loss), net of tax
Other comprehensive income (loss), net of tax
Distributions/dividends to noncontrolling interests
Acquisition of noncontrolling interests
Balance as of the end of the period
Total equity

See the accompanying notes to the consolidated financial statements.

CELANESE CORPORATION AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year Ended December 31,		Year Ended December 31,	Year Ended December 31,
	2023	2022	2021	
	2024	2023	2022	
	(In \$ millions)		(In \$ millions)	(In \$ millions)
Operating Activities				
Net earnings (loss)				
Net earnings (loss)				
Net earnings (loss)				
Adjustments to reconcile net earnings (loss) to net cash provided by (used in) operating activities				
Asset impairments				
Asset impairments				
Asset impairments				
Depreciation, amortization and accretion				
Pension and postretirement net periodic benefit cost				
Pension and postretirement contributions				
Actuarial (gain) loss on pension and postretirement plans				
Pension curtailments and settlements, net				
Deferred income taxes, net				
(Gain) loss on disposition of businesses and assets, net				
Stock-based compensation				
Stock-based compensation				
Stock-based compensation				
Undistributed earnings in unconsolidated affiliates				
Other, net				
Other, net				
Other, net				
Operating cash provided by (used in) discontinued operations				
Changes in operating assets and liabilities				
Trade receivables - third party and affiliates, net				
Trade receivables - third party and affiliates, net				
Trade receivables - third party and affiliates, net				
Inventories				
Other assets				
Trade payables - third party and affiliates				
Other liabilities				
Net cash provided by (used in) operating activities				
Investing Activities				
Capital expenditures on property, plant and equipment				
Capital expenditures on property, plant and equipment				
Capital expenditures on property, plant and equipment				
Acquisitions, net of cash acquired				
Proceeds from sale of businesses and assets, net				
Proceeds from sale of marketable securities				
Proceeds from sale of marketable securities				
Settlement of cross-currency swap agreement				
Proceeds from sale of marketable securities				
Other, net				
Other, net				
Settlement of cross-currency swap agreement				
Settlement of cross-currency swap agreement				

Other, net
Net cash provided by (used in) investing activities
Financing Activities
Net change in short-term borrowings with maturities of 3 months or less
Net change in short-term borrowings with maturities of 3 months or less
Net change in short-term borrowings with maturities of 3 months or less
Proceeds from short-term borrowings
Repayments of short-term borrowings
Proceeds from long-term debt
Repayments of long-term debt
Purchases of treasury stock, including related fees
Purchases of treasury stock, including related fees
Purchases of treasury stock, including related fees
Common stock dividends
Common stock dividends
Stock option exercises
Common stock dividends
Distributions/dividends to noncontrolling interests
Settlement of forward-starting interest rate swaps
Issuance cost of bridge facility
Issuance cost of bridge facility
Issuance cost of bridge facility
Other, net
Net cash provided by (used in) financing activities
Exchange rate effects on cash and cash equivalents
Net increase (decrease) in cash and cash equivalents
Cash and cash equivalents as of beginning of period
Cash and cash equivalents as of end of period

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, medical, consumer electronics, energy storage, filtration, paints and coatings, paper and packaging, industrial applications 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 U.S." 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 ("U.S. 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 shareholders' interests are shown as noncontrolling interests.

2. Summary of Accounting Policies

Critical Accounting Policies

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.

Recoverability of Goodwill and Indefinite-Lived Intangible Assets

The Company assesses the recoverability of the carrying amount of its reporting unit goodwill and other 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 another 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 of goodwill, the Company measures the recoverability of goodwill for each reporting unit using the income approach based on a discounted cash flow model incorporating discount rates commensurate with the risks involved or a combination of the income approach and the market approach using the guideline public company method, which is classified as a Level 3 fair value measurement. The key assumptions used in the discounted cash flow valuation model include discount rates, revenue growth rates, tax rates, cash flow projections and terminal value rates. Discount rates, revenue 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. Revenue growth rates and cash flow projections are based on historical trends and expected growth drivers such as macroeconomic trends in the industries and territories in which the reporting units operate. The Company may engage third-party valuation consultants to assist with this process.

Management tests other 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, revenue growth rates, tax rates, sales projections and terminal value rates. Discount rates, royalty rates, revenue 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. Revenue growth rates and sales projections are based on historical trends and expected growth drivers such as macroeconomic trends in the industries and territories in which the indefinite-lived intangible assets operate. Tax rates consider the operating structure of the Company and tax rates in jurisdictions in which the indefinite-lived intangible assets operate.

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 monthly 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. The Company engages third-party consultants to assist with this process.

In the U.S., 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 approximately 400 Aa-grade non-callable bonds (unless accompanied by a make whole provision) 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 U.S., 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.

- **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 U.S. 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, liabilities where possible.

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 and technical authorities in the relevant jurisdiction.

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 U.S. 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 U.S. 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 it 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, 2023, December 31, 2024 and 2022, 2023, the carrying amount of the total assets associated with

Fairway included in the consolidated balance sheets were \$626 \$574 million and \$627 \$626 million, respectively, made up primarily of \$529 \$491 million and \$544 \$529 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, 2023, December 31, 2024 and 2022 were 2023 was \$208 million, and \$223 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 pooled-type investments and registered investment companies, which do not have readily determinable fair values, are typically estimated using a net asset value provided by a third party as a practical expedient.

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

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

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

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

Cash and Cash Equivalents

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

Inventories

Inventories, including stores and supplies, are stated at the lower of cost and net realizable value. Cost for inventories is determined using the first-in, first-out 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 U.S. 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 **six** **eight** 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 debt issued in 2021. The interest rate swap agreement was designated as a cash flow hedge. Accordingly, to the extent the cash flow hedges were effective, changes in the fair value of the interest rate swap were included in gain (loss) from cash flow hedges within Accumulated other comprehensive income (loss), net in the consolidated balance sheets.

- **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 generally 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 cross-currency swaps to synthetically convert certain **USD United States dollar ("USD")** borrowings to **EUR euro ("EUR")** borrowings in 2019 and 2022. The cross-currency swap agreements are designated as a net investment hedge. Accordingly, to the extent the net investment hedges are 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.

The Company entered into cross-currency swaps to effectively convert certain USD borrowings to **JPY Japanese yen ("JPY")** and EUR borrowings in 2023. The cross-currency swap agreements were designated as fair value hedges. Accordingly, to the extent the fair value hedges are effective, changes in the fair value attributable to changes in the excluded components are included in gain (loss) from fair value hedges within Accumulated other comprehensive income (loss), net in the consolidated balance sheets. The value of the excluded components is recognized in earnings using a systematic and rational method by accruing the current-period swap settlements into earnings each reporting period.

The Company entered into cross-currency swaps to synthetically convert certain USD borrowings to Chinese yuan ("CNY") borrowings in 2024. The cross-currency swap agreements are designated as a net investment hedge. Accordingly, to the extent the net investment hedges are 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 hedges are 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 affects 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.

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, 2023 December 31, 2024, the Company had \$1.2 billion \$936 million of remaining performance obligations related to take-or-pay contracts. The Company expects to recognize approximately \$446 \$451 million of its remaining performance obligations as Net sales in 2024, \$398 2025, \$249 million in 2025, \$152 2026, \$128 million in 2026 2027 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 Current and Noncurrent Other liabilities in the consolidated balance sheets.

The Company does not have any material contract assets as of December 31, 2023 December 31, 2024.

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.

Functional and Reporting Currencies

For the Company's international operations where the functional currency is other than the U.S. 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") and final rules issued by the Securities and Exchange Commission ("SEC"):

Standard/Final Rule	Description	Effective Date	Effect on the Financial Statements or Other Significant Matters
In November 2024, the FASB issued ASU 2024-03, <i>Disaggregation of Income Statement Expenses (DISE)</i> and on January 6, 2025, the FASB issued ASU 2025-01, <i>Clarifying the Effective Date</i> .	The new guidance requires a public business entity ("PBE") to disclose, on an annual and interim basis, additional information about certain costs and expenses in the notes to financial statements. Specifically, in a tabular disclosure, the amounts of (a) purchases of inventory; (b) employee compensation; (c) depreciation; (d) intangible asset amortization; and (e) depreciation, depletion, and amortization recognized as part of oil- and gas-producing activities (or other amounts of depletion expense) included in each relevant expense caption. Within the same tabular disclosure, a PBE is required to include certain expense, gain, or loss amounts that are already required to be disclosed under U.S. GAAP. Additionally, a PBE is required to disclose a qualitative description of the amounts remaining in relevant expense captions that are not separately disaggregated quantitatively. The guidance also requires a PBE to disclose the total amount of selling expenses and, in annual reporting periods, an entity's definition of selling expenses.	Effective for annual periods beginning after December 15, 2026, and interim periods within annual periods beginning after December 15, 2027. Early adoption is permitted.	The Company is currently evaluating the impact of the adoption on its financial statement disclosures.

Standard/Final Rule	Description	Effective Date	Effect on the Financial Statements or Other Significant Matters
In March 2024, the SEC issued Release No. 33-11275, <i>The Enhancement and Standardization of Climate-Related Disclosures for Investors</i> .	The final rule will require the disclosure of Scope 1 and Scope 2 greenhouse gas emissions, if material, which will be subject to phased-in assurance requirements, governance of climate-related risks, risk management processes and climate-related targets and goals. Within the notes to financial statements, the final rule requires disclosure of certain climate-related financial statement effects and metrics.	Phased-in and effective for fiscal years beginning after December 15, 2024. Early adoption is permitted. The SEC stayed the effectiveness of the final rule in April 2024 pending judicial review.	The Company is currently evaluating the impact of the adoption on its financial statement disclosures.
In December 2023, the FASB issued ASU 2023-09, <i>Improvements to Income Tax Disclosures</i> .	The new guidance requires an entity to disclose specific categories in the rate reconciliation and provide additional information for reconciling items that meet a quantitative threshold. Additionally, the guidance requires an entity to disclose annual income taxes paid (net of refunds received) disaggregated by federal (national), state and foreign taxes and disaggregate the information by jurisdiction based on a quantitative threshold. The guidance also requires an entity to disclose income (loss) from continuing operations before income tax expense (benefit) disaggregated between domestic and foreign and income tax expense (benefit) from continuing operations disaggregated by federal (national), state and foreign.	Effective for annual periods beginning after December 15, 2024. Early adoption is permitted.	The Company is currently evaluating the impact of the adoption on its financial statement disclosures.
In November 2023, the FASB issued ASU 2023-07, <i>Improvements to Reportable Segment Disclosures</i> .	The new guidance requires an entity to disclose, on an annual and interim basis, significant segment expenses that are regularly provided to the chief operating decision maker ("CODM") and included within segment profit or loss, as well as an amount of other segment items by reportable segment and a description of its composition. Additionally, the guidance requires an entity to disclose the title and position of the CODM and an explanation of how the CODM uses the reported measure(s) of segment profit or loss in assessing segment performance and deciding how to allocate resources. The update is required to be applied retrospectively to prior periods presented, based on the significant segment expense categories identified and disclosed in the period of adoption.	Effective for annual periods beginning after December 15, 2023, and for interim periods beginning after December 15, 2024. Early adoption is permitted.	The Company is currently evaluating adopted the impact new guidance effective for the year ended December 31, 2024. The adoption of the adoption on its financial statement disclosures, new guidance did not have a material impact to the Company.

4. Acquisitions, Dispositions and Plant Closures

Acquisitions

• Santoprene

In December 2021, the Company acquired the Santoprene™ thermoplastic vulcanizates ("TPV") elastomers business of Exxon Mobil Corporation ("Santoprene") for a purchase price of \$1.15 billion in an all-cash transaction. The Company acquired the Santoprene™, Dytron™ and Geolast™ trademarks and product portfolios, customer and supplier contracts and agreements, both production facilities producing TPV, the TPV intellectual property portfolio with associated technical and R&D assets and employees of the TPV elastomer business. The acquisition of Santoprene substantially strengthens the Company's existing elastomers portfolio, allowing the Company to bring a wider range of functionalized solutions into targeted growth areas including future mobility, medical and sustainability. The acquisition was accounted for as a business combination and the acquired operations are included in the Engineered Materials segment.

The Company allocated the purchase price of the acquisition to identifiable assets acquired and liabilities assumed based on their estimated fair values as of the acquisition date. The purchase price allocation was based upon preliminary information. During the measurement period, there were no adjustments that materially impacted the Company's goodwill initially recorded.

• Mobility & Materials

In November 2022, the Company acquired 100% ownership of entities and assets consisting of a majority of the Mobility & Materials business ("M&M") of DuPont de Nemours, Inc. ("DuPont") (the "M&M Acquisition") for a purchase price of \$11.0 billion, subject to transaction adjustments, in an all-cash transaction. The Company acquired a global production network of 29 facilities, including compounding and polymerization, customer and supplier contracts and agreements, an intellectual property portfolio, including approximately 850 patents with associated technical and R&D assets, and approximately 5,000 employees across the manufacturing, technical, and commercial organizations. This acquisition of M&M enhances the engineered materials product portfolio by adding new polymers, brands, product technology, and backward integration in critical polymers, allowing the Company to accelerate growth in high-value applications including future mobility, connectivity and medical. The acquisition was accounted for as a business combination and the acquired operations are included in the Engineered Materials segment.

The Company allocated the purchase price of the acquisition to identifiable assets acquired and liabilities assumed based on their estimated fair values as of the acquisition date. The excess of the purchase price over the aggregate fair values was recorded as goodwill. During the measurement period, there were no adjustments that materially impacted the Company's goodwill initially recorded.

The following unaudited pro forma financial information presents the consolidated results of operations as if the M&M Acquisition had occurred at the beginning of 2021. M&M's pre-acquisition results have been added to the Company's historical results. The pro forma results contained in the table below include adjustments for (i) increased depreciation expense as a result of acquisition date fair value adjustments, (ii) amortization of acquired intangibles, (iii) interest expense and amortization of debt issuance costs of \$366 million and \$674 million related to borrowings under entered into during the U.S. Term Loan Facility (defined below) year ended December 31, 2022 and the issuance of Acquisition Notes (defined below) \$9.0 billion of senior unsecured notes registered under the Securities Act in July 2022 as if these had taken place at the beginning of 2021 for the years year ended December 31, 2022 and 2021, respectively, and (iv) net total inventory step up of inventory amortized to Cost of sales of \$66 million for the years year ended December 31, 2022 and 2021.

These pro forma results have been prepared for comparative purposes only and are not necessarily indicative of the results of operations as they would have been had the acquisition occurred on the assumed date, nor are they necessarily an indication of future operating results.

	Year Ended December 31,	
	2022	2021
	(In \$ millions)	
Unaudited Consolidated Pro Forma Results		
Proforma Net sales	12,614	12,069
Proforma Earnings (loss) from continuing operations before tax	888	1,843

	Year Ended December 31,
	2022
	(In \$ millions)
Unaudited Consolidated Pro Forma Results	
Proforma Net sales	12,614
Proforma Earnings (loss) from continuing operations before tax	888

The amount of M&M Net sales and Earnings (loss) from continuing operations before tax consolidated by the Company since the acquisition date through December 31, 2022 were \$430 million and \$(80) million, respectively.

During the year ended December 31, 2022, transaction related costs of \$117 million were expensed as incurred to Selling, general and administrative expenses in the consolidated statements of operations.

• **Nutrinova Joint Venture**

On September 27, 2023, In September 2023, the Company formed a food ingredients joint venture with Mitsui under the name Nutrinova. The Company contributed receivables, inventory, property, plant and equipment, certain other assets, liabilities, technology and employees of its food ingredients business while retaining a 30% interest in the joint venture. Mitsui acquired the remaining 70% interest in the food ingredients business for a purchase price of \$503 million, subject to transaction adjustments. The Company accounted is accounting for its interest in the joint venture as an equity method investment, and its portion of the results will continue continues to be included in the Engineered Materials segment. A gain on the transaction of \$515 million is was included in Gain

(loss) on disposition of businesses and assets, net in the consolidated statements of operations for the year ended December 31, 2023.

• **Korea Engineering Plastics Co. Restructuring**

In April 2022, the Company completed the restructuring of Korea Engineering Plastics Co. ("KEPCO"), a joint venture owned 50% by the Company and 50% by Mitsubishi Gas Chemical Company, Inc. KEPCO was first formed in 1987 to manufacture and market polyoxymethylene ("POM") in Asia, with a particular focus on serving domestic demand in South Korea. KEPCO will now focus solely on manufacturing and supplying high quality products to its shareholders, who will independently market them globally. As part of the restructuring of KEPCO, the Company paid KEPCO \$5 million and will have paid 5 equal annual installments of €24 million on October 1 of each year from 2022 to 2026. This resulted in an increase to the Company's investment in KEPCO of \$134 million. The Company's joint venture partner has made and will make similar payments to KEPCO. The restructuring did not result in a change in ownership percentage of KEPCO, nor a change in control, and KEPCO will continue to be accounted for as an equity method investment.

Plant Closures

• **Uentrop, Germany**

On October 31, 2023, In October 2023, the Company announced the planned intended closure of its Polyamide 66 ("PA66") and High-Performance Nylon ("HPN") polymerization units at its facility in Uentrop, Germany to optimize production costs across its global network. These operations are included in the Company's Engineered Materials segment. The Company expects to complete fully ceased operation of the closure in 2024. PA66 polymerization unit and partially ceased operation of the HPN polymerization units during the year ended December 31, 2024.

The exit and shutdown costs related to the closure of the PA66 and HPN polymerization units in Uentrop, Germany were as follows:

	Year Ended December 31,
	2023 2024
	(In \$ millions)
Accelerated depreciation expense Restructuring ⁽¹⁾	14 16
Loss on disposition of assets, net Accelerated depreciation expense ⁽²⁾	36 4
Total	18 52

⁽¹⁾ Included in Other (charges) gains, net in the consolidated statements of operations (Note 24).

⁽²⁾ Included in Cost of sales in the consolidated statements of operations.

• **Mechelen, Belgium**

On February 29, 2024, the Company announced the intended closure of its facility in Mechelen, Belgium to optimize production costs across its global network. This operation is included in the Company's Engineered Materials segment. The Company fully ceased operations during the year ended December 31, 2024.

The exit and shutdown costs related to the closure of the facility in Mechelen, Belgium were as follows:

	Year Ended December 31,
	2024
	(In \$ millions)
Restructuring ⁽¹⁾	55
Accelerated depreciation expense ⁽²⁾	35
Total	90

⁽¹⁾ Included in Other (charges) gains, net in the consolidated statements of operations (Note 24).

(2) Included in Cost of sales in the consolidated statements of operations.

The Company expects to incur additional exit and shutdown costs related to the closure of the PA66 and HPN polymerization units facility in Uentrop, Germany Mechelen, Belgium of approximately \$70 \$20 million, in 2024, inclusive of estimated employee termination costs, costs, through 2028.

5. Receivables, Net

	As of December 31,	
	2023	2022
	2024	2023
(In \$ millions)		
Trade receivables - third party and affiliates		
Allowance for doubtful accounts - third party and affiliates		
Trade receivables - third party and affiliates, net		

	As of December 31,	
	2023	2022
	2024	2023
(In \$ millions)		
Non-income taxes receivable		
Income taxes receivable		
Income taxes receivable		
Income taxes receivable		
Other ⁽¹⁾		
Non-trade receivables, net		
Non-trade receivables, net		
Non-trade receivables, net		

(1) Includes \$42 million and \$193 million of non-trade receivables related to the M&M Acquisition as of December 31, 2023 and December 31, 2022, respectively.

6. Inventories

	As of December 31,	
	2023	2022
	2024	2023
(In \$ millions)		
Finished goods		
Work-in-process		
Raw materials and supplies		
Total		

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.

Equity Method

On September 27, 2023, In September 2023, the Company formed a food ingredients joint venture with Mitsui under the name Nutrinova. The Company accounted for its interest in the joint venture as an equity method investment. See Note 4 for additional information.

As a part of the M&M Acquisition, the Company acquired certain equity method investments and ownership interests.

The Company has ownership interests in 14 equity method investments ranging from 22% to 50% at December 31, 2023 December 31, 2024.

Equity method investments by business segment are as follows:

Carrying Value 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,	Share of Earnings (Loss) Year Ended December 31,	Dividends and Other Distributions Year Ended December 31,
Carrying Value as of December 31,	2023	2022	2023	2022	2021
2024	2023	2024	2023	2022	2024

(In \$ millions)

Engineered Materials⁽¹⁾

Other Activities

Other Activities

Other Activities

Total

Total

Total

(1) Engineered Materials includes an equity method investment with losses in excess of its carrying amount due to the Company's guarantee of various debt obligations under agreements with third parties related to an equity affiliate (Note 19). This equity method investment was recorded in Current Other liabilities (Note 10) as of December 31, 2023, December 31, 2024 and December 31, 2022, 2023.

Equity Investments Without Readily Determinable Fair Values

The Company has ownership interests in 4 equity investments without readily determinable fair values ranging from 8% to 31% at December 31, 2023, December 31, 2024.

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

Carrying Value as of December 31,	Carrying Value as of December 31,	Dividend Income for the Year Ended December 31,	Dividend Income for the Year Ended December 31,		
Carrying Value as of December 31,	2023	2022	2023	2022	2021
2024	2023	2024	2023	2023	2022

(In \$ millions)

Engineered Materials

Acetyl Chain

Acetyl Chain

Acetyl Chain

Other Activities

Other Activities

Other Activities

Total

Total
Total

Transactions with Affiliates

The Company owns manufacturing facilities at the InfraServ location in Frankfurt am Main-Hoechst, Germany and has contractual agreements with the its InfraServ Entities equity affiliates 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,		
	2023	2022	2021
	2024	2023	2022
(In \$ millions)			

Purchases

Sales and other credits

	As of December 31,	
	2023	2022
	2024	2023
(In \$ millions)		

Trade receivables
Non-trade receivables
Current notes receivables
Total due from affiliates
Short-term borrowings ⁽¹⁾
Short-term borrowings ⁽¹⁾
Short-term borrowings ⁽¹⁾
Trade payables
Current Other liabilities
Total due to affiliates

⁽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,	
	2023	2022
	2024	2023
(In \$ millions)		

Land
Land improvements
Buildings and building improvements
Machinery and equipment
Construction in progress
Gross asset value
Accumulated depreciation
Net book value

Assets under finance leases, net, included in the amounts above were \$154 \$119 million and \$176 \$154 million as of December 31, 2023 December 31, 2024 and 2022, 2023, respectively.

Capitalized interest costs and depreciation expense are as follows:

Year Ended December 31,

	2023	2022	2021
	2024	2023	2022

(In \$ millions)

Capitalized interest

Depreciation expense

During 2024, 2023 2022 and 2021, 2022, certain long-lived assets were impaired (Note 24).

9. Goodwill and Intangible Assets, Net

Goodwill

Engineered
Materials

Engineered
Materials

Engineered
Materials

Acetyl
Chain

Acetyl
Chain

Total

(In \$ millions)

As of December 31, 2021
Acquisitions (Note 4)
Exchange rate changes
As of December 31, 2022
Acquisitions (Note 4)
Dispositions(1)
Dispositions (Note 4)
Exchange rate changes
As of December 31, 2023(2)
As of December 31, 2023(1)
Impairment losses
Impairment losses
Impairment losses
Exchange rate changes
As of December 31, 2024(1)

(1) Related to Includes accumulated impairment losses of \$1.5 billion in the formation Engineered Materials segment as of the Nutrinova joint venture (Note 4) December 31, 2024.

(2) There were no accumulated impairment losses as of December 31, 2023.

In connection The Company assesses the recoverability of the carrying amount of its reporting unit goodwill 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.

During the three months ended September 30, 2024, the Company completed qualitative evaluations on its reporting units, with the Company's annual goodwill impairment assessment, exception of the engineered materials reporting unit, and concluded that it was more likely than not that the fair value of these reporting units exceeded their carrying value. The engineered materials reporting unit was tested quantitatively as the

Company experienced decreased demand, identified near-term negative trends in the automotive and industrial end-markets and experienced other challenging current macroeconomic conditions during the three months ended September 30, 2024.

Based on the quantitative test, the estimated fair value of the engineered materials reporting unit exceeded the carrying amount of its underlying assets. Therefore, the Company did not record an impairment loss to goodwill during the nine months ended September 30, 2023 September 30, 2024. Although no impairment of the engineered materials reporting unit was identified during the nine months ended September 30, 2024, as the estimated fair value exceeded its carrying value by less than 10% as of September 30, 2024.

During the three months ended December 31, 2024, the Company experienced a significant and sustained decrease in the Company's share price. Further, due to extended weakness in the macroeconomic environment, specifically the auto and industrial end-markets, which deepened general demand softness during the three months ended December 31, 2024, thereby impacting pricing and volume, the Company updated its engineered materials reporting unit forecast model for each the 2025 fiscal year which showed additional deterioration in the projected financial results for the 2025 fiscal year compared to the analyses prepared during the three months ended September 30, 2024. While the long-term projections beyond 2025 include recovery, the lower projections in 2025 do have an impact on the forecast model beyond 2025 by applying forecasted growth rates to a lower

anticipated 2025 base revenue. The updated 2025 projections continue to reflect industry wide challenges including demand softness across the majority of end uses resulting in lower pricing. Based on the sustained decrease in the share price and updated projections, the Company determined that there were indicators that the engineered materials reporting unit's goodwill may be impaired and, accordingly, performed an interim quantitative test of the engineered materials reporting unit during the three months ended December 31, 2024. The results of the test determined that the carrying amount of the engineered materials reporting unit exceeded its estimated fair value primarily due to the downward adjustments in the forecast model, as well as an increase in the discount rate. As such, the Company recorded a non-cash goodwill impairment loss of \$1.5 billion in Other charges (gains), net (Note 24) within the Engineered Materials segment.

The quantitative evaluations of the engineered materials reporting unit were performed using an equal weighting of the income approach based on the discounted estimated future cash flows of the reporting unit and market approach using the guideline public company method. The key assumptions used in the discounted cash flow valuation model include the discount rate, revenue growth rate, tax rate, cash flow projections and terminal value rate. The discount rates were based on market participant data, including the Company's weighted average cost of capital adjusted for risks specific to the reporting unit. The revenue growth rates and cash flow projections were based on historical trends and expected growth drivers such as macroeconomic trends in the industries and territories in which the reporting unit operates. The tax rates considered the operating structure of the reporting unit and tax rates in jurisdictions in which the reporting unit operates. A terminal value rate was applied to the final year of the projected periods to reflect continued stable, perpetual growth. Under the market approach, the Company utilized earnings multiples for public companies similar to the engineered materials reporting unit adjusted for a control premium.

While the Company believes the assumptions used in the impairment tests were reasonable, changes in market conditions or key assumptions made in future quantitative tests, including discount rates, revenue growth rates, tax rates, cash flow projections and terminal value rates, could negatively impact the results of future impairment testing for any of the Company's reporting units exceeded and could result in the carrying amount recognition of additional impairment charges. Such charges could be material to the underlying assets by a substantial margin (Note 2). statements of operations and balance sheets in the period(s) recorded.

No events or changes in circumstances occurred during the three months ended December 31, 2023 December 31, 2024 that indicated the carrying amount fair values of the assets may not be fully recoverable. Company's remaining reporting units were reduced below their carrying amounts. 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, 2021	45	996	45	55	1,141
Acquisitions ⁽¹⁾	—	1,509	550	—	2,059
Disposition	—	(2)	—	—	(2)
Accumulated impairment losses	—	(4)	—	—	(4)
Exchange rate changes	(3)	(44)	6	—	(41)
As of December 31, 2022	42	2,455	601	55	3,153
Disposition ⁽²⁾	—	(60)	(1)	—	(61)
Exchange rate changes	(1)	42	1	—	42
As of December 31, 2023	41	2,437	601	55	3,134
Accumulated Amortization					
As of December 31, 2021	(41)	(543)	(42)	(39)	(665)
Amortization	(1)	(51)	(9)	(1)	(62)
Disposition	—	2	—	—	2
Accumulated impairment losses	—	2	—	—	2
Exchange rate changes	3	23	1	—	27
As of December 31, 2022	(39)	(567)	(50)	(40)	(696)
Amortization	—	(120)	(43)	(1)	(164)
Disposition ⁽²⁾	—	59	1	—	60
Exchange rate changes	1	(11)	(3)	(1)	(14)
As of December 31, 2023	(38)	(639)	(95)	(42)	(814)
Net book value	3	1,798	506	13	2,320

(1) Primarily related to \$1.5 billion of customer-related intangible assets and \$550 million of developed technology acquired as part of the M&M Acquisition with weighted average amortization periods of 20 years and 13 years, respectively, and 18 years in total (Note 4).

(2) Primarily related to the formation of the Nutrinova joint venture (Note 4).

	Licenses	Customer-Related Intangible Assets	Developed Technology	Covenants Not to Compete and Other	Total
(In \$ millions)					
Gross Asset Value					
As of December 31, 2022	42	2,455	601	55	3,153
Disposition (Note 4)	—	(60)	(1)	—	(61)
Exchange rate changes	(1)	42	1	—	42
As of December 31, 2023	41	2,437	601	55	3,134
Exchange rate changes	(1)	(31)	(14)	—	(46)
As of December 31, 2024	40	2,406	587	55	3,088
Accumulated Amortization					
As of December 31, 2022	(39)	(567)	(50)	(40)	(696)
Amortization	—	(120)	(43)	(1)	(164)
Disposition (Note 4)	—	59	1	—	60
Exchange rate changes	1	(11)	(3)	(1)	(14)
As of December 31, 2023	(38)	(639)	(95)	(42)	(814)
Amortization	—	(116)	(42)	(1)	(159)
Exchange rate changes	1	27	3	—	31
As of December 31, 2024	(37)	(728)	(134)	(43)	(942)
Net book value	3	1,678	453	12	2,146

Indefinite-lived intangible assets are as follows:

	Trademarks and Trade Names
(In \$ millions)	
As of December 31, 2021	259
Acquisitions (Note 4)	1,400
Exchange rate changes	(11)
As of December 31, 2022	1,648
Dispositions ((1)Note 4)	(14)
Exchange rate changes	21
As of December 31, 2023	1,655
Impairment losses	(117)
Exchange rate changes	(43)
As of December 31, 2024	1,495

(1) **Related** The Company assesses the recoverability of the carrying amount of its 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 assets may not be fully recoverable.

During the three months ended September 30, 2024, the Company completed qualitative evaluations on its indefinite-lived intangible assets, with the exception of those assigned to the **formation** engineered materials reporting unit, and concluded that it was more likely than not that the fair value of these indefinite-lived intangible assets exceeded their carrying value. Indefinite-lived intangible assets assigned to the **Nutrinova joint venture** (Note 4).

engineered materials reporting unit were tested quantitatively.

In connection with the Company's annual indefinite-lived intangible assets impairment **assessment, test**, the Company **did not record an** recorded a non-cash impairment loss of \$34 million during the **nine three** months ended **September 30, 2023** September 30, 2024, **as in** Other charges (gains), net (Note 24) to impair the net book value of certain trade

names, primarily Zytel®, included in the Engineered Materials segment.

Additionally, in conjunction with the goodwill impairment test in the three months ended December 31, 2024, the Company performed an interim impairment test on the indefinite-lived intangible assets assigned to the engineered materials reporting unit. The Company recorded a non-cash impairment loss of \$83 million in Other charges (gains), net (Note 24) to impair the net book value of certain trade names, primarily Zytel®, included in the Engineered Materials segment.

Indefinite-lived intangible assets assigned to the engineered materials reporting unit were tested quantitatively utilizing the relief from royalty method under the income approach to determine the estimated fair value for each of indefinite-lived intangible asset. The key assumptions used in this model include discount rates, royalty rates, revenue growth rates, tax rates, sales projections and terminal value rates. The discount rates were based on the Company's weighted average return on assets adjusted for risks specific to the indefinite-lived intangible assets. Royalty rates are established by management using the most recent third party valuations and are periodically substantiated by third-party valuation consultants. The revenue growth rates and sales projections were based on historical trends and expected growth drivers such as macroeconomic trends in the industries and territories in which the indefinite-lived intangible assets exceeded operate. The tax rates considered the carrying value operating structure of the underlying asset by a substantial margin (Note 2). Company and tax rates in jurisdictions in which the indefinite-lived intangible assets operate. A terminal value rate was applied to the final year of the projected period to reflect continued stable, perpetual growth.

While the Company believes the assumptions used in the impairment tests were reasonable, changes in market conditions or key assumptions made in future quantitative tests, including discount rates, royalty rates, revenue growth rates, tax rates, sales projections and terminal value rates, could negatively impact the results of future impairment testing and could result in the recognition of additional impairment losses. Such charges could be material to the statements of operations and balance sheets in the period(s) recorded.

No events or changes in circumstances occurred during the three months ended December 31, 2023 December 31, 2024 that indicated the carrying amount of the Company's remaining indefinite-lived intangible assets may not be fully recoverable. Accordingly, no additional impairment analysis was performed during that period.

During the year ended December 31, 2023 December 31, 2024, the Company did not renew or extend any intangible assets.

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

	(In \$ millions)	(In \$ millions)
2024		
2025		
2026		
2027		
2028		
2029		

10. Current Other Liabilities

	As of December 31,	
	2023	2022
	(In \$ millions)	
Benefit obligations (Note 12)	25	25
Customer rebates	96	101
Derivatives (Note 17)	90	63
Interest (Note 11)	246	265
Legal (Note 19)	34	21
Operating leases (Note 16)	89	83
Restructuring (Note 24)	18	6
Salaries and benefits	175	151
Sales and use tax/foreign withholding tax payable	128	108
Investment in affiliates (Note 7)	96	79
Other ⁽¹⁾	157	299
Total	1,154	1,201

⁽¹⁾ Includes \$18 million and \$166 million payable to DuPont related to the M&M Acquisition and transition activities as of December 31, 2023 and December 31, 2022, respectively.

	As of December 31,	
	2024	2023
	(In \$ millions)	

Benefit obligations (Note 12)	25	25
Customer rebates	92	96
Derivatives (Note 17)	93	90
Interest (Note 11)	222	246
Legal (Note 19)	10	34
Operating leases (Note 16)	79	89
Restructuring (Note 24)	63	18
Salaries and benefits	166	175
Sales and use tax/foreign withholding tax payable	150	128
Investment in affiliates (Note 7)	98	96
Other	122	157
Total	1,120	1,154

11. Debt

	As of December 31,	
	2023	2022
	2024	2023

(In \$ millions)

Short-Term Borrowings and Current Installments of Long-Term Debt - Third Party and Affiliates

Current installments of long-term debt
Current installments of long-term debt
Current installments of long-term debt
Short-term borrowings, including amounts due to affiliates ⁽¹⁾
Revolving credit facility ⁽²⁾
Revolving credit facility ⁽²⁾
Revolving credit facility ⁽²⁾
Revolving credit facilities ⁽²⁾
Revolving credit facilities ⁽²⁾
Revolving credit facilities ⁽²⁾
Total
Total
Total

(1) The weighted average interest rate was 2.9% 2.1% and 5.8% 2.9% as of December 31, 2023 December 31, 2024 and 2022, 2023, respectively.

(2) The weighted average interest rate was 3.4% 3.1% and 5.8% 3.4% as of December 31, 2023 December 31, 2024 and 2022, 2023, respectively.

	As of December 31,	
	2023	2022
	2024	2023

(In \$ millions)

Long-Term Debt
Senior unsecured notes due 2023, interest rate of 1.125%
Senior unsecured notes due 2024, interest rate of 3.500%
Senior unsecured notes due 2023, interest rate of 1.125%
Senior unsecured notes due 2024, interest rate of 3.500%
Senior unsecured notes due 2023, interest rate of 1.125%
Senior unsecured notes due 2024, interest rate of 3.500%
Senior unsecured notes due 2024, interest rate of 5.900%
Senior unsecured notes due 2025, interest rate of 1.250%
Senior unsecured notes due 2025, interest rate of 6.050%

Senior unsecured term loan due 2025 ⁽¹⁾
Senior unsecured notes due 2026, interest rate of 1.400%
Senior unsecured notes due 2026, interest rate of 1.400%
Senior unsecured notes due 2026, interest rate of 1.400%
Senior unsecured notes due 2026, interest rate of 4.777%
Senior unsecured notes due 2027, interest rate of 2.125%
Senior unsecured notes due 2027, interest rate of 6.165%
Senior unsecured term loan due 2027 ⁽¹⁾
Senior unsecured notes due 2028, interest rate of 0.625%
Senior unsecured notes due 2028, interest rate of 6.350%
Senior unsecured notes due 2028, interest rate of 6.350% ⁽²⁾
Senior unsecured notes due 2029, interest rate of 5.337%
Senior unsecured notes due 2029, interest rate of 6.330%
Senior unsecured notes due 2030, interest rate of 6.550%
Senior unsecured notes due 2030, interest rate of 6.550% ⁽²⁾
Senior unsecured notes due 2032, interest rate of 6.379%
Senior unsecured notes due 2033, interest rate of 6.700%
Pollution control and industrial revenue bonds due at various dates through 2030 ⁽²⁾
Bank loans due at various dates through 2030 ⁽³⁾
Senior unsecured notes due 2033, interest rate of 6.700% ⁽²⁾
Pollution control and industrial revenue bonds due at various dates through 2030 ⁽³⁾
Bank loans due at various dates through 2030 ⁽⁴⁾
Obligations under finance leases due at various dates through 2054
Subtotal
Unamortized deferred financing costs ⁽⁴⁾
Unamortized deferred financing costs ⁽⁵⁾
Current installments of long-term debt
Total

- (1) The interest rate was 6.943% 6.047% and 5.934% 6.943% as of December 31, 2023 December 31, 2024 and 2022 2023, respectively.
- (2) On November 14, 2024, S&P Global Ratings downgraded the Company's credit rating to BB+, which had the effect of increasing the interest rates by 25 basis points on the senior unsecured notes due 2028, senior unsecured notes due 2030 and senior unsecured notes due 2033 to 6.600%, 6.800% and 6.950%, respectively, effective November 15, 2024.
- (3) Interest rates range from 4.05% 4.1% to 5.00% 5.0%.
- (3) (4) The weighted average interest rate was 2.6% 2.8% and 1.3% 2.6% as of December 31, 2023 December 31, 2024 and 2022 2023, respectively.
- (4) (5) Related to the Company's long-term debt, excluding obligations under finance leases.

Senior Credit Facilities

In connection with the M&M Acquisition, in February 2022, the Company entered into a bridge facility commitment letter with Bank of America, N.A. ("Bank of America") pursuant to which Bank of America committed to provide, subject to the terms and conditions set forth therein, a 364-day \$11.0 billion senior unsecured bridge term loan facility (the "Bridge Facility"). Subsequently, commitments in respect of the Bridge Facility were syndicated to additional financial institutions as contemplated thereby.

In March 2022, Celanese, Celanese U.S. and certain subsidiaries entered into a term loan credit agreement (the (as amended to date, the "March 2022 U.S. Term Loan Credit Agreement"), pursuant to which lenders provided a tranche of delayed-draw term loans due 364 days from issuance in an amount equal to \$500 million (the "364-day Term Loans") and a tranche of delayed-draw term loans due 5 years from issuance in an amount equal to \$1.0 billion (the "5-year Term Loans"). In September 2022, Celanese, Celanese U.S. and certain subsidiaries entered into an additional term loan credit agreement (the "September 2022 U.S. Term Loan Credit Agreement" and, together with the March 2022 U.S. Term Loan Credit Agreement, the "U.S. Term Loan Credit Agreements"), pursuant to which lenders provided delayed-draw term loans due 3 years from issuance in an amount equal to \$750 million (the "3-year Term Loans" and collectively with the 364-day Term Loans and the 5-year Term Loans, the "U.S. Term Loan Facility"). The U.S. Term Loan Facility was fully drawn during the three months ended December 31, 2022.

Amounts outstanding under the 5-year Term Loans of the U.S. Term Loan Facility will accrue interest at a rate equal to Secured Overnight Financing Rate with an interest period of one or three months ("Term SOFR") plus a margin of 1.125% to 2.125% per annum, or the base rate plus a margin of 0.125% to 1.125%, in each case, based on the Company's senior unsecured debt rating. The 364-day Term Loans and 3-year Term Loans have been fully repaid.

The entry into the U.S. Term Loan Credit Agreements and offerings of USD- and euro-denominated notes (as described below) reduced availability under the Bridge Facility to zero and the Company terminated the Bridge Facility.

Also in March 2022, Celanese, Celanese U.S. and certain subsidiaries entered into a new revolving credit agreement (the (as amended to date, the "U.S. Revolving Credit Agreement" and, together with the March 2022 U.S. Term Loan Credit Agreement, the "U.S. Credit Agreements") consisting of a \$1.75 billion senior unsecured revolving credit facility (with a letter of credit sublimit), maturing in 2027 (the "U.S. Revolving Credit Facility"). The margin for borrowings under the U.S. Revolving Credit Facility was 1.00% to 2.00% above certain interbank rates at current Company credit ratings. The proceeds of a \$365 million borrowing under the new senior unsecured revolving credit facility were used to repay and terminate the Company's existing revolving credit facility.

During the year ended December 31, 2022, the Company paid \$66 million in fees related to the Bridge Facility commitment, amortizing these fees to interest expense in the year ended December 31, 2022.

On February 21, 2023, August 9, 2023, February 16, 2024, November 1, 2024 and February 16, 2024 February 17, 2025, the Company amended certain covenants in certain of the U.S. Credit Agreements, including financial ratio maintenance covenants.

On August 9, 2023, the Company amended certain covenants in the March 2022 U.S. Term Loan Credit Agreement to permit refinancing certain senior notes without requiring a mandatory prepayment under the March 2022 U.S. Term Loan Credit Agreement.

The March 2022 U.S. Term Loan Credit Agreement and the U.S. Revolving Credit Agreement are and the September 2022 U.S. Term Loan Credit Agreement was, guaranteed by Celanese, Celanese U.S. and domestic subsidiaries together representing substantially all of the Company's U.S. assets and business operations (the "Subsidiary Guarantors"). The Subsidiary Guarantors are listed in Exhibit 22.1 to this Annual Report.

On January 4, 2023, In January 2023, Celanese (Shanghai) International Trading Co., Ltd ("CSIT"), a fully consolidated subsidiary, entered into a restatement of an existing credit facility agreement (the "China CSIT Revolving Credit Agreement") to upsize and modify the facility thereunder to consist of an aggregate CNY1.75 billion uncommitted senior unsecured revolving credit facility available under two tranches (with overdraft, bank guarantee and documentary credit sublimits) (the "China Revolving Credit CSIT January 2023 Facility"). Obligations bear interest at certain fixed and floating rates. On April 7, 2024, the CSIT January 2023 Facility was reduced to CNY750 million, and on December 19, 2024, the CSIT January 2023 Facility was reduced to CNY550 million. The China CSIT Revolving Credit Agreement is guaranteed by Celanese U.S.

On January 6, 2023, Also in January 2023, CSIT entered into a senior unsecured working capital loan contract for CNY800 million (the "China Working Capital Term Loan Agreement," together with the China Revolving Credit Agreement, the "China Credit Agreements," and the China Credit Agreements together with the U.S. Credit Agreements, the "Global Credit Agreements" Agreement"), payable 12 months from withdrawal date and bearing interest at 0.5% less than certain interbank rates. The loan under the China Working Capital Term Loan Agreement was fully drawn on January 10, 2023 in January 2023 and was supported by fully repaid during the three months ended March 31, 2024.

In December 2023, Celanese (Nanjing) Chemical Co., Ltd. ("CNC") entered into a letter of comfort senior unsecured working capital loan agreement for CNY800 million, payable on December 25, 2026 and bearing interest at 2.8% (the "CNC Working Capital Loan Agreement"). The loan under the CNC Working Capital Loan Agreement was fully drawn during the three months ended March 31, 2024.

On June 28, 2024, CNC entered into a senior unsecured working capital loan agreement for CNY800 million, payable in installments until June 28, 2027 and bearing interest at 2.75% (the "CNC Three Year Working Capital Loan Agreement"). The CNC Three Year Working Capital Loan Agreement was partially drawn during the year ended December 31, 2024.

On November 1, 2024, Celanese U.S. entered into a senior unsecured term loan credit agreement (the "November 2024 U.S. Term Loan Credit Agreement"), pursuant to which the lenders provided a delayed-draw term loan due 364 days from the Company date of borrowing in an amount up to \$1.0 billion. Amounts outstanding under the November 2024 U.S. Term Loan Credit Agreement will accrue interest at a rate equal to the Secured Overnight Financing Rate with an interest period of one or three months ("Term SOFR") plus a margin of 1.300% to 2.250% per annum, or the base rate plus a margin of 0.300% to 1.250%, in each case, based on the Company's senior unsecured debt rating, subject to further changes based on such ratings. The commitments under the November 2024 U.S. Term Loan Credit Agreement will terminate by March 15, 2025. The loan under the November 2024 U.S. Term Loan Credit Agreement was not drawn during the year ended December 31, 2024.

On December 10, 2024, CNC entered into a credit facility agreement (the "CNC Revolving Credit Agreement," together with the CNC Three Year Working Capital Loan Agreement, the CSIT Revolving Credit Agreement, the China Working Capital Term Loan Agreement and the CNC Working Capital Loan Agreement, the "China Credit Agreements," and the China Credit Agreements together with the U.S. Credit Agreements, the "Global Credit Agreements") for a CNY1.0 billion uncommitted senior unsecured revolving credit facility (the "CNC December 2024 Facility", and together with the CSIT January 2023 Facility and any other revolving credit facilities available to the Company's subsidiaries in China, the "China Revolving Credit Facilities"). Obligations bear interest at certain floating rates. The Company expects that the China Credit Agreements will continue to facilitate its efficient repatriation of cash to the U.S. to repay debt and effectively redomicile a portion of its U.S. debt to China at a lower average interest rate.

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

As of
December 31, 2023 2024

(In \$ millions)

Revolving Credit Facility

Borrowings outstanding	—
Available for borrowing	1,750

China Revolving Credit Facility Facilities

Borrowings outstanding	212 55
Available for borrowing	34 171

On February 6, 2025, the Company drew \$300 million from its U.S. Revolving Credit Facility. This borrowing and cash on hand were used primarily to repay in full the Company's senior unsecured notes due 2025, with an interest rate of 1.250%, due on February 11, 2025, and for general corporate purposes.

Senior Notes

The Company has outstanding senior unsecured notes, issued in public offerings registered under the Securities Act of 1933, as amended (the "Securities Act") (collectively, the "Senior Notes"). The Senior Notes were issued by Celanese U.S. and are guaranteed on a senior unsecured basis by Celanese and the Subsidiary Guarantors. Celanese U.S. 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 July 2022, Celanese U.S. completed a public offering of senior unsecured notes registered under the Securities Act as follows (collectively, the "Acquisition Notes"):

Maturity Date	Aggregate Principal Amount Issued		Discount to Par	Interest Rate
	(In millions)			
July 5, 2024	\$	2,000	99.987%	5.900%
March 15, 2025	\$	1,750	99.993%	6.050%
July 19, 2026	€	1,000	100.000%	4.777%
July 15, 2027	\$	2,000	100.000%	6.165%
January 19, 2029	€	500	99.996%	5.337%
July 15, 2029	\$	750	100.000%	6.330%
July 15, 2032	\$	1,000	100.000%	6.379%

Fees and expenses related to the offering of the Acquisition Notes, including underwriting discounts, were \$65 million for the year ended December 31, 2022 and are being amortized to Interest expense in the consolidated statements of operations over the terms of the applicable notes.

On August 24, 2023, August 2023, Celanese U.S. completed a public offering of senior unsecured notes registered under the Securities Act as follows (collectively, the "2023 Offering"):

Maturity Date	Aggregate Principal Amount Issued		Discount to Par	Interest Rate
	(In \$ millions)			
November 15, 2028		1,000	99.986%	6.350%
November 15, 2030		999	99.950%	6.550%
November 15, 2033		1,000	99.992%	6.700%

Fees and expenses related to the Also in August 2023, Offering, including underwriting discounts, were \$26 million for the year ended December 31, 2023 and are being amortized to Interest expense in the consolidated statements of operations over the terms of the applicable notes.

On August 25, 2023, Celanese U.S. completed a cash tender offer for \$2.25 billion in aggregate principal amount (the "Tender Offer") as follows:

Maturity Date	
Maturity Date	
Maturity Date	
	(In \$ millions)
	(In \$ millions)
	(In \$ millions)

June 30, 2024
June 30, 2024
June 30, 2024
July 5, 2024
July 5, 2024
July 5, 2024
March 15, 2025
March 15, 2025
March 15, 2025
April 30, 2024
April 30, 2024
April 30, 2024
May 8, 2024
May 8, 2024
May 8, 2024

The net proceeds from the 2023 Offering were used (i) to fund the Tender Offer and (ii) for the repayment of other outstanding indebtedness, including the payment in full of the 364-day Term Loans and the 3-year Term Loans. indebtedness.

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

	(In \$ millions)
2024	
2025	
2026	
2027	
2028	
2029	
Thereafter	
Total	

On February 12, 2025, Moody's Ratings downgraded the Company's credit ratings to Ba1 which, along with the credit downgrade by S&P Global Ratings on November 14, 2024, will have the impact of increasing interest rates for certain Senior Notes by up to 50 basis points and the U.S. Credit Agreements by 25 basis points starting in the years ended December 31, 2025 and 2026, as applicable.

Accounts Receivable Purchasing Facility

On June 1, 2023, In June 2023, the Company entered into an amendment to the amended and restated receivables purchase agreement (the "Amended Receivables Purchase Agreement") under its U.S. accounts receivable purchasing 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 accounts receivable purchasing facility such that the SPE may sell certain receivables until June 18, 2025. Under the Amended Receivables Purchase Agreement, transfers of U.S. 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 U.S. accounts receivable to the SPE. The Company and related subsidiaries have no continuing involvement in the transferred U.S. accounts receivable, other than collection and administrative responsibilities and, once sold, the U.S. accounts receivable are no longer available to satisfy creditors of the Company or the related subsidiaries. These sales are transacted at 100% of the face value of the relevant U.S. accounts receivable, resulting in derecognition of the U.S. accounts receivables from the Company's consolidated balance sheet. The Company de-recognized \$1.4 \$1.5 billion and \$1.1 \$1.4 billion of accounts receivable under this agreement for the years ended December 31, 2023 December 31, 2024 and 2022, 2023, respectively, and collected \$1.3 \$1.5 billion and \$1.1 \$1.3 billion of accounts receivable sold under this agreement during the same periods. Unsold U.S. accounts receivable of \$109 \$139 million were pledged by the SPE as collateral to the Purchasers as of December 31, 2023 December 31, 2024.

Factoring and Discounting Agreements

The Company has factoring agreements in Europe, Japan and Singapore with financial institutions to sell 100%, 100% and 90% of certain accounts receivable, respectively, on a non-recourse basis. The Company also has a factoring agreement in China with a financial institution to sell 100% of certain accounts receivable on a limited recourse basis. These transactions are treated as sales and are accounted for as reductions in accounts receivable because the agreements transfer effective control over and risk related to the receivables to the buyer. The Company has no material 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 \$423 \$700 million and \$320 \$423 million of accounts receivable under these factoring agreements for the years ended December 31, 2023 December 31, 2024 and 2022, 2023, respectively, and collected \$407 \$640 million and \$325 \$407 million of accounts receivable sold under these factoring agreements during the same periods.

In March 2021, the Company entered into an agreement in Singapore with a financial institution to discount, on a non-recourse basis, documentary credits or other documents recorded as accounts receivable. 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 and, once sold, the accounts receivable are no longer available to satisfy creditors in the event of bankruptcy. The Company de-recognized \$8 million and \$50 million of accounts receivable under this agreement for the years ended December 31, 2023 and 2022, respectively.

On December 15, 2023, the Company entered into a Master Discounting Agreement master discounting agreements (the "Master Discounting Agreement" Agreements") with a financial institution institutions in China to discount, on a non-recourse basis, banker's acceptance drafts ("BADs"), classified as accounts receivable. Under the Master Discounting Agreement, the transfer Agreements, transfers of BADs are treated as sales and are accounted for as a reduction in accounts receivable because the Master Discounting Agreement transfers Agreements transfer effective control over and risk related to the transferred BADs to the financial institution. institutions. The Company has no continuing involvement in the transferred BADs, and the BADs are no longer available to satisfy creditors in the event of a bankruptcy. The Company received \$100 million and \$45 million from the accounts receivable transferred under the Master Discounting Agreement Agreements as of December 31, 2023. The impacts of discounting are not material to the Company's results of operations, cash flows or financial position. December 31, 2024 and 2023, respectively.

Covenants

The Company's material financing arrangements contain customary covenants, such as events of default and change of control provisions, and in the case of the existing U.S. Credit Agreements the maintenance of certain financial ratios (subject to adjustment following certain qualifying acquisitions and dispositions, as set forth in the existing U.S. Credit Agreements, as amended). 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 the covenants in its material financing arrangements as of December 31, 2023 December 31, 2024.

12. 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 U.S. Benefits are dependent on years of service and the employee's compensation. Supplemental retirement benefits provided to certain employees are nonqualified for U.S. tax purposes. Separate nonqualified trusts have been established for certain U.S. nonqualified plan obligations. Pension costs under the Company's retirement plans are actuarially determined.

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 U.S. postretirement health care plan was closed to new participants effective January 1, 2006.

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,		
	2023	2022	2021
	2024	2023	2022

(In \$ millions)

Defined contribution plans

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

	Pension Benefits
	As of December 31,
	Pension Benefits
	As of December 31,
	Pension Benefits
	As of December 31,
	2023
	2023
	2023
	2024
	2024
	2024
	(In \$ millions)
	(In \$ millions)
	(In \$ millions)
Change in Projected Benefit Obligation	
Change in Projected Benefit Obligation	
Change in Projected Benefit Obligation	
Projected benefit obligation as of beginning of period	
Projected benefit obligation as of beginning of period	
Projected benefit obligation as of beginning of period	
Service cost	
Service cost	
Service cost	
Interest cost	
Interest cost	
Interest cost	
Net actuarial (gain) loss ⁽¹⁾	
Net actuarial (gain) loss ⁽¹⁾	
Net actuarial (gain) loss ⁽¹⁾	
Acquisitions ⁽²⁾	
Acquisitions ⁽²⁾	
Acquisitions ⁽²⁾	
Divestiture ⁽³⁾	
Divestiture ⁽³⁾	
Divestiture ⁽³⁾	
Divestiture ⁽²⁾	
Divestiture ⁽²⁾	
Divestiture ⁽²⁾	
Settlements	
Settlements	
Settlements	
Benefits paid	
Benefits paid	
Benefits paid	
Curtailments	
Curtailments	
Curtailments	
Special termination benefits	
Special termination benefits	
Special termination benefits	

Exchange rate changes
Exchange rate changes
Exchange rate changes

Projected benefit obligation as of end of period
Projected benefit obligation as of end of period
Projected benefit obligation as of end of period

Change in Plan Assets

Change in Plan Assets

Change in Plan Assets

Fair value of plan assets as of beginning of period
Fair value of plan assets as of beginning of period
Fair value of plan assets as of beginning of period

Actual return on plan assets
Actual return on plan assets
Actual return on plan assets

Employer contributions
Employer contributions
Employer contributions

Acquisitions⁽²⁾
Acquisitions⁽²⁾

Divestiture⁽²⁾

Acquisitions⁽²⁾
Divestiture⁽³⁾
Divestiture⁽³⁾
Divestiture⁽³⁾

Divestiture⁽²⁾
Divestiture⁽²⁾

Settlements
Settlements
Settlements

Benefits paid⁽⁴⁾ ⁽³⁾
Benefits paid⁽⁴⁾ ⁽³⁾
Benefits paid⁽⁴⁾ ⁽³⁾

Exchange rate changes
Exchange rate changes
Exchange rate changes

Fair value of plan assets as of end of period
Fair value of plan assets as of end of period
Fair value of plan assets as of end of period

Funded status as of end of period
Funded status as of end of period
Funded status as of end of period

Amounts Recognized in the Consolidated Balance Sheets Consist of:
Amounts Recognized in the Consolidated Balance Sheets Consist of:
Amounts Recognized in the Consolidated Balance Sheets Consist of:

Noncurrent Other assets
Noncurrent Other assets
Noncurrent Other assets
Current Other liabilities
Current Other liabilities
Current Other liabilities
Benefit obligations

Benefit obligations

Benefit obligations

Net amount recognized
Net amount recognized
Net amount recognized

Amounts Recognized in Accumulated Other Comprehensive Income Consist of:

Amounts Recognized in Accumulated Other Comprehensive Income Consist of:

Amounts Recognized in Accumulated Other Comprehensive Income Consist of:

Net actuarial (gain) loss(5) (4)
Net actuarial (gain) loss(5) (4)
Net actuarial (gain) loss(5) (4)
Prior service (benefit) cost
Prior service (benefit) cost
Prior service (benefit) cost
Net amount recognized
Net amount recognized
Net amount recognized

- (1) Primarily relates to changes in discount rates.
- (2) Represents plan obligations and assets related to the M&M Acquisition (Note 4).
- (3) Represents plan obligations and assets contributed to the Nutrinova joint venture (Note 4).
- (4) (5) Includes benefit payments to nonqualified pension plans of \$20 \$19 million and \$20 million as of December 31, 2023 December 31, 2024 and 2022, 2023, respectively.
- (5) (4) Relates to the pension plans of the Company's equity method investments.

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

	Pension Benefits As of December 31,	Pension Benefits As of December 31,		Postretirement Benefits As of December 31,	Pension Benefits As of December 31,	Postretirement Benefits As of December 31,
	2023	2022	2023	2022		
	2024	2023	2024	2023		
(In percentages)						
U.S. plans						
International plans						
Total						

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

	Pension Benefits As of December 31,	
	2023	2022
	2024	2023
(In percentages)		
U.S. plans		
International plans		
Total		

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

	As of December 31,	
	2023	2022
	2024	2023
(In \$ millions)		
Projected benefit obligation		

Fair value of plan assets

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

As of December 31,	
2023	2022
2024	2023
(In \$ millions)	

Accumulated benefit obligation

Fair value of plan assets

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

As of December 31,	
2023	2022
2024	2023
(In \$ millions)	

Accumulated postretirement benefit obligation

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

As of December 31,	
2023	2022
2024	2023
(In \$ millions)	

Accumulated benefit obligation

The components of net periodic benefit cost are as follows:

Pension Benefits		Pension Benefits		Postretirement Benefits		Pension Benefits	Postretirement Benefits
Year Ended December 31,		Year Ended December 31,		Year Ended December 31,		Year Ended December 31,	Year Ended December 31,
2023	2022	2021	2023	2022	2021		
2024	2023	2022	2024	2023	2022		
(In \$ millions)							

Service cost

Interest cost

Expected return on plan assets

Recognized actuarial (gain) loss

Recognized actuarial (gain) loss

Recognized actuarial (gain) loss

Curtailment (gain) loss

Settlement (gain) loss

Settlement (gain) loss

Settlement (gain) loss

Special termination benefit

Total

Total

Total

The Company maintains nonqualified pension plans funded with nonqualified trusts for certain U.S. employees as follows:

As of December 31,	
2023	2022
2024	2023
(In \$ millions)	

Nonqualified Trust Assets

Marketable securities
Marketable securities
Marketable securities
Noncurrent Other assets, consisting of insurance contracts

Nonqualified Pension Obligations

Current Other liabilities
Current Other liabilities
Current Other liabilities
Benefit obligations

(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,		
2023	2022	2021
2024	2023	2022
(In \$ millions)		
Total		

Valuation

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

Pension Benefits As of December 31,	Pension Benefits As of December 31,	Postretirement Benefits As of December 31,	Pension Benefits As of December 31,	Postretirement Benefits As of December 31,
2023	2022	2023	2022	
2024	2023	2024	2023	
(In percentages)				

Discount Rate Obligations

U.S. plans
U.S. plans
U.S. plans
International plans
Combined

Rate of Compensation Increase

U.S. plans
U.S. plans
U.S. plans
International plans
International plans
International plans
Combined
Combined
Combined

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

Pension Benefits			Pension Benefits			Postretirement Benefits			Pension Benefits			Postretirement Benefits					
Year Ended December 31,			Year Ended December 31,			Year Ended December 31,			Year Ended December 31,			Year Ended December 31,					
2023			2022			2021			2023			2022			2021		
2024			2023			2022			2024			2023			2022		
(In percentages)																	

Discount Rate Obligations

U.S. plans
U.S. plans
U.S. plans
International plans
Combined
Discount Rate Service Cost
U.S. plans
U.S. plans
U.S. plans
International plans
Combined
Discount Rate Interest Cost
U.S. plans
U.S. plans
U.S. plans
International plans
Combined
Expected Return on Plan Assets
U.S. plans
U.S. plans
U.S. plans
International plans
International plans
International plans
Combined
Combined
Combined
Rate of Compensation Increase
Rate of Compensation Increase
Rate of Compensation Increase
U.S. plans
U.S. plans
U.S. plans
International plans
International plans
International plans
Combined
Combined
Combined
Interest Crediting Rate
Interest Crediting Rate
Interest Crediting Rate
U.S. plans
U.S. plans
U.S. plans
International plans
International plans
International plans
Combined
Combined
Combined

N/A	N/A	5.9	3.5	3.5	N/A	N/A
-----	-----	-----	-----	-----	-----	-----

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

		As of December 31,		
	2023	2022	2021	
	2024	2023	2022	
(In percentages, except year)				
Health care cost trend rate assumed for next year				
Health care cost trend ultimate rate				
Health care cost trend ultimate rate year	Health care cost trend ultimate rate year	2032	2032	2031
			Health care cost trend ultimate rate year	2032
				2032

Plan Assets

The weighted average target asset allocations for the Company's pension plans in 2023 2024 are as follows:

	U.S. Plans	U.S. Plans	International Plans	U.S. Plans	International Plans
(In percentages)					
Bonds - domestic to plans					
Equities - domestic to plans					
Equities - international to plans					
Other					
Total					

On average, the actual return on the U.S. qualified defined pension plans' assets over the long-term (20 years) has exceeded the expected long-term rate of asset return assumption. The U.S. qualified defined benefit plans' actual return on assets for the year ended December 31, 2023 December 31, 2024 was 8.8% 1.3% versus an expected long-term rate of asset return assumption of 5.5%. The expected long-term rate of asset return assumption used to determine 2024 2025 net periodic benefit cost is 5.5% for the U.S. 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.
- Pooled-type investments: 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.
- 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.

Pooled-type investments: 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.

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)	Quoted Prices in Active Markets for Identical Assets (Level 1)		Significant Other Observable Inputs (Level 2)		Total		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Total
As of December 31,									
2023	2022	2023	2022	2023	2022				
2024	2023	2024	2023	2024	2023				

(In \$ millions)

Assets
Cash and cash equivalents
Cash and cash equivalents
Cash and cash equivalents
Derivatives
Swaps
Swaps
Swaps
Equity securities
Equity securities
Equity securities
U.S. companies
U.S. companies
U.S. companies
International companies
Fixed income
Corporate debt
Corporate debt
Corporate debt
Treasuries, other debt
Mortgage backed securities
Insurance contracts
Insurance contracts
Insurance contracts
Other
Total investments, at fair value ⁽¹⁾
Liabilities
Derivatives
Derivatives
Derivatives
Swaps
Swaps
Swaps
Total liabilities
Total liabilities

Total liabilities

Total net assets⁽²⁾

- (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, 2024 excludes investments in pooled-type investments, registered investment companies and short-term investment funds with fair values of \$431 million, \$34 million and \$35 million, respectively. Total investments, at fair value, for the year ended December 31, 2023 excludes investments in pooled-type investments, registered investment companies and short-term investment funds with fair values of \$460 million, \$43 million and \$31 million, respectively. Total investments, at fair value, for the year ended December 31, 2022 excludes investments in pooled-type investments, registered investment companies and short-term investment funds with fair values of \$441 million, \$41 million and \$41 million, respectively.
- (2) Total net assets excludes non-financial plan receivables and payables of \$20 million and \$17 million, respectively, as of December 31, 2024 and \$22 million and \$5 million, respectively, as of December 31, 2023 and \$17 million and \$10 million, respectively, as of December 31, 2022. Non-financial items include due to/from broker, interest receivables and accrued expenses.

Benefit obligation funding is as follows:

	Total Expected 2024 2025
	(In \$ millions)
Cash contributions to defined benefit pension plans	29 30
Benefit payments to nonqualified pension plans	19 18
Benefit payments to other postretirement benefit plans	3

The Company's estimates of its U.S. 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⁾
	Pension Benefit Payments ⁽¹⁾
	Pension Benefit Payments ⁽¹⁾
	(In \$ millions)
	(In \$ millions)
	(In \$ millions)
2024	
2024	
2024	
2025	
2025	
2025	
2026	
2026	
2026	
2027	
2027	
2027	
2028	
2028	
2028	
2029-2033	

2029-2033
2029-2033
2029
2029
2029
2030-2034
2030-2034
2030-2034

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

13. 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, contained in Current and Noncurrent Other Liabilities, are as follows:

	As of December 31,	
	2023	2022
	2024	2023
(In \$ millions)		
Demerger obligations (Note 19)		
Divestiture obligations (Note 19)		
Active sites		
U.S. Superfund sites		
Other environmental remediation liabilities		
Total		

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 U.S. Superfund sites (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 19). 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 2023 2024 or have any receivables for insurance recoveries related to these matters as of December 31, 2023 December 31, 2024.

German InfraServ Entities

The Company's InfraServ Entities equity affiliates (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 19). 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 equity affiliates 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 equity affiliates 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, 2023			As of December 31, 2024		
	Ownership	Liability	Reserves ⁽¹⁾	Ownership	Liability	Reserves ⁽¹⁾
	(In percentages)	(In percentages)	(In \$ millions)	(In \$ millions)	(In percentages)	(In \$ millions)
InfraServ GmbH & Co. Gendorf KG						
InfraServ GmbH & Co. Hoechst KG						
Yncoris GmbH & Co. KG						

⁽¹⁾ Gross reserves maintained by the respective entity.

U.S. Superfund Sites

In the U.S., the Company may be subject to substantial claims brought by U.S. 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 U.S. 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 U.S. 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 Study 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 LPRSA and the Newark Bay Study Area.

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. In September 2021, the EPA issued a Record of Decision selecting an interim remedial plan for the upper 9 miles of the Lower Passaic River ("Upper 9 Miles"). Pursuant to the EPA's Record of Decision, targeted dredging will be conducted in the Upper 9 Miles to address surface sediments with elevated contamination followed by the installation of an engineered cap at an EPA estimated cost of \$441 million.

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 (MCA) (LDW) (U.S. District Court New Jersey) (the "2018 OCC Lawsuit"), alleging that each of the defendants owned or operated a facility that contributed contamination to the LPRSA. With respect to the Company, the 2018 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.

Separately, the United States lodged a Consent Decree in U.S. District Court for the District of New Jersey on December 16, 2022 in December 2022 that will resolve resolves the Company's liability (and that of more than 80 other settling defendants) to the EPA for costs to clean up both the Lower 8.3 Miles and Upper 9 Miles of the Lower Passaic River Site in exchange for a collective payment of \$150 million, United States v. Alden Leeds, Inc., No. 2:22-7326 (MCA) (LDW) (U.S. District Court New Jersey) ("Consent Decree Action"). The Consent Decree also will provide provides the Company protection from contribution claims by others for costs incurred to clean up both the Lower 8.3 Miles and Upper 9 Miles of the Lower Passaic River Site. The Company's proposed payment toward the \$150 million collective settlement payment is not material to the Company's results of operations, cash flows or financial position. The Consent Decree is still subject to public comment and court approval.

On March 7, 2023, In March 2023, the U.S. District Court for the District of New Jersey entered an order staying and administratively terminating the 2018 OCC Lawsuit, pending resolution of the request for judicial approval of the Consent Decree in the Consent Decree Action. On March 24, 2023, Also, in March 2023, OCC filed a new lawsuit against 40 parties, including a subsidiary of the Company, seeking to

Company, seeking to recover costs for remedial design work the EPA has ordered OCC to undertake for a portion of the LPRSA at an estimated cost of \$71 million, Occidental Chemical Corporation v. Givaudan Fragrances Corporation, No. 2:23-cv-1699 (U.S. District Court New Jersey) (the "2023 OCC Lawsuit"). Like the earlier lawsuit, the 2023 OCC Lawsuit concerns the facility Essex County, New Jersey purchased and for which Essex County, New Jersey has agreed to defend and indemnify the Company. This new lawsuit does not change the Company's estimated liability for LPRSA cleanup costs.

Like the earlier lawsuit, the 2023 OCC lawsuit also was stayed pending resolution of the request for judicial approval of the Consent Decree in the Consent Decree Action. On December 18, 2024, the U.S. District Court for the District of New Jersey granted the United States' motion to enter the Consent Decree in the Consent Decree Action. The Company anticipates that OCC will seek review of that decision. Nokia of America Corporation, which opposed the entry of the Consent Decree, filed a notice of appeal on January 9, 2025. The Company anticipates that OCC also will appeal the District Court's decision entering the Consent Decree.

In the interim, the Company continues to vigorously defend these matters and continues to believe that its ultimate allocable share of the cleanup costs with respect to the Lower Passaic River Site, previously estimated at less than 1%, will not be material.

Other Environmental Matters

In April 2022, a methanol leak on a pipeline to the Company's Bishop, Texas facility was discovered. The release has been contained, the leak has been repaired and the pipeline has resumed operation. The Company promptly disclosed the incident to state and federal authorities, including the Texas Commission on Environmental Quality and the EPA, and remediation activities are now completed. While the Company has not received a notice of violation nor been assessed any fines or penalties to date, the Company recorded a reserve in Other current liabilities based on anticipated clean-up costs and possible penalties to state or federal authorities. The Company does not believe that resolution of this matter will have a material impact on its financial condition or results of operations.

14. Shareholders' 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 Global Credit Agreements and its indentures governing its senior unsecured notes. Any decision to declare and pay dividends in the future will be made at the discretion of the Company's Board of Directors and will depend on, among other things, the results of operations, cash requirements, financial condition, contractual restrictions and other factors that the Company's Board of Directors may deem relevant.

The Company declared a quarterly cash dividend of \$0.70 \$0.03 per share on its Common Stock on February 7, 2024 February 12, 2025, amounting to approximately \$76 \$3 million. The cash dividend will be paid on March 5, 2024 March 11, 2025 to holders of record as of February 20, 2024 February 25, 2025.

On November 4, 2024, the Company announced its intent to reduce its quarterly dividend by approximately 95% beginning in the first quarter of 2025.

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, 2023
	2023	2022	2021	
Shares repurchased	—	—	6,556,378	69,324,429
Average purchase price per share	\$ —	\$ —	\$ 152.53	\$ 83.71
Amount spent on repurchased shares (in \$ millions)	\$ —	\$ —	\$ 1,000	\$ 5,803
Aggregate Board of Directors repurchase authorizations during the period (in \$ millions)	\$ —	\$ —	\$ 1,000	\$ 6,866

	Total From February 2008 Through December 31, 2024
Shares repurchased	69,324,429
Average purchase price per share	\$ 83.71
Amount spent on repurchased shares (in \$ millions)	\$ 5,803
Aggregate Board of Directors repurchase authorizations during the period (in \$ millions)	\$ 6,866

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 shareholders' equity.

The Company did not repurchase any Common Stock during the years ended December 31, 2024, 2023 and 2022.

Other Comprehensive Income (Loss), Net

[illegible]

Foreign currency translation

Foreign currency translation

Foreign currency translation

Gain (loss) on derivative hedges

Pension and
postretirement
benefits gain
(loss)

Total

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

Foreign
Currency
Translation Gain
(Loss)

Foreign
Currency
Translation Gain
(Loss)

Foreign Currency Translation Gain (Loss)	Gain (Loss) on Derivative Hedges (Note 17)	Pension and Postretirement Benefits Gain (Loss) (Note 12)	Accumulated Other Comprehensive Income (Loss), Net	Gain (Loss) on Derivative Hedges (Note 17)	Pension and Postretirement Benefits Gain (Loss) (Note 12)	Accumulated Other Comprehensive Income (Loss), Net
			(In \$ millions)			

As of December 31, 2020	
Other comprehensive income (loss) before reclassifications	
Income tax (provision) benefit	
Income tax (provision) benefit	
Income tax (provision) benefit	

As of December 31, 2021

Other comprehensive income (loss) before reclassifications

Amounts reclassified from accumulated other comprehensive income (loss)

Income tax (provision) benefit

As of December 31, 2022

Other comprehensive income (loss) before reclassifications

Amounts reclassified from accumulated other comprehensive income (loss)

Income tax (provision) benefit

As of December 31, 2023

Other comprehensive income (loss) before reclassifications

Amounts reclassified from accumulated other comprehensive income (loss)

Income tax (provision) benefit

As of December 31, 2024

15. Income Taxes

In December 2017, the Tax Cuts and Jobs Act (the "TCJA") was enacted and was effective January 1, 2018. The U.S. Treasury has issued various notices and final and proposed regulatory packages supplementing the TCJA provisions since 2018. In December 2021, There have been no material proposed or final regulatory packages during the U.S. Treasury issued final foreign tax credit regulations clarifying certain items in the TCJA and prior guidance related to disallowance of foreign income taxes related to income exempt from U.S. taxation, treatment of debt between foreign affiliates for expense apportionment purpose, allocation and apportionment of foreign income taxes and the definition of creditable foreign income taxes. The regulations were published in the federal register in January 2022 and became effective in March 2022. In November 2022, the U.S. Treasury released proposed foreign tax credit regulations addressing the eligibility of foreign taxes for credit by clarifying the cost recovery requirements, attribution requirements for withholding taxes on royalties and attribution definitions regarding allocation and apportionment of foreign taxes. The Company does not expect the final or the proposed regulations to have a material impact to current or future income tax expense.

year ended December 31, 2024.

In August 2022, the Inflation Reduction Act (the "IRA") was enacted and included a 1% excise tax on share repurchases in excess of \$1 million, and a corporate minimum tax of 15% on adjusted book earnings. The corporate minimum tax paid is creditable in future years to the extent regular tax liability exceeds the minimum tax in any given year. The Company does not expect these provisions will or any newly issued administrative guidance to have a material impact to future income tax expense. The IRA also provides various beneficial credits for energy efficient related manufacturing, transportation and fuels, hydrogen/carbon recapture and renewable energy, which the Company is evaluating in regard to planned projects.

The Company will continue to monitor the expected impacts of any new guidance on the Company's filing positions and will record the impacts as discrete income tax expense adjustments in the period the guidance is finalized or becomes effective.

In December 2021, the Organization for Economic Co-operation and Development ("OECD") issued final Model Rules for Pillars One and Two of its Base Erosion and Profit Shifting ("BEPS") project. In general, Pillar One addresses nexus concerns and the allocation of profits among companies in which a multinational enterprise ("MNE") conducts its business. Pillar Two aims to ensure that all MNEs pay an effective tax rate of no less than 15% on their adjusted net income in each of the jurisdictions in which they have operations. Pillar Two is more impactful to the Company as it allows for assessment even if the individual countries do not enact its minimum tax provisions. In effect, Pillar Two allows any country within which an MNE operates to levy tax upon that MNE to the extent it determines that the MNE is paying less than a 15% effective tax rate on its adjusted net income. The taxes levied may then be allocated among the jurisdictions that conform to the OECD rules.

In December 2022, the member states of the European Union ("EU") unanimously voted to adopt the OECD's minimum tax which was agreed to by consensus of the BEPS 2.0 (Pillars One and Two) signatory jurisdictions. Under the EU's minimum tax directive, member states are to adopt domestic legislation implementing the minimum tax rules effective for periods beginning on or after December 31, 2023, with Pillar Two's "under-taxed profit rule" to take effect for periods beginning on or after December 31, 2024. The EU effective dates are January 1, 2024, and January 1, 2025, for different aspects of the directive.

Legislatures in multiple countries outside of the EU have also enacted or drafted legislation to implement the OECD's minimum tax proposals.

On July 17, 2023, In July 2023, the OECD published Administrative Guidance proposing certain safe harbor provisions, including an effective rate test and a routine profits test, which if satisfied effectively delay effective dates of Pillar Two to January 1, 2027. The EU and a significant number of other countries have or are expected to implement the safe harbor in local legislation. Based on these safe harbor provisions, the Company currently expects that several material jurisdictions, including the U.S., Netherlands, Switzerland, Germany, China, Singapore and Canada, will qualify for the safe harbor effectively extending the application of the global minimum tax until January 1, 2027.

The Company will continue to monitor the developments and implementation of the OECD BEPS projects. Currently the Company does not meet the requirements for the application of Pillar One. After an initial assessment of the application of the safe harbor provisions on a global basis, the Company is currently determined that there was not expecting a material impact from the local adoption of the OECD Pillar Two proposals in 2024, but is continuing to model the effect of these provisions on its future effective tax rate and cash taxes.

Income Tax Provision

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

Year Ended December 31,

	2023	2022	2021
	2024	2023	2022

(In \$ millions)

U.S.
International
Total

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

	Year Ended December 31,		
	2023	2022	2021
	2024	2023	2022

(In \$ millions)

Current
U.S.
U.S.
U.S.
International
Total
Deferred
U.S.
U.S.
U.S.
International
Total
Total

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

	Year Ended December 31,		
	2023	2022	2021
	2024	2023	2022

(In \$ millions, except percentages)

Income tax provision computed at U.S. federal statutory tax rate
Change in valuation allowance
Equity income and dividends
(Income) expense not resulting in tax impact, net
U.S. tax effect of foreign earnings and dividends
Foreign tax credits
Other foreign tax rate differentials
Legislative changes
State income taxes, net of federal benefit
State income taxes, net of federal benefit
State income taxes, net of federal benefit
Recognition of basis differences in investments in affiliates
Asset transfers between wholly owned foreign affiliates
Other, net
Income tax provision (benefit)
Effective income tax rate
Effective income tax rate
Effective income tax rate
(67) % (34) % 15 % (51) % (67) % (34) %

In December 2022, as part of its integration efforts for the M&M Acquisition (see [Note 4](#)) and to simplify future cash flows for purposes of acquisition debt repayment, the Company reorganized its foreign legal entity holding structure and relocated certain of its intangible assets to align with the acquired M&M foreign operations. The transfer of these assets between wholly owned foreign affiliates, generated a net deferred tax benefit of approximately \$800 million. The contractual provisions for these asset transfers provided for adjustments to the purchase price for business events occurring within the succeeding twelve months, and as a result, the Company recorded an additional deferred tax benefit of approximately \$190 million in 2023.

In 2023, in furtherance of its integration strategy for the M&M Acquisition, the Company continued to relocate certain intangible assets to better align with the acquired M&M foreign operations. In addition, in late 2023, as part of its overall integration approach, the Company initiated a strategy to realign its European headquarters and principal operations to Switzerland to achieve operational efficiencies by leveraging an acquired site for future growth and improved alignment of ownership of intangible assets with future technology and innovation efforts to be conducted locally. These operational efficiencies are expected to include, (i) centralized regional manufacturing, sales and operational planning, procurement and business leadership and (ii) cost and facility savings.

The headquarters and principal operations realignment strategy, and the relocation of intangible assets to wholly owned foreign affiliates, generated a net deferred tax benefit of approximately \$725 million. In addition, the relocation of these intangible assets resulted in the utilization of approximately \$230 million of the Company's existing U.S. foreign tax credit carryforwards. These carryforwards had previously been offset by a full valuation allowance.

In the second quarter of 2024, the Company completed an internal integration-related restructuring of its acquired China operations in order to align with existing operations and to optimize the Company's internal treasury operations. This restructuring of the Chinese operations consisted of a sale within the Company that resulted in a China capital gains tax of approximately \$87 million.

During the three months ended December 31, 2024, the Company recorded a non-cash goodwill impairment loss of \$1.5 billion in the Engineered Materials segment. As of December 31, 2024, the Engineered Materials segment had goodwill of \$5.0 billion (see [Note 9](#)). The impairment of goodwill is not deductible for tax purposes and the tax effect of this non-deductible expense in the amount of \$319 million is included in the (Income) expense not resulting in tax impact, net line above. In addition, due to the changes in forecasted profits for the engineered materials reporting unit included in the impairment analysis, the Company also recorded a valuation allowance against certain local country, non-U.S. tax credit carryforwards in the amount of \$338 million.

Included in the Other, net line in the effective income tax rate reconciliation above are the U.S. GAAP gain in excess of the tax gain related to the formation of the Nutrinova joint venture (see [Note 4](#)) of \$102 million for the year ended December 31, 2023 and charges of approximately \$20 million related to transaction costs for the M&M Acquisition for the year ended December 31, 2022. In addition, included in the Other, net line in the effective income tax rate reconciliation above are U.S. benefits of foreign derived intangible income of \$0 million, \$72 million, \$0 million, and \$10 \$0 million; and changes in uncertain tax positions of \$(2) million, \$5 million \$63 million and \$65 \$63 million for the years ended December 31, 2023 December 31, 2024, 2022 2023 and 2021, 2022, respectively.

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,	
	2023	2022
	2024	2023
(In \$ millions)		
Deferred Tax Assets		
Pension and postretirement obligations		
Pension and postretirement obligations		
Pension and postretirement obligations		
Accrued expenses		
Inventory		
Net operating loss carryforwards		
Tax credit carryforwards		
Intangibles and other		
Subtotal		
Valuation allowance ⁽¹⁾		
Total		
Deferred Tax Liabilities		

Depreciation and amortization
Depreciation and amortization
Depreciation and amortization
Investments in affiliates
Other
Total
Net deferred tax assets (liabilities)

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

As a result of the TCJA, U.S. 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 U.S. 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 and Capital Loss Carryforwards**

As of December 31, 2023 December 31, 2024, the Company had available U.S. federal net operating loss carryforwards of \$20 \$15 million that are subject to limitation. These net operating loss carryforwards begin to expire in 2025, 2036. As of December 31, 2023 December 31, 2024, the Company also had available state net operating loss carryforwards, net of federal tax impact, of \$42 \$35 million, \$27 \$24 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, 2023 December 31, 2024 of \$4.0 \$3.5 billion primarily for Malta, Switzerland, Luxembourg, Spain, the United Kingdom, Singapore, Switzerland, China and Hong Kong and China with various expiration dates. Net operating loss carryforwards of \$17 \$69 million in China began are scheduled to continue to expire through 2029. Net operating loss carryforwards of \$1.7 billion in 2023 Switzerland are partially offset by a valuation allowance of \$230 million due to uncertain recoverability and are scheduled to continue to expire through 2028, 2030. Net operating losses in most other foreign jurisdictions do not have an expiration date. The Company acquired capital loss carryforwards of \$173 million as part of the M&M Acquisition (Note 4) that are subject to annual limitation due to the ownership change. The Company fully offset these capital loss carryforwards with a valuation allowance due to uncertain recoverability.

- Tax Credit Carryforwards**

The Company had available \$112 \$200 million of U.S. foreign tax credit carryforwards, which are fully offset by a valuation allowance of \$165 million due to uncertain recoverability and \$18 million of alternative minimum tax credit carryforwards in the U.S. The foreign tax credit carryforwards are subject to a ten-year carryforward period and begin to expire 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,		
	2023	2022	2021
	2024	2023	2022
	(In \$ millions)		
As of the beginning of the year			
Increases in tax positions for the current year			
Increases (decreases) in tax positions for the current year			
Increases in tax positions for prior years			
Decreases in tax positions for prior years			
Increases (decreases) due to settlements			

As of the end of the year
As of the end of the year
As of the end of the year
Total uncertain tax positions that if recognized would impact the effective tax rate
Total uncertain tax positions that if recognized would impact the effective tax rate
Total uncertain tax positions that if recognized would impact the effective tax rate
Total amount of interest expense (benefit) and penalties recognized in the consolidated statements of operations ⁽¹⁾
Total amount of interest expense and penalties recognized in the consolidated balance sheets

⁽¹⁾ This amount reflects interest on uncertain tax positions and release of tax positions due to changes in assessment, statute lapses or audit closures that were reflected in the consolidated statements of operations.

The increase in uncertain tax positions for the year ended December 31, 2022 was primarily due to increases in foreign tax positions related to ongoing tax examinations, partially offset by releases due to completed examinations and statute closures.

The Company's tax returns have been under audit for the years 2013 through 2015 by the United States, Netherlands and Germany (the "Authorities"). In September 2021, the Company received a draft joint audit report proposing adjustments to transfer pricing and the reallocation of income between the related jurisdictions. The Authorities also proposed to apply these adjustments to open tax years through 2019. The Company and the Authorities were unable to reach an agreement jointly and therefore the audits continued on a separate jurisdictional basis. In the fourth quarter of 2022, the Company concluded settlement discussions with the Dutch tax authorities. authority. In the third quarter of 2024, the Company concluded settlement discussions with the German tax authority related to the German transfer pricing audit. The Company is engaged in continuing discussions with the U.S. tax authority on joint audit matters, as well as other Authorities separate matters, and is currently evaluating all additional potential remedies regarding the ongoing examinations.

As of December 31, 2023 December 31, 2024, the Company believes that an adequate provision for income taxes has been made for all open tax years related to the examinations by the Authorities. However, the outcome of tax audits cannot be predicted with certainty. If any issues raised by the Authorities are resolved in a manner inconsistent with the Company's expectations or the Company is unsuccessful in defending its position, the Company could be required to adjust its provision for income taxes in the period such resolution occurs. If required, any such adjustments could be material to the statements of operations and cash flows in the period(s) recorded.

In addition, the Company's income tax returns in Mexico are under audit for the year years 2018 and 2019, in Canada for the years 2016 through 2022. 2022, and in the U.S. for the years 2016 through 2020. In August 2023, the Company negotiated a partial settlement with the Mexico tax authorities for its audit for the year 2018. The partial settlement did not have a material impact on income tax expense in the consolidated statements of operations for the year ended December 31, 2023. The Company is in discussions with the Mexican tax authorities regarding the preliminary findings in the 2019 audit. In September 2023, the Canadian tax authorities opened tax audits for the years 2019 through 2022, and the audits are in the preliminary stages. The Company is in ongoing discussions regarding the audit findings with the Canadian tax authorities authority for the years 2016 through 2018 and does not expect a material impact to income tax expense. expense resulting from the audit. The audit in the U.S. for the years 2016 through 2020 is in the data gathering phase. The Company's tax returns in Germany are also under audit for certain entities for years after 2007.

16. Leases

The components of lease expense are as follows:

Year Ended December 31,	Year Ended December 31,	Statement of Operations Classification	Year Ended December 31,	Statement of Operations Classification
2023	2024			
(In \$ millions)	(In \$ millions)			
(In \$ millions)	(In \$ millions)			
(In \$ millions)				
Lease Cost				
Lease Cost				
Lease Cost				
Operating lease cost				
Operating lease cost				
Operating lease cost	99 66 66 40 40	Cost of sales / Selling, general and administrative expenses	99	Cost of sales / Selling, general and administrative expenses
			99	
			66	
			66	
				Cost of sales / Selling, general and administrative expenses
				Cost of sales / Selling, general and administrative expenses

Short-term lease cost	Short-term lease cost	19	19	19	18	18	Cost of sales / Selling, general and administrative expenses	Cost of sales / Selling, general and administrative expenses	Short-term lease cost	18	19	19	19	19	Cost of sales / Selling, general and administrative expenses	Cost of sales / Selling, general and administrative expenses
Variable lease cost	Variable lease cost	13	15	15	12	12	Cost of sales / Selling, general and administrative expenses	Cost of sales / Selling, general and administrative expenses	Variable lease cost	17	13	13	15	15	Cost of sales / Selling, general and administrative expenses	Cost of sales / Selling, general and administrative expenses
Finance lease cost																
Amortization of leased assets																
Amortization of leased assets																
Amortization of leased assets		21	19	19	19	19	Cost of sales	Cost of sales	20	21	21	19	19	19	Cost of sales	Cost of sales
Interest on lease liabilities	Interest on lease liabilities	10	11	11	13	13	Interest expense	Interest expense	Interest on lease liabilities	8	10	10	11	11	Interest expense	Interest expense
Sublease income	Sublease income	—	2	2	—	—	Other income (expense), net	Other income (expense), net	Sublease income	—	—	—	2	2	Other income (expense), net	Other income (expense), net
Total net lease cost																

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

As of December 31,	As of December 31,	Balance Sheet Classification	As of December 31,	Balance Sheet Classification
2023	2024			
(In \$ millions)	(In \$ millions)		(In \$ millions)	
Leases	Leases	Leases	Leases	Leases
Assets	Assets	Assets	Assets	Assets
Operating lease assets	Operating lease assets	Operating lease ROU assets	Operating lease ROU assets	Operating lease ROU assets
Operating lease assets	Operating lease assets	Operating lease ROU assets	Operating lease ROU assets	Operating lease ROU assets
Operating lease assets	422	413	413	Operating lease ROU assets
Operating lease assets	422	422	422	Operating lease ROU assets

Finance lease assets	Finance lease assets	154	176	176	Property, plant and equipment, net	Property, plant and equipment, net	Finance lease assets	119	154	154	Property, plant and equipment, net	Property, plant and equipment, net
Total leased assets												
Liabilities												
Liabilities												
Liabilities												
Current												
Current												
Current												
Operating												
Operating												
Operating		89	83	83	Current Other liabilities	Current Other liabilities	79	89	89	Current Other liabilities	Current Other liabilities	
Finance	Finance	24	25	25	Short-term borrowings and current installments of long-term debt	Short-term borrowings and current installments of long-term debt	Finance	23	24	24	Short-term borrowings and current installments of long-term debt	Short-term borrowings and current installments of long-term debt
Noncurrent												
Operating												
Operating												
Operating		325	364	364	Operating lease liabilities	Operating lease liabilities	294	325	325	Operating lease liabilities	Operating lease liabilities	
Finance	Finance	124	147	147	Long-term debt	Long-term debt	Finance	122	124	124	Long-term debt	Long-term debt
Total lease liabilities												

As of December 31,

		2023	2022
		2024	2023
Weighted-Average Remaining Lease Term (years)			
Operating leases			
Operating leases			
Operating leases		8.6	9.0
Finance leases	Finance leases	7.8	8.3
Finance leases	Finance leases	7.7	7.8
Weighted-Average Discount Rate			
Weighted-Average Discount Rate			
Weighted-Average Discount Rate			
Operating leases			
Operating leases			
Operating leases		3.5 %	3.0 %
Finance leases	Finance leases	6.2 %	6.4 %
Finance leases	Finance leases	5.6 %	6.2 %

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

		2023	2022	2021
		2024	2023	2022

(In \$ millions)

Cash paid for amounts included in the measurement of lease liabilities

Operating cash flows from operating leases
Operating cash flows from operating leases
Operating cash flows from operating leases
Operating cash flows from finance leases
Financing cash flows from finance leases
ROU assets obtained in exchange for finance lease liabilities (Note 20)
ROU assets obtained in exchange for finance lease liabilities (Note 20)
ROU assets obtained in exchange for finance lease liabilities (Note 20)
ROU assets obtained in exchange for operating lease liabilities

Maturities of lease liabilities are as follows:

	As of December 31, 2023			As of December 31, 2024	
	Operating Leases	Operating Leases	Finance Leases	Operating Leases	Finance Leases
	(In \$ millions)				
2024					
2025					
2026					
2027					
2028					
2029					
Later years					
Total lease payments					
Total lease payments					
Total lease payments					
Less amounts representing interest					
Total lease obligations					

17. Derivative Financial Instruments

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 Other Comprehensive Income (Loss)	Gain (Loss) Recognized in Earnings (Loss)	Statement of Operations Classification	Gain (Loss) Recognized in Other Comprehensive Income (Loss)	
Year Ended December 31,						
	2023					
	2023					
	2023					
	2024					
	2024					
	2024					
Designated as Cash Flow Hedges						
Designated as Cash Flow Hedges						
Designated as Cash Flow Hedges						
Commodity swaps						
Commodity swaps						

Commodity swaps	(5)	39	39	25	25	2	2	23	23	3	3	Cost of sales	Cost of sales	—	(5)	(5)	39	39
Interest rate swaps	—	—	—	10	10	(7)	(7)	(7)	(7)	(3)	(3)	Interest expense	Interest expense	—	—	—	—	—
Foreign currency forwards																		
Foreign currency forwards	5	2	2	(1)	(1)	5	5	1	1	—	—	Cost of sales	Cost of sales	—	5	5	2	2
Total																		
Designated as Fair Value Hedges																		
Designated as Fair Value Hedges																		
Designated as Fair Value Hedges																		
Cross-currency swaps ⁽¹⁾																		
Cross-currency swaps ⁽¹⁾																		
Cross-currency swaps ⁽¹⁾	(1)	—	—	—	—	9	9	—	—	—	—	Foreign exchange gain (loss), net	Foreign exchange gain (loss), net	142	(1)	(1)	—	1
Designated as Net Investment Hedges ⁽²⁾																		
Designated as Net Investment Hedges ⁽²⁾																		
Designated as Net Investment Hedges ⁽²⁾																		
Foreign currency denominated debt (Note 11)	(106)	(22)	(22)	107	107	—	—	—	—	—	—	N/A	N/A	153	(106)	(106)	(22)	(22)
Foreign currency denominated debt (Note 11)																		
Foreign currency denominated debt (Note 11)																		
Cross-currency swaps (Note 11)	(174)	(92)	(92)	27	27	—	—	—	—	—	—	N/A	N/A	147	(174)	(174)	(92)	(92)
Total																		
Total																		
Total																		
Not Designated as Hedges																		
Not Designated as Hedges																		

Foreign currency
forwards and swaps

[illegible]

(1) In conjunction with the 2023 Offering ([Note 11](#)) in August 2023, the Company entered into a cross-currency swap to effectively convert \$500 million of the issued notes into a Japanese yen-denominated borrowing at prevailing yen interest rates, maturing on July 15, 2029. The swap qualifies and has been designated as a fair value hedge of the Company's foreign currency exchange rate exposure on the long-term debt of its Japanese yen-denominated subsidiary.

Additionally, in conjunction with the 2023 Offering ([Note 11](#)) in August 2023, the Company entered into cross-currency swaps to effectively convert \$1.0 billion of the issued notes into 5-year and 7-year euro-denominated borrowings at prevailing euro interest rates, maturing on November 15, 2028 and November 15, 2030, respectively. The swaps qualify and have been designated as fair value hedges of the Company's foreign currency exchange rate exposure on the long-term debt of its euro-denominated subsidiary.

(2) Concurrently with the offering of the Acquisition USD Notes certain unsecured notes in July 2022 (Note 11), the Company entered into cross-currency swaps to effectively convert \$2.0 billion and \$500 million of the Acquisition USD Notes issued notes into a euro-denominated borrowing at prevailing euro interest rates, maturing on July 15, 2027 and July 15, 2032, respectively. The swaps and €1.5 billion of the Acquisition Euro Notes certain unsecured euro notes offered in July 2022 qualify and have been designated as net investment hedges of the Company's foreign currency exchange rate exposure on the net investments of certain of its euro-denominated subsidiaries.

Additionally, on April 11, 2024, the Company entered into cross-currency swaps to effectively convert its \$1.0 billion senior unsecured notes due 2033 ([Note 11](#)) into Chinese yuan-denominated borrowings at prevailing yuan interest rates, maturing on November 15, 2033. The swaps qualify and have been designated as net investment hedges of the Company's foreign currency exchange rate exposure on the net investment of certain of its Chinese yuan-denominated subsidiaries.

See [Note 18](#) 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.

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 U.S. dollar equivalents of net foreign exchange exposure related to (short) long foreign exchange forward contracts outstanding by currency are as follows:

(In \$ millions)

Currency

Brazilian real	(43) (36)
British pound sterling	53 86
Canadian dollar	23 13
Chinese yuan	383 438
Euro	148 229
Hungarian forint	18 14
Indian rupee	(27) (25)
Indonesian rupiah	(9) (11)
Japanese yen	(38) 22
Korean won	197 216
Mexican peso	109 107
Singapore dollar	21 34
Swedish krona	(7) (9)
Swiss franc	(156) (313)
Thai baht	(8)
Other	(6)
Total	672 751

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,

	2023	2022
	2024	2023

(In \$ millions)

Derivative Assets

Gross amount recognized
Gross amount recognized
Gross amount recognized
Gross amount offset in the consolidated balance sheets
Net amount presented in the consolidated balance sheets
Gross amount not offset in the consolidated balance sheets
Net amount

As of December 31,

	2023	2022
	2024	2023

(In \$ millions)

Derivative Liabilities

Gross amount recognized
Gross amount recognized
Gross amount recognized
Gross amount offset in the consolidated balance sheets
Net amount presented in the consolidated balance sheets
Gross amount not offset in the consolidated balance sheets
Net amount

18. Fair Value Measurements

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

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											
Fair Value Measurement											
Fair Value Measurement											
Significant Other Observable Inputs											
(Level 2)											
Notional Amount	Other assets					Other assets	Other liabilities			Other assets	Other liabilities
	Notional Amount	Current	Noncurrent	Current	Noncurrent	Notional Amount	Current	Noncurrent	Current	Noncurrent	
	(In millions)	(In millions)	(In \$ millions)				(In millions)	(In \$ millions)			
As of December 31, 2024											
Derivatives Designated as Cash Flow Hedges											
Derivatives Designated as Cash Flow Hedges											
Derivatives Designated as Cash Flow Hedges											
Commodity swaps											
Commodity swaps											
Commodity swaps											
Derivatives Designated as Fair Value Hedges											
Derivatives Designated as Fair Value Hedges											
Derivatives Designated as Fair Value Hedges											
Cross-currency swaps											
Cross-currency swaps											
Cross-currency swaps											
Derivatives Designated as Net Investment Hedges											
Cross-currency swaps											
Cross-currency swaps											
Cross-currency swaps											
Cross-currency swaps											
Derivatives Not Designated as Hedges											
Foreign currency forwards and swaps											
Foreign currency forwards and swaps											
Foreign currency forwards and swaps											
Total											
As of December 31, 2023											
Derivatives Designated as Cash Flow Hedges											
Derivatives Designated as Cash Flow Hedges											
Derivatives Designated as Cash Flow Hedges											
Commodity swaps											
Commodity swaps											
Commodity swaps											
Designated as Fair Value Hedges											
Designated as Fair Value Hedges											
Designated as Fair Value Hedges											

Derivatives Designated as Fair Value Hedges
Derivatives Designated as Fair Value Hedges
Derivatives Designated as Fair Value Hedges
Cross-currency swaps
Cross-currency swaps
Cross-currency swaps
Derivatives Designated as Net Investment Hedges
Cross-currency swaps
Cross-currency swaps
Cross-currency swaps
Derivatives Not Designated as Hedges
Foreign currency forwards and swaps
Foreign currency forwards and swaps
Foreign currency forwards and swaps
Total
As of December 31, 2022
Derivatives Designated as Cash Flow Hedges
Derivatives Designated as Cash Flow Hedges
Derivatives Designated as Cash Flow Hedges
Commodity swaps
Commodity swaps
Commodity swaps
Foreign currency forwards and swaps
Derivatives Designated as Net Investment Hedges
Cross-currency swaps
Cross-currency swaps
Cross-currency swaps
Derivatives Not Designated as Hedges
Foreign currency forwards and swaps
Foreign currency forwards and swaps
Foreign currency forwards and swaps
Total

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

Fair Value Measurement								
Carrying Amount	Carrying Amount	Significant Other Observable Inputs (Level 2)	Unobservable Inputs (Level 3)	Total	Carrying Amount	Significant Other Observable Inputs (Level 2)	Unobservable Inputs (Level 3)	Total
As of December 31,								
2023	2022	2023	2022	2023	2022	2023	2022	2023
2024	2023	2024	2023	2024	2023	2024	2023	2024
(In \$ millions)								

Equity investments without readily determinable fair values
Insurance contracts in nonqualified trusts
Long-term debt, including current installments of long-term debt

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 in the consolidated balance sheets, 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, 2023** **December 31, 2024** and **2022**, **2023**, the fair values of cash and cash equivalents, receivables, trade payables, short-term borrowings and the current installments of long-term debt approximate carrying values due to the short-term nature of these instruments. These items have been excluded from the table with the exception of the current installments of long-term debt.

19. Commitments and Contingencies

Commitments

Guarantees

Equity Affiliates

The Company has directly guaranteed various debt obligations under agreements with third parties related to certain equity affiliates. At **December 31, 2023** **December 31, 2024**, the Company had directly guaranteed \$145 million and €31 million of such obligations. These amounts represent the maximum potential amount of future (undiscounted) payments that the Company could be required to make under the guarantees. The Company would be required to perform on these guarantees in the event of default by the guaranteed party.

Maximum future payments under these obligations are \$145 million and €31 million for bank borrowings and the guarantee will remain in force until all guaranteed obligations are paid and the underlying debt agreements entered into by certain equity affiliates are terminated.

Environmental and Other Liabilities

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 13](#)).

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, 2023** **December 31, 2024** are **\$114** **\$117** 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 13](#)).

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** **\$102** million as of **December 31, 2023** **December 31, 2024**. 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, 2023** **December 31, 2024**, the Company had unconditional purchase obligations of **\$4.0** **\$3.7** billion, of which **\$683** **\$611** million will be paid in **2024**, **\$565 million in** 2025, **\$452** **\$484** million in 2026, **\$369** **\$427** million in 2027, **\$230** **\$291** million in 2028, **\$231 million in** 2029 and the balance thereafter 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, intellectual property, personal injury, **toxic tort**, **public nuisance** and other actions in tort, workers' compensation, chemical exposure, asbestos exposure, taxes, trade compliance, acquisitions and divestitures, claims of current and legacy shareholders, 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.

As previously reported, in July 2020, the Company settled a European Commission competition law investigation involving certain of its subsidiaries and three other companies related to certain past ethylene purchases. Shell Chemicals Europe, **and** another group of corporate claimants, **and, most recently, TotalEnergies Petrochemicals & Refining SA** have filed claims for damages with the District Court of Amsterdam against four companies, including Celanese, arising from those **activities**, **and activities**. BASF SE has filed a **similar claim in the first court hearing was held in late September 2023. Court of Munich, Germany.** The Company intends to vigorously defend itself against these claims. While it is possible that additional parties could assert demands or claims related to this matter, based on information available at this time, the Company does not expect ultimate resolution of this matter to have a material impact on its financial condition or results of operations.

20. Supplemental Cash Flow Information

Year Ended December 31,			
	2023	2022	2021
	2024	2023	2022
(In \$ millions)			
Interest paid, net of amounts capitalized			
Taxes paid, net of refunds			
Noncash Investing and Financing Activities	Noncash Investing and Financing Activities	Noncash Investing and Financing Activities	
Accrued treasury stock repurchases			
Finance lease obligations (Note 16)			
Finance lease obligations (Note 16)			
Finance lease obligations (Note 16)			
Accrued capital expenditures			
Asset retirement obligations			

21. 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 chief operating** decision maker ("CODM"), who is the Company's **President and** Chief Executive Officer.

Effective December 31, 2022, The Company's CODM regularly reviews the Company reorganized its operating and reportable segments to align with recent structural and management reporting changes. The change reflects the resegmentation Operating profit of the former Acetate Tow operating and each reportable segment into to assess financial results and allocate resources. Operating profit is assessed against forecast and prior periods to evaluate and assess segment results. Operating profit is also reported on the Acetyl Chain operating and consolidated statement of operations. The Company has disclosed for each reportable segment. This reorganization reflects segment the culmination of a shift significant expense categories that are reviewed by the CODM in operating strategy and organizational hierarchy, with a focus on integration, collaboration and maximization of value creation through its global optionality and integrated chain model of the underlying businesses. The historical segment information has been recast to conform with the reorganized segments. tables below.

The Company's business segments are as follows:

- Engineered Materials

The Company's Engineered Materials segment includes the engineered materials 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 participates** 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, consumer electronics, appliances, industrial products, battery separators, conveyor belts, filtration equipment, coatings, and electrical applications and products.

• Acetyl Chain

The Company's Acetyl Chain segment includes the integrated chain of intermediate chemistry, acetic acid, vinyl acetate monomer ("VAM"), acetic anhydride, acetate esters, emulsion polymers, ethylene vinyl acetate ("EVA") polymers, redispersible powders ("RDP"), and acetate tow businesses. The Company's intermediate chemistry acetyl chain business produces and supplies acetyl products, including acetic acid, vinyl acetate monomer, VAM, 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 global producer of redispersible polymer powders. The Company's RDP products that have are used in a variety of applications in a number of building the mortar industry, including decorative mortar, exterior insulation and construction applications including flooring, plasters, insulation, tiling finish systems, gypsum-based materials, plaster and waterproofing, render, self-leveling floor systems, skim coat and tile adhesives. The Company's acetate tow business serves consumer-driven applications and is a leading global producer and supplier of acetate tow and acetate flake, primarily used in filter products applications.

• Other Activities

Other Activities primarily consists of corporate center costs, including administrative activities such as finance, taxes, 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, cost plus a mark-up.

	Engineered Materials
	Engineered Materials
	Engineered Materials
	(In \$ millions)
	(In \$ millions)
	(In \$ millions)
	Year Ended December 31, 2023
	Year Ended December 31, 2023
	Year Ended December 31, 2023
	Year Ended December 31, 2024
	Year Ended December 31, 2024
	Year Ended December 31, 2024
Net sales	
Net sales	
Net sales	
Cost of sales	
Cost of sales	
Cost of sales	
Gross profit	
Gross profit	
Gross profit	
Selling, general and administrative expenses	
Selling, general and administrative expenses	
Selling, general and administrative expenses	

[illegible]

Equity in net earnings (loss) of affiliates					
Equity in net earnings (loss) of affiliates					
Depreciation and amortization					
Depreciation and amortization					
Depreciation and amortization					
Capital expenditures					
Capital expenditures					
Capital expenditures	178	352	53	—	583 (3)
	As of December 31, 2022				
Goodwill and intangible assets, net					
Goodwill and intangible assets, net					
Goodwill and intangible assets, net					
Total assets					
Total assets					
Total assets					
	Year Ended December 31, 2021				
	Year Ended December 31, 2021				
	Year Ended December 31, 2021				
Net sales					
Net sales					
Net sales					
Other (charges) gains, net (Note 24)					
Other (charges) gains, net (Note 24)					
Other (charges) gains, net (Note 24)					
Operating profit (loss)					
Operating profit (loss)					
Operating profit (loss)					
Equity in net earnings (loss) of affiliates					
Equity in net earnings (loss) of affiliates					
Equity in net earnings (loss) of affiliates					
Depreciation and amortization					
Depreciation and amortization					
Depreciation and amortization					
Capital expenditures					
Capital expenditures					
Capital expenditures	154	311	25	—	490 (3)

	Engineered Materials	Acetyl Chain	Other Activities	Eliminations	Consolidated
(In \$ millions)					
Year Ended December 31, 2023					
Net sales	6,149	4,884 (1)	—	(93)	10,940
Cost of sales	(4,825)	(3,607)	2	93	(8,337)
Gross profit	1,324	1,277	2	—	2,603
Selling, general and administrative expenses	(435)	(118)	(522)	—	(1,075)
Amortization of intangible assets	(162)	(2)	—	—	(164)
Research and development expenses	(97)	(40)	(9)	—	(146)
Other (charges) gains, net (Note 24)	(56)	(4)	(8)	—	(68)
Gain (loss) on disposition of business and assets, net	509 (4)	(4)	—	—	505
Other segment items(2)	—	—	32	—	32

Operating profit (loss)	1,083	1,109	(505)	—	1,687
Depreciation and amortization	462	217	27	—	706
Equity in net earnings (loss) of affiliates	83	6	13	—	102
Capital expenditures	237	207	98	—	542 ⁽³⁾
As of December 31, 2023					
Goodwill and intangible assets, net	10,525	427	—	—	10,952
Total assets	17,930	5,538	3,129	—	26,597
Year Ended December 31, 2022					
Net sales	4,024	5,743 ⁽¹⁾	—	(94)	9,673
Cost of sales	(3,249)	(4,130)	(8)	94	(7,293)
Gross profit	775	1,613	(8)	—	2,380
Selling, general and administrative expenses	(213)	(125)	(486)	—	(824)
Amortization of intangible assets	(57)	(3)	(2)	—	(62)
Research and development expenses	(71)	(40)	(1)	—	(112)
Other (charges) gains, net (Note 24)	(7)	—	(1)	—	(8)
Gain (loss) on disposition of business and assets, net	2	2	1	—	5
Other segment items ⁽²⁾	—	—	(1)	—	(1)
Operating profit (loss)	429	1,447	(498)	—	1,378
Depreciation and amortization	226	213	23	—	462
Equity in net earnings (loss) of affiliates	202	7	11	—	220
Capital expenditures	178	352	53	—	583 ⁽³⁾

⁽¹⁾ Includes intersegment sales of \$90 million, \$93 million \$94 million and \$75 \$94 million for the years ended December 31, 2023, December 31, 2024, 2022 2023 and 2021, 2022, respectively.

⁽²⁾ Includes Foreign exchange gain (loss), net.

⁽³⁾ Includes a decrease in accrued capital expenditures of \$21 million, a decrease in accrued capital expenditures of \$26 million and an increase in accrued capital expenditures of \$40 million for the years ended December 31, 2024, 2023 and 2022, respectively.

⁽⁴⁾ Includes a \$515 million gain related to the formation of the Nutrinova joint venture included in Gain (loss) on disposition of businesses and assets, net in the consolidated statements of operations [\(Note Note 4\)](#).

⁽³⁾ Includes a decrease in accrued capital expenditures of \$26 million, an increase in accrued capital expenditures of \$40 million and an increase in accrued capital expenditures of \$23 million for the years ended December 31, 2023, 2022 and 2021, respectively.

Geographical Area Information

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

	Year Ended December 31,		
	2023	2022	2021
	2024	2023	2022

(In \$ millions)

Belgium
Brazil
Canada
China
Greater China
France
Germany
India
India

India
Italy
Japan
Mexico
Singapore
Singapore
Singapore
South Korea
Spain
Switzerland
United Kingdom
United Kingdom
United Kingdom
U.S.
Other
Total

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

		As of December 31,
	2023	2022
	2024	2023

(In \$ millions)

Belgium				
Canada				
China				
Greater China				
Germany				
Italy				
Japan				
Mexico				
Netherlands				
Singapore				
South Korea				
Switzerland				
United Kingdom				
U.S.				
Other				
Total	Total	5,273	5,584	5,584

22. 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 that are solutions-based and are tailored to each customer's 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.

The Company manages its Acetyl Chain business segment by leveraging its ability to sell chemicals externally to end-use markets or downstream to its acetate tow, intermediate chemistry, emulsion polymers, redispersible powders and ethylene vinyl acetate polymers businesses. 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,		
	2023	2022	2021
	2024	2023	2022

(In \$ millions)

Engineered Materials

North America

North America

North America

Europe and Africa

Asia-Pacific

South America

Total

Acetyl Chain

Acetyl Chain

Acetyl Chain

North America

North America

North America

Europe and Africa

Asia-Pacific

South America

Total⁽¹⁾

- ⁽¹⁾ Excludes intersegment sales of \$90 million, \$93 million \$94 million and \$75 \$94 million for the years ended December 31, 2023 December 31, 2024, 2022 2023 and 2021, 2022, respectively.

23. Earnings (Loss) Per Share

	Year Ended December 31,		
	2023	2022	2021
	2024	2023	2022

(In \$ millions, except share data)

Amounts attributable to Celanese Corporation

Earnings (loss) from continuing operations

Earnings (loss) from continuing operations

Earnings (loss) from continuing operations

Earnings (loss) from discontinued operations

Net earnings (loss)

Weighted average shares - basic

Weighted average shares - basic

Weighted average shares - basic

Incremental shares attributable to equity awards⁽¹⁾

Weighted average shares - diluted

- ⁽¹⁾ Excludes options to purchase 265,922, 202,876 0 and 0 shares of Common Stock for the years ended December 31, 2023 December 31, 2024, 2022 2023 and 2021, 2022, respectively, as their effect would have been antidilutive. Excludes 61, 39,465 154,172 and 555 154,172 equity award shares for the years ended December 31, 2023 December 31, 2024, 2023 and 2022, and 2021, respectively, as their effect would have been antidilutive. For the year ended December 31, 2024, the Company incurred a net loss from continuing operations, resulting in 239,886 incremental shares attributable to equity awards being excluded from the number of weighted average shares - diluted as their effect would have been antidilutive.

24. Other (Charges) Gains, Net

Year Ended December 31,			
	2023	2022	2021
	2024	2023	2022

(In \$ millions)

Restructuring ⁽¹⁾
Asset impairments
Asset impairments
Asset impairments
Plant/office closures
Total
Total
Total

- (1) Includes employee termination benefits related to the previously announced closure of the Company's facility in Mechelen, Belgium (Note 4) and the previously announced closure of its polymerization units in Uentrop, Germany (Note 4) for the year ended December 31, 2024, and employee termination benefits primarily related to Company-wide business optimization projects during the year years ended December 31, 2023 December 31, 2024 and 2023.
- (2) Primarily related to non-cash impairment losses on goodwill and certain trade names, primarily Zytel®, arising from the Company's goodwill and indefinite-lived intangible assets impairment tests (Note 9).

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

	Engineered Materials	Engineered Materials	Engineered Materials	Acetyl Chain	Other	Total	Acetyl Chain	Other	Total	
	Engineered Materials	Acetyl Chain	Other	Total	Acetyl Chain	Other	Total	Acetyl Chain	Other	Total
	(In \$ millions)	(In \$ millions)								
Employee Termination Benefits										
As of December 31, 2022										
As of December 31, 2023										
As of December 31, 2022										
As of December 31, 2023										
As of December 31, 2022										
As of December 31, 2023										
Additions										
Cash payments										
As of December 31, 2023										
As of December 31, 2023										
As of December 31, 2023										
Other changes										
Exchange rate changes										
As of December 31, 2024										

120

125

120 125

Exhibit 4.11 4.10

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 six 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 1.250% Senior Notes due 2025 of Celanese US Holdings LLC (the "Issuer") guaranteed by the Company and the other Guarantors (as defined below); (3) the 4.777% Senior Notes due 2026 of the Issuer guaranteed by the Company and the other Guarantors; (4) the 2.125% Senior Notes due 2027 of the Issuer guaranteed by the Company and the other Guarantors; (5) the 0.625% Senior Notes due 2028 of the Issuer guaranteed by the Company and the other Guarantors; and (6) 5.337% Senior Notes due 2029 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 Seventh 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 and other notice delivery requirements. 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 and certain officers to corporations and their stockholders for monetary damages for breaches of officers' and 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 or as an officer, 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;
- of a director under Section 174 of the DGCL (unlawful dividends or stock repurchases and redemptions); or
- for transactions from which the director derived improper personal benefit, benefit, or of an officer in any action by or in the right of the Company.

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 and officers 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 66⅔% 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 1.250% SENIOR NOTES DUE 2025, 4.777% SENIOR NOTES DUE 2026, 2.125% SENIOR NOTES DUE 2027, 0.625% SENIOR NOTES DUE 2028, AND 5.337% SENIOR NOTES DUE 2029

The following summary of our 1.250% Senior Notes due 2025 (the "2025 Notes"), our 4.777% Senior Notes due 2026 (the "2026 Notes"), our 2.125% Senior Notes due 2027 (the "2027 Notes"), our 0.625% Notes due 2028 (the "2028 Notes"), and our 5.337% Senior Notes due 2029 (the "2029 Notes" and, together with the 2025 Notes, the 2026 Notes, the 2027 Notes, and the 2028 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 "WF Trustee"), 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 WF Trustee, Deutsche Bank Trust Company Americas, as paying agent (the "DB Paying Agent") and as registrar and transfer agent (the "DB Transfer Agent"), 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 WF Trustee, the DB Paying Agent, and the DB Transfer Agent, as supplemented in respect of the 2028 Notes by the eleventh supplemental indenture thereto dated as of September 10, 2021 among the Issuer, the Guarantors, the WF Trustee, the DB Paying Agent, and the DB Transfer Agent and as supplemented in respect of the 2026 Notes and the 2029 Notes, by the thirteenth supplemental indenture thereto dated as of July 19, 2022, by and among the Issuer, the Guarantors, Computershare Trust Company, N.A. as successor to Wells Fargo Bank, National Association, as base trustee, U.S. Bank Trust Company, National Association, as series trustee (the "USB Trustee", and together with the WF Trustee, the "Trustee") and as registrar and transfer agent (the "USB Transfer Agent" and together with the DB Transfer Agent, the "Transfer Agent"), and Elavon Financial Services DAC, UK Branch, as paying agent (the "EFS Paying Agent" and together with the DB Paying Agent, the "Paying 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 2025 Notes, the 2026 Notes, the 2027 Notes, the 2028 Notes and the 2029 Notes are traded on The New York Stock Exchange under the trading symbols "CE /25," "CE /26A," "CE /27," "CE /28," and "CE /29A," respectively.

Principal, Maturity and Interest

As of **January 31, 2024** **January 31, 2025**, the Issuer had outstanding €300,000,000 aggregate principal amount of the 2025 Notes, €500,000,000 aggregate principal amount of the 2027 Notes, €500,000,000 aggregate principal amount of the 2028 Notes, €1,00,000,000 aggregate principal amount of the 2026 Notes and €500,000,000 aggregate principal amount of the 2029 Notes.

The 2025 Notes will mature on February 11, 2025, the 2026 Notes will mature on July 19, 2026, the 2027 Notes will mature on March 1, 2027, the 2028 Notes will mature on September 10, 2028, and the 2029 Notes will mature on January 19, 2029.

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 2025 Notes accrues at the rate of 1.250% per annum and is payable annually in arrears on February 11; interest on the 2026 Notes accrues at the rate of 4.777% per annum and is payable in arrears on July 19; interest on the 2027 Notes accrues at the rate of 2.125% per annum and is payable annually in arrears on March 1; interest on the 2028 Notes accrues at the rate of 0.625% per annum and is payable in arrears on September 10; and interest on the 2029 Notes accrues at the rate of 5.337% per annum and is payable in arrears on January 19.

The Issuer will make each interest payment to the holders of record of the Notes on the immediately preceding January 27, July 5, February 15, August 27, or January 5, 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 December 11, 2017, November 5, 2018 or September 10, 2021, or July 19, 2022 for the 2026 Notes and the 2029

Notes, 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.

Interest Rate Adjustment

(a) With respect to the 2026 Notes and the 2029 Notes, interest rate payable on each of the notes will be subject to adjustments from time to time if either Moody's or S&P, or, in either case, any Substitute Rating Agency downgrades (or subsequently upgrades) the rating assigned to each of the 2026 Notes and the 2029 Notes, in the manner described below:

(b) If the rating from Moody's (or any Substitute Rating Agency therefor) of each of the 2026 Notes and the 2029 Notes is decreased to a rating set forth in the immediately following table, the interest rate on the notes will increase such that it will equal the interest rate payable on each of the 2026 Notes and the 2029 Notes on the date of their initial issuance, plus the percentage set forth opposite the ratings from the table below, plus any applicable percentage from the immediately following clause (c) of this paragraph.

Moody's Rating*	Percentage
Ba1	0.250 %
Ba2	0.500 %
Ba3	0.750 %
B1 or below	1.000 %

* Including the equivalent ratings, in either case of any Substitute Rating Agency or under any successor rating categories of Moody's.

(c) In addition, if the rating from S&P (or any Substitute Rating Agency therefor) for each of the 2026 Notes and the 2029 Notes is decreased to a rating set forth in the immediately following table, the interest rate on the notes will increase such that it will equal the interest rate payable on each of the 2026 and 2029 Notes on the date of their initial issuance, plus the percentage set forth opposite the ratings from the table below, plus any applicable percentage from the immediately preceding clause (b) of this paragraph.

S&P Rating*	Percentage
BB+	0.250 %
BB	0.500 %
BB-	0.750 %
B+ or below	1.000 %

* Including the equivalent ratings, in either case of any Substitute Rating Agency or under any successor rating categories of S&P.

(d) Notwithstanding the foregoing, if at any time the interest rate on each of the 2026 Notes and 2029 Notes has been adjusted upward and either Moody's or S&P (or, in either case, a Substitute Rating Agency therefor), as the case may be, subsequently increases its rating of such notes to any of the threshold ratings set forth above, the interest rate on each of the 2026 Notes and 2029 Notes will be decreased such that the interest rate on such notes equals the interest rate payable on each of the 2026 Notes and 2029 Notes on the date of their initial issuance, plus the percentages set forth opposite the ratings from the tables in paragraph (b) and (c) above in effect immediately following the increase in rating. If Moody's (or any Substitute Rating Agency therefor) subsequently increases its rating of each of the 2026 Notes and 2029 Notes to Baa3 or higher (or its respective equivalent, in either case of any Substitute Rating Agency or under any successor rating categories of Moody's) and S&P (or any Substitute Rating Agency therefor) increases its rating to BBB- or higher (or its respective equivalent, in either case of any Substitute Rating Agency or under any successor rating categories of S&P), the interest rate on each of the 2026 Notes and 2029 Notes will be decreased to the interest rate payable on each of such notes on the date of their initial issuance.

(e) The interest rates on each of the 2026 Notes and 2029 Notes will permanently cease to be subject to any adjustment described above (notwithstanding any subsequent downgrade in the ratings by either or both Moody's or S&P) if each of the 2026 Notes and 2029 Notes become rated Baa2 and BBB (or the equivalent of either such rating, in the case of a Substitute Rating Agency) or higher by Moody's and S&P (or, in either case, a Substitute Rating Agency therefor), respectively (or one of these ratings if the Notes are only rated by one Rating Agency). In such case, the interest rate on the notes will be the interest rate payable on each of the 2026 Notes and 2029 Notes on the date of their initial issuance.

(f) Each adjustment required by any decrease or increase in a rating set forth above (or an equivalent rating, in either case of any Substitute Rating Agency or under any successor rating categories of Moody's or S&P, as the case may be), whether occasioned by the action of Moody's or S&P (or, in either case, a Substitute Rating Agency therefor), shall be made independent of any and all other adjustments; provided, however, in no event shall (1) the interest rate on each of the 2026 and 2029 Notes be reduced to below the interest rate payable on each of such notes on the date of their initial issuance, or (2) the total increase in the interest rate on each of the 2026 and 2029 Notes exceed 2.000% above the interest rate payable on each of such notes on the date of their initial issuance.

(g) Except as provided in this paragraph and the immediately following paragraph, no adjustments in the interest rate of each of the 2026 Notes and 2029 Notes shall be made solely as a result of a Rating Agency ceasing to provide a rating of such notes. If at any time fewer than two rating agencies provide a rating of each of the notes for any reason beyond the Issuer's control, the Issuer will use its commercially reasonable efforts to obtain a rating of such notes from a Substitute

Rating Agency, to the extent one exists, and if a Substitute Rating Agency exists, for purposes of determining any increase or decrease in the interest rate on the notes pursuant to the tables above:

- (i) such Substitute Rating Agency will be substituted for the last Rating Agency to provide a rating of each of the 2026 Notes and the 2029 Notes, but has since ceased to provide such rating;
 - (ii) the relative rating scale used by such Substitute Rating Agency to assign ratings to senior unsecured debt will be determined in good faith by an independent investment banking institution of national standing appointed by the Issuer and, for purposes of determining the applicable ratings included in the applicable tables in this paragraph (b) and (c) above with respect to such Substitute Rating Agency, such ratings will be deemed to be the equivalent ratings used by Moody's or S&P, as applicable, in such table; and
 - (iii) the interest rate on each of the 2026 Notes and the 2029 Notes will increase or decrease, as the case may be, such that the interest rate equals the interest rate payable on the Notes of such series on the date of their initial issuance, plus the appropriate percentage, if any, set forth opposite the rating from such Substitute Rating Agency in the applicable table above (taking into account the provisions of clause (i) above) (plus any applicable percentage resulting from a decreased rating by the other rating agency).
- (h) For so long as only one Rating Agency provides a rating of each of the 2026 Notes and the 2029 Notes, any subsequent increase or decrease in the interest rate of such notes necessitated by a reduction or increase in the rating by the Rating Agency providing the rating shall be twice the percentage set forth in the applicable table above. For so long as none of Moody's, S&P or a Substitute Rating Agency provides a rating of the Notes of either the 2026 Notes or 2029 Notes, the interest rate on the notes of such series will increase to, or remain at, as the case may be, 2.000% above the interest rate payable on the notes of such series on the date of their initial issuance. If Moody's or S&P either ceases to rate either the 2026 Notes or 2029 Notes for reasons within the Issuer's control or ceases to make a rating of the notes of such series publicly available for reasons within the Issuer's control, the Issuer will not be entitled to obtain a rating from a Substitute Rating Agency and the increase or decrease in the interest rate of the notes of such series shall be determined in the manner described above as if either only one or no Rating Agency provides a rating of the notes of such series.
- (i) Any interest rate increase or decrease described above will take effect from the first day of the interest period, commencing after the date on which a rating change occurs that requires an adjustment in

the interest rate. As such, interest will not accrue at such increased or decreased rate until the next interest payment date following the date on which the rating change occurs. If Moody's, or S&P (or, in either case, a Substitute Rating Agency therefor) changes its rating of either the 2026 Notes or 2029 Notes more than once during any particular interest period, the last change by such agency will control for purposes of any interest rate increase or decrease with respect to the notes of such series described above relating to such rating agency's action.

- (j) If the interest rate payable on the 2026 Notes and 2029 Notes increased as described under this paragraph, the term "interest," as used with respect to each of the 2026 Notes and the 2029 Notes, will be deemed to include any such additional interest unless the context otherwise requires.

The interest rate and the amount of interest payable on the 2026 Notes and the 2029 Notes will be determined and calculated by the Issuer.

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 2025 Notes, the 2027 Notes and the 2028 Notes. U.S. Bank Trust Company, National Association is the registrar and transfer agent for the 2026 Notes and the 2029 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 Agreements (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 Agreements 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 Agreements; provided that such Guarantor has delivered to the Trustee a certificate of a Responsible Officer (in the case of the 2026 Notes and the 2029 Notes, an Officers' Certificate) 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 days' prior notice, except with respect to the 2028 Notes, 10 days' prior notice, 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 2025 Notes, 2026 Notes, 2027 Notes, 2028 Notes, and the 2029 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, June 19, 2026, with respect to the 2026 Notes, December 1, 2026, with respect to the 2027 Notes, June 10, 2028, with respect to the 2028 Notes, or November 19, 2028, with respect to the 2029 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 and the 2028 Notes), 30 basis points (in the case of the 2027 Notes) or 50 basis points (in the case of the 2026 Notes and the 2029 Notes).

In addition, commencing November 11, 2024, with respect to the 2025 Notes (three months prior to the maturity of the 2025 Notes), June 19, 2026 (one month prior to the maturity date of the 2026 Notes), December 1, 2026 with respect to the 2027 Notes (three months prior to the maturity of the 2027 Notes), June 10, 2028 (three months prior to the maturity of the 2028 Notes), and November 19, 2028 (two months prior the maturity date of the 2029 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 days' prior notice, except with respect to the 2026 Notes, 2028 Notes and 2029 Notes, 10 days' prior notice, 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 2025 Notes, the 2027 Notes and the 2028 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 €100,000 in the case of the 2028 Notes, 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 depository 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 days, except with respect to the 2028 Notes, the 2026 Notes and the 2029 Notes, 10 days, 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, except in the case of the 2026 Notes, the 2028 Notes, and the 2029 Notes as described below.

With respect to the 2026 Notes, 2028 Notes, and the 2029 Notes, Notice of any redemption of the notes in connection with a transaction or an event may, at our discretion, be given prior to the completion or the occurrence thereof. Any redemption or notice may, at our discretion, be subject to one or more conditions precedent, including, but not limited to, completion or occurrence of a related transaction or event (such as an equity or equity-linked offering, an incurrence of indebtedness or an acquisition or other strategic transaction involving a change of control in us or another entity). At our discretion, the redemption date may be delayed until such time as any or all such conditions shall be satisfied, or such redemption may not occur and such notice may be rescinded in the event that any or all such conditions shall not have been satisfied by the redemption date, or by the redemption date as so delayed. We will provide written notice to the trustee prior to the close of business two Business Days prior to the redemption date if any such redemption has been rescinded or delayed, and upon receipt the trustee will provide such notice to each holder of the notes to be redeemed in the same manner in which the notice of redemption was given.

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, except in the case of the 2026 Notes and the 2029 Notes) (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 under 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, except in the case of the 2026 Notes and the 2029 Notes) (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, except in the case of the 2026 Notes and the 2029 Notes), 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 Agreements, 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

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 Rules 3-10 and 13-01 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 Guarantor (other than Indebtedness under a Qualified Securitization Financing), in the case of the 2025 Notes, the 2026 Notes, the 2027 Notes, the 2028 Notes, and the 2029 Notes or the payment of which is guaranteed by the Issuer 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, the 2026 Notes, the 2027 Notes, the 2028 Notes, and the 2029 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 Guarantor that is a Significant Subsidiary, in the case of the 2025 Notes, 2026 Notes, 2027 Notes, 2028 Notes, and the 2029 Notes;

(f) 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 indemnity reasonably satisfactory to it. 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 2026 Notes, the 2027 Notes, the 2028 Notes, and the 2029 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 depository.

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.

"*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.

"*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.

"*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 Agreements*" means (i) that certain Credit Agreement, dated as of March 18, 2022, by and among the Parent Guarantor, the Issuer, Celanese Europe B.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, and (ii) that certain Term Loan Credit Agreement, dated as of March 18, 2022, by and among the Parent Guarantor, the Issuer, each lender from time to time party thereto, Bank of America, N.A., as administrative agent, in each case, 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 December 11, 2017, with respect to the 2025 Notes, November 5, 2018, with respect to the 2027 Notes, September 10, 2021 with respect to the 2028 Notes and July 19, 2022 with respect to the 2026 Notes and the 2029 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";
- (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); and
- (i) with respect to the 2028 Notes, Liens for current taxes not yet due and payable or taxes being contested in good faith by appropriate proceedings and for which adequate reserves have been established on the Company's consolidated financial statements in accordance with GAAP.

"*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 (and in the case of the 2026 Notes and the 2029 Notes, the Issuer) 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. Except with respect to the 2026 Notes and the 2029 Notes, 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 Agreements 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*" with respect to the 2025 Notes, 2027 Notes and 2028 Notes 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 (except with respect to the 2026 Notes and the 2029 Notes) 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. Except with respect to the 2026 Notes and the 2029 Notes, 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, indemnities (and with respect to the 2026 and 2029 Notes, obligations), 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.

"*Substitute Rating Agency*" means, in the event either Moody's or S&P ceases to rate the Notes of any series or fails to make a rating of the Notes of such series publicly available for reasons outside the control of the Issuer, a "nationally recognized statistical rating organization" within the meaning of Section 3(a)(62) under the Exchange Act selected by the Issuer as a replacement agency for Moody's or S&P, as applicable.

"*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.

AGREEMENT AND GENERAL RELEASE
("Agreement")

Celanese Corporation and its subsidiaries and affiliates ("Company", "Employer", "Employer", or "Celanese"), 222 W. Las Colinas Blvd., Irving, Texas 75039, and Anne L. PuckettLori J. Ryerkerk and her heirs, executors, administrators, successors, and assigns ("Executive") agree that:

1. **Last Day of Active Employment; Transition Period; Separation Date.** The last day of Executive's employment with the Company will be February 19, 2024 December 31, 2024 (the "Separation Date"). For avoidance purposes of doubt, clarity, Executive shall continue to receive her customary base salary and benefits through December 31, 2023 (the "Active Employment Period") and commencing on January 1, 2024 and ending February 19, 2024 (the "Transition Period"), Executive shall be available to consult regarding transition of business matters to the Separation Date, unless Executive's successor during the Company's normal business hours, on an as-needed basis and will receive an hourly rate of \$300 per hour for time actually spent providing such services in the Transition Period. During the Active Employment Period, Executive will work in the office and continue to perform any required duties and assist with the transition of business issues through December 22, 2023, or such employment earlier date terminates as mutually agreed upon, set forth herein. Unless otherwise expressly agreed to in writing by the Company, if Executive voluntarily resigns or breaches the terms of this Agreement before the Separation Date, Executive's employment shall immediately terminate, and Executive will forfeit all rights to the consideration set forth in Section 2 below. In order to receive the consideration set forth in Section 2 below, Executive shall (i) comply with the terms of this Agreement and the Release (as defined below), and (ii) abide by all Company policies and procedures, (iii) through December 31, 2023, perform Executive's duties faithfully, to procedures. Effective as of the best of Executive's ability Separation Date, Executive hereby resigns from any and to the satisfaction all positions Executive may hold as a corporate officer or director of the Company while devoting Executive's full business efforts and time to its subsidiaries and affiliates (including without limitation any positions as a director, manager, officer, committee member, or employee), and from all positions held on behalf of the Company (e.g., external and to the promotion of its business as needed, including but not limited to working on projects assigned to Executive and (iv) be available to provide support during the Transition Period as described above. joint venture board memberships, internal committee positions, etc.).
2. **Consideration.** Each separate installment under this Agreement shall be treated as a separate payment for purposes of determining whether such payment is subject to or exempt from compliance with the requirements of Section 409A of the Internal Revenue Code. In consideration for timely signing and not revoking this Agreement and, on but not before the Separation Date, signing and not revoking the Release of Claims attached as Exhibit A (the "Release"), and compliance with the promises made herein and therein, in accordance with and pursuant to the terms of the Company's Executive Severance Benefits Plan originally effective in July of 2010, as in effect on the date hereof amended from time to time (the "Severance Plan"), and as additional consideration for Executive's entry into this Agreement, the Company and Executive agree that Executive will receive the payments and benefits set forth in Sections 2.a., 2.b., 2.c., 2.f.ii and 2.h. 2.g. Executive and the Company acknowledge and agree that irrespective of whether this Agreement or the Release become effective, Executive shall receive the payments and benefits described in Sections 2.d., 2.e, 2.f., and 2.g., 2.f.i, subject to any requirements of any plans, agreements, or policies described therein.
- a. **Separation.** Effective on the Separation Date, Executive shall separate from service with the Company and all of its affiliates. The Company will provide Executive with a draft of any public written announcement the Company plans to make

-1-

regarding Executive's separation from the Company, and Executive may provide the Company with feedback on same.

- b. a. **Separation Pay.** The Company will pay an amount equal to 150%200% of Executive's annual base salary as in currently effect as of the date of this Agreement (150% of \$600,000, i.e. \$900,000.00) (\$2,700,000), plus an amount equal to 150%200% of Executive's one-year target bonus (150% times target bonus of \$480,000, i.e. \$720,000) (\$4,050,000), for a total payment of \$1,620,000.00, \$6,750,000, less any lawful deductions. Such amount shall be paid within fifteen (15) days of following the Release Effective Date (as defined in the Release), and in no event, later than March 15, 2024 March 15, 2025, provided that all the conditions herein have been satisfied on or before the date of payment.

-1-

- c. b. 2023 2024 Annual Bonus.** For 2023, 2024, Executive will be eligible to receive an annual bonus payout, minus lawful deductions. The bonus payout will be based on Executive's target annual bonus target percentage, which is 80% 150% of Executive's annual base salary modified based on an individual performance modifier at 1.0 and actual Company performance, subject to the terms of the applicable bonus Company's annual incentive plan. The 2023 2024 bonus payout will be paid to Executive by March 30, 2024 March 30, 2025. For purposes of clarity, Executive will not be entitled to any bonus for 2024.
- d. c. Long-Term Equity and Cash Awards ("LTIs").** The Company Executive's separation will fulfill its obligations to Executive be treated as a "Retirement" pursuant to the terms of the her signed outstanding equity award agreements (collectively, the "Equity Awards"). This includes any vesting pursuant to the Equity Awards through the Separation Date (or, if earlier, the date of her termination of employment). The Company and Executive agree that the total Equity Awards for which Executive is eligible are set forth at Exhibit B. Executive will not be entitled to any equity grant for 2024.
- e. d. Pension and 401(k) Plan Vesting.** If Executive is eligible, shall receive all vested benefits under the Company will fulfill its obligations according to Celanese Americas Retirement Pension Plan and the Celanese 401(k) Savings Plan in accordance with the terms of the respective Plans. thereof.
- f. e. Unused Vacation.** The Company will pay to Executive wages for any unused vacation for 2023, 2024, based on and to the extent required by Company policy, and any approved vacation carried over from 2022, 2023, under the Company's standard procedure for calculating and paying any unused vacation to separated employees. Any The gross amount due to Executive (if any), less any lawful deductions, will be payable within 45 forty-five (45) days of the Separation Date, subject to Executive providing the details of any vacation days utilized during 2023, 2024.
- g. f. Company Benefit Plans.**
- i. Healthcare and dental coverage, if any, will continue until the last day of the month of the Separation Date (or if earlier, the date of i. Executive's termination of employment) benefits (e.g., according to Executive's current health and medical, dental, plan elections. All other normal Company programs (e.g., life insurance, LTD, 401K 401(k) contributions, etc.) will continue until the Separation Date (or, if earlier, the date of Executive's termination), subject to the terms of those programs.
- ii. Subject to Executive's timely election of continuation coverage pursuant to COBRA, the Company will provide Executive a monthly reimbursement payment for the medical and dental COBRA premiums charged and paid for up to 18 months for Executive and her dependents; provided that such monthly reimbursement will be paid following receipt of proof of payment for the COBRA premiums and such reimbursements shall cease as of the date that Executive becomes eligible to participate in any other employer sponsored group health plan. The benefits described in this Section 2.f.ii. shall no longer be provided to the extent the Company determines that such would result in any fine, penalty or violation of law for being a discriminatory benefit or otherwise.
- h. g. Outplacement Services.** The Company will pay for Outplacement Services in accordance with the terms of the Severance Plan, provided that all the conditions therein and herein have been satisfied.

-2-

The payments and other benefits provided under this Agreement shall be reduced by applicable withholding taxes and other lawful deductions.

3. **No Consideration Absent Execution of this Agreement and the Release.** Executive understands and agrees that Executive would not receive the monies and/or benefits

-2-

described in Sections 2.d, 2.a, 2.b, 2.c., 2.e, 2.f., 2.f.ii., and 2.g., unless Executive timely signs and does not revoke either this Agreement or the Release, and fulfills the promises contained herein and therein.

4. **Return of Company Property.** Executive will surrender to the Company, on a mutually agreeable date prior to December 31, 2023, the Separation Date, all Company materials, including but not limited to Executive's Company laptop computer, phone, credit card, calling cards, etc. Executive will be responsible for resolving any outstanding balances on the Company credit card. The Company and Executive will coordinate the transfer of Executive's cell phone number to Executive's personal cell phone.
5. **General Release of Claims.** Executive on Executive's own behalf and on behalf of Executive's agents, administrators, representatives, executors, successors, heirs, devisees and assigns (collectively, the "Releasing Parties") knowingly and voluntarily releases and forever discharges, to the full extent permitted by law, in all countries, including but not limited to the U.S., the People's Republic of China (PRC), The the United Kingdom (U.K.), The the Netherlands, and The the Federal Republic of Germany (FRG), the Company, its parent corporation, affiliates, subsidiaries, divisions, predecessors, successors, and assigns and the current and former employees, officers, directors, and agents thereof (collectively referred to throughout the remainder of this Agreement as (each individually, a "Company Releasee" and collectively, the "Company Releasees" and each a "Company Releasee"), of and from any and all claims, known and unknown, asserted and unasserted, Executive has or may have against the Company Releasees as of the date of execution of this Agreement, including, but not limited to, any alleged violation of:

- Title VII of the Civil Rights Act of 1964, as amended;
- The Civil Rights Act of 1991;
- Sections 1981 through 1988 of Title 42 of the United States Code, as amended;
- The Employee Retirement Income Security Act of 1974, as amended;
- Executive Order 11246, as amended;
- The Immigration Reform and Control Act, as amended;
- The Americans with Disabilities Act of 1990, as amended;
- The Age Discrimination in Employment Act of 1967, as amended;
- The Workers Adjustment and Retraining Notification Act, as amended;
- The Occupational Safety and Health Act, (OSHA) as amended;
- The Wall Street Reform Act of 2010 (Dodd-Frank);
- The Family Medical Leave Act of 1993;
- The Sarbanes-Oxley Act of 2002;
- The National Labor Relations Act (NLRA), as amended;
- The Texas Civil Rights Act, as amended and related statutes;
- The Texas Minimum Wage Law, as amended;
- Equal Pay Law for Texas, as amended;
- Florida Civil Rights Act and related statutes;
- Indiana Civil Rights Act and related statutes;
- Kentucky Civil Rights Act and related statutes;
- Michigan Elliott-Larsen Civil Rights Act and related statutes;

-3-

- Michigan Sales Representatives Commission Act;
- Minnesota Human Rights Act and related statutes;
- North Carolina Equal Employment Practices Act and related statutes;
- North Carolina Retaliatory Employment Discrimination Act;

-3-

- Ohio Civil Rights Act and related statutes;
- South Carolina Human Affairs Law and related statutes;
- Virginia Human Rights Act and related statutes;
- Delaware Discrimination in Employment Act and related statutes;
- California Fair Employment and Housing Act, Cal. Gov't Code § 12900 et seq. and related statutes;
- Constitution of the Commonwealth of Puerto Rico;
- Puerto Rico Act No. 80 of May 30, 1976 (termination without just cause) including its recall provisions and related statutes;
- Puerto Rico Act No. 100 of June 30, 1959 (discrimination based on age, race, sex, color, religion, marriage, political ideas, military status, sexual orientation, gender identity, social condition or origin, national origin, or for being an actual or perceived victim of domestic violence, sexual battery, or stalking) and related statutes;
- West Virginia Human Rights Act – W. Va. Code §5-11-1 et seq. and related statutes;
- Pennsylvania Human Relations Act, Pennsylvania Whistleblower Law, and related statutes;
- New Jersey Law Against Discrimination, New Jersey Conscientious Employee Protection Act, New Jersey Family Leave Act, and related statutes;
- Miss. Code Ann. § 45-9-55 and related statutes;
- Georgia Fair Employment Practices Act, Georgia Equal Pay Act, Georgia Prohibition of Age Discrimination in Employment Act, Georgia Equal Employment for Persons with Disabilities Code, and related statutes;
- Any other federal, state, or local civil or human rights law, including but not limited to any other local, state, or federal law, regulation, or ordinance in any state in the United States;
- Any public policy, contract, tort, or common law, or a grievance under the applicable collective bargaining agreement;
- Any claim for costs, fees, or other expenses including attorneys' fees incurred in these matters.

6. **Affirmations.** Executive affirms that Executive has not filed, caused to be filed, or presently is a party to any claim, complaint, or action against any Company Releasee in any forum or form; provided, however, that the foregoing does not affect any right to file an administrative charge with the Equal Employment Opportunity Commission ("**EEOC**"), OSHA, the National Labor Relations Board ("**NLRB**"), or a charge or complaint under applicable laws with the Securities and Exchange Commission ("**SEC**") or any other federal, state, or municipal agency with appropriate jurisdiction (a "**Government Agency**"), subject to the restriction that if any such charge or complaint is filed, Executive agrees not to violate the confidentiality provisions of this Agreement, except by an order of a court having competent jurisdiction, if **permitted** **required** by applicable law, or if in connection with confidential communications with a Government Agency or an investigation conducted by a Government Agency with appropriate jurisdiction. Additionally, no provision of this Release shall be interpreted so as to impede Executive (or any other individual) from reporting possible violations of federal law or regulation to any governmental agency or entity or making other disclosures under the whistleblower provisions of federal law or regulation or accepting any monetary reward in connection therewith, and Executive does not need the prior authorization of the Company to make

-4-

any such reports or disclosures and Executive shall not be required to notify the Company that such reports or disclosures have been made. Executive further agrees and covenants that should Executive or any other person,

-4-

organization, or other entity file, charge, claim, sue, or cause or permit to be filed any charge or claim with the EEOC, or any civil action, suit, or legal proceeding against any Company Releasee involving any matter occurring at any time in the past, Executive will not seek or accept any

personal relief (including a judgment, relief, or settlement) in such charge, civil action, suit, or proceeding, unless permitted under law or regulation. This Agreement does not limit Executive's right to receive an award for information provided to the SEC, otherwise required by applicable law. Executive further affirms that Executive has reported all hours worked as of the date of this Agreement and has been paid and/or has received all leave (paid or unpaid), compensation, wages, bonuses, commissions, and/or benefits to which Executive may be entitled and that no other leave (paid or unpaid), compensation, wages, bonuses, commissions, and/or benefits are due to Executive, except as provided in this Agreement. Executive furthermore affirms that Executive has no known workplace injuries or occupational diseases.

7. **Confidentiality.** Executive agrees not to disclose any information regarding the existence or substance of this Agreement, except to Executive's spouse, tax advisor, and an attorney with whom Executive chooses to consult regarding Executive's consideration of this Agreement or as permitted by applicable law. Executive agrees and recognizes that any knowledge or information of any type whatsoever of a confidential nature relating to the business of the Company or any of its subsidiaries, divisions, or affiliates, including, without limitation, all types of trade secrets, client lists or information, employee lists or information, information regarding product development, marketing plans, management organization, operating policies or manuals, performance results, business plans, financial records, or other financial, commercial, business, or technical information (collectively "Confidential Information"), must be protected as confidential and not copied, disclosed, or used other than for the benefit of the Company at any time unless and until such knowledge or information is in the public domain through no wrongful act by Executive. Executive further agrees not to divulge to anyone (other than the Company or any persons employed or designated by the Company), publish, or make use of any such Confidential Information without the prior written consent of the Company, except by an order of a court having competent jurisdiction or if in connection with confidential communications with a Government Agency or an investigation conducted by a Government Agency with appropriate jurisdiction. Nothing in this Section 7 is intended to interfere with Executive's right to engage in the conduct outlined in Section 6, or to otherwise interfere with Executive's rights under any applicable federal, state or local law(s).
8. **Notification of Allowable Disclosure of Trade Secret Information in the United States.** An individual may not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that: (a) is made (i) in confidence to a federal, state, or local government official, either directly or indirectly, or to an attorney; and (ii) solely for the purpose of reporting or investigating a suspected violation of law; or (b) is made in a complaint or other document that is filed under seal in a lawsuit or other proceeding. Further, an individual who files a lawsuit against his or her employer alleging retaliation for reporting a suspected violation of law the individual may disclose the trade secret to his or her attorney. The individual also may use the trade secret information in the court proceeding, provided that he or she files any document containing the trade secret under seal and does not disclose the trade secret except pursuant to a court order.

-5-

9. **Non-solicitation of Employees.** Executive acknowledges and recognizes the highly confidential nature of the business of the Company. To the extent applicable under

-5-

existing law, without the express written permission of the Company, for as long as Executive is employed by the Company and for a period of three (3) years from the Separation Date, Executive shall not, directly or indirectly, solicit or hire employees of the Company for employment; employment or otherwise interfere with the Company's relationship with such employees; provided, however, that nothing in this Section 9 shall restrict Executive from owning solely as an investment, publicly traded securities of any company that is engaged in the business of the Company, if Executive (i) is not a controlling person of, or a member of a group which controls; and (ii) does not, directly or indirectly, own 5% or more of any class of securities of any such company.

10. **Governing Law and Interpretation.** This Agreement shall be governed by and construed in accordance with the laws of the state of Texas, without regard to its conflict of laws provision. In the event Executive or the Company breaches any provision of this Agreement, Executive and the Company affirm that either may institute an action to specifically enforce any term or provision of this Agreement. Should any provision of

this Agreement be declared illegal or unenforceable by any court of competent jurisdiction and cannot be modified to be enforceable, excluding the general release language, such provision shall immediately become null and void, leaving the remainder of this Agreement in full force and effect.

11. **Non-admission of Wrongdoing.** The parties hereto agree that neither this Agreement nor the furnishing of the consideration for the release contained in this Agreement and the Release shall be deemed or construed at any time for any purpose as an admission by the Company or any Company Releasee or the Executive, of any liability or unlawful conduct of any kind.
12. **Non-Disparagement.** Executive agrees not that Executive shall at no time make, publish, or communicate to disparage any person or make entity or in any public forum or otherwise, any defamatory, maliciously false, or disparaging remarks, comments or send any disparaging communications statements concerning any Company Releasee or their reputation respective businesses, reputations, or business, any of their respective employees, officers, or directors now or in the future. Likewise, the Company agrees to direct its executive leadership team not to make, publish, or communicate to any person or entity or in any public forum or otherwise, any defamatory, maliciously false, or disparaging remarks, comments, or statements not to disparage or make any disparaging remark or send any disparaging communication concerning Executive, Executive's reputation, and/or Executive's business, Executive. Nothing in this Section 12 is intended to interfere with Executive's right to engage in the conduct outlined in Section 6, or to otherwise interfere with Executive's rights under any applicable federal, state or local law(s).
13. **Future Cooperation.** Executive agrees to make reasonable efforts to assist the Company, including but not limited to responding to telephone calls, assisting with transition duties, assisting with issues that arise prior to and after the Separation Date, and assisting with the defense or prosecution of any lawsuit or claim. This includes but is not limited to providing deposition testimony, attending hearings, and testifying on behalf of the Company. The Company will reimburse Executive for reasonable time and expenses in connection with any future cooperation after the Separation Date, at Executive's current annual base pay, converted a mutually-agreed upon rate, provided that such reasonable time and expenses are pre-approved by the Company in writing prior to an hourly rate, being incurred. Time and expenses can may include loss of pay or using vacation time at a future employer. The Company shall reimburse Executive within 30 thirty (30) days of remittance by Executive to the Company of such time and expenses incurred, documentation

-6-

concerning such time and expenses incurred, provided that such time expenses were pre-approved by the Company in writing.

14. **Injunctive Relief.** Executive agrees and acknowledges that the Company will be irreparably harmed by any breach or threatened breach by Executive of this Agreement or any Prior Agreement (as defined below) and that monetary damages would be grossly inadequate. Accordingly, Executive agrees that in the event of a breach or threatened breach of this Agreement or any Prior Agreement by Executive, the Company shall be entitled to apply for immediate injunctive or other preliminary or equitable relief, as appropriate, in addition to all other remedies at law or equity.
15. **Review Period.** Executive is hereby advised he/she has up to twenty-one (21) calendar days from the date Executive receives it to review this Agreement and to consult with an attorney prior to execution of this Agreement. Executive agrees that any modifications made to this Agreement do not restart or affect in any manner the original twenty-one (21) calendar day consideration period. The Company advises Executive to consult with an attorney of his/her choosing regarding this Agreement (at his/her own expense), which includes a release for claims of age discrimination under the Age Discrimination in Employment Act.
16. **Revocation Period and Effective Date.** If Executive signs and returns to the Company a copy of this Agreement, Executive has a period of seven (7) days ("Revocation Period") following the date of such execution to revoke this Agreement. This Agreement will become effective and irrevocable on the 8 eighth (8th) day following the date Executive signs this Agreement ("Effective Date") if not previously revoked. In order for the revocation to be effective, written notice must be received by the Company no later than close of business on the seventh (7th) day after Executive signs this Agreement at which time the Revocation Period shall expire.
17. **Amendment; Severability.** This Agreement may not be modified, altered, or changed except upon express written consent of the parties hereto wherein specific reference is made to this Agreement. The parties to this Agreement agree that should any government agency or court

of competent jurisdiction declare or determine that any provision of this Agreement is illegal or invalid, the validity of the remaining parts, terms or provisions of this Agreement shall not be affected and such provisions shall remain in full force and effect and any illegal or invalid part, term, or provision, will not be deemed to be a part of this Agreement.

18. **Entire Agreement.** This Agreement and the Release set forth the entire agreement between the parties hereto, and fully supersede any prior obligation of the Company to Executive, other than any prior non-disclosure, non-solicitation, non-competition, or arbitration agreement or provision which Executive entered into or is otherwise subject to (collectively, the "Prior Agreements"), which are incorporated into this Agreement by this reference, reaffirmed by Executive, and which remain in full force and effect according to their respective terms. The parties hereto agree that if any conflict exists between the provisions of this Agreement, the Release, and any Prior Agreements, those provisions providing greater protection to the Company and its affiliates shall control. Executive acknowledges that Executive has not relied on any representations, promises, or agreements of any kind made to Executive in connection with Executive's decision to accept

-7-

enter into this Agreement or the Release, except for those set forth in this Agreement or the Release.

-7-

-
19. HAVING ELECTED TO EXECUTE THIS AGREEMENT, TO FULFILL THE PROMISES, AND TO RECEIVE THE SUMS AND BENEFITS IN SECTION 2 ABOVE, EXECUTIVE FREELY AND KNOWINGLY, AND AFTER DUE CONSIDERATION, ENTERS INTO THIS AGREEMENT INTENDING TO WAIVE, SETTLE, AND RELEASE ALL CLAIMS EXECUTIVE HAS OR MIGHT HAVE AGAINST THE COMPANY RELEASEES.

[Remainder of page intentionally blank. Signature page(s) follow(s).]

-8-

IN WITNESS WHEREOF, the parties hereto knowingly and voluntarily executed this Agreement as of the date indicated below:

Executive

Anne L. Puckett

Signature: /s/ Anne L. Puckett

LORI J. RYERKERK

Date: 01-Nov-2023 11:38:51 PM

CDT

Signature: /s/ Lori J. Ryerkerk

Date: 12/27/24

Celanese Corporation:

By: /s/ Vanessa Dupuis

Vanessa Dupuis, SVP and Chief HR Officer

Name: Vanessa Dupuis

Title: CHRO

Date: 01-Nov-2023 11:29:14 PM

CDT 12/11/24

-8- Signature Page to
Executive Separation Agreement and Release

Exhibit A

RELEASE OF CLAIMS

This Release of Claims ("Release") is made and entered into by and between Celanese Corporation and its subsidiaries and affiliates ("Company", "Employer," "Employer," or "Celanese"), 222 W. Las Colinas Blvd., Irving, Texas 75039, and **Anne L. Puckett** **Lori J. Ryerkerk** and her heirs, executors, administrators, successors, and assigns ("Executive"). Terms used in this Release with initial capital letters that are not otherwise defined herein shall have the meanings ascribed to such terms in the Agreement and General Release to which this Release is attached (the "Agreement").

WHEREAS, Executive and the Company are parties to the Agreement; and

WHEREAS, Section 2 of the Agreement provides that Executive is entitled to certain payments and benefits if Executive timely signs and does not revoke the Agreement and this Release.

NOW, THEREFORE, in consideration of the mutual promises and covenants set forth herein, the receipt and adequacy of which are acknowledged, Executive and the Company agree as follows:

1. **Release of Claims.** In consideration of the promises of the Company provided in the Agreement, including, without limitation, the payments and benefits set forth in Section 2 of the Agreement, that being good and valuable consideration, the receipt, adequacy and sufficiency of which are acknowledged by Executive, Executive on Executive's own behalf and on behalf of the Releasing Parties, knowingly and voluntarily releases and forever discharges, to the full extent permitted by law, in all countries, including but not limited to the U.S., the People's Republic of China (PRC), the United Kingdom (U.K.), the Netherlands, and the Federal Republic of Germany (FRG), the Company Releasees of and from any and all claims, known and unknown, asserted and unasserted, Executive has or may have against the Company Releasees as of the date of execution of this Release, including, but not limited to, any alleged violation of:

- Title VII of the Civil Rights Act of 1964, as amended;
- The Civil Rights Act of 1991;
- Sections 1981 through 1988 of Title 42 of the United States Code, as amended;
- The Employee Retirement Income Security Act of 1974, as amended;
- Executive Order 11246, as amended;
- The Immigration Reform and Control Act, as amended;

- The Americans with Disabilities Act of 1990, as amended;
- The Age Discrimination in Employment Act of 1967, as amended;
- The Workers Adjustment and Retraining Notification Act, as amended;
- The Occupational Safety and Health Act, (OSHA) as amended;
- The Wall Street Reform Act of 2010 (Dodd-Frank);
- The Family Medical Leave Act of 1993;
- The Sarbanes-Oxley Act of 2002;
- The National Labor Relations Act (NLRA), as amended;
- The Texas Civil Rights Act, as amended and related statutes;

-9-

- The Texas Minimum Wage Law, as amended;
- Equal Pay Law for Texas, as amended;
- Florida Civil Rights Act and related statutes;
- Indiana Civil Rights Act and related statutes;
- Kentucky Civil Rights Act and related statutes;
- Michigan Elliott-Larsen Civil Rights Act and related statutes;
- Michigan Sales Representatives Commission Act;
- Minnesota Human Rights Act and related statutes;
- North Carolina Equal Employment Practices Act and related statutes;
- North Carolina Retaliatory Employment Discrimination Act;
- Ohio Civil Rights Act and related statutes;
- South Carolina Human Affairs Law and related statutes;
- Virginia Human Rights Act and related statutes;
- Delaware Discrimination in Employment Act and related statutes;
- California Fair Employment and Housing Act, Cal. Gov't Code § 12900 et seq. and related statutes;
- Constitution of the Commonwealth of Puerto Rico;
- Puerto Rico Act No. 80 of May 30, 1976 (termination without just cause) including its recall provisions and related statutes;
- Puerto Rico Act No. 100 of June 30, 1959 (discrimination based on age, race, sex, color, religion, marriage, political ideas, military status, sexual orientation, gender identity, social condition or origin, national origin, or for being an actual or perceived victim of domestic violence, sexual battery, or stalking) and related statutes;
- West Virginia Human Rights Act – W. Va. Code §5-11-1 et seq. and related statutes;
- Pennsylvania Human Relations Act, Pennsylvania Whistleblower Law, and related statutes;
- New Jersey Law Against Discrimination, New Jersey Conscientious Employee Protection Act, New Jersey Family Leave Act, and related statutes;
- Miss. Code Ann. § 45-9-55 and related statutes;
- Georgia Fair Employment Practices Act, Georgia Equal Pay Act, Georgia Prohibition of Age Discrimination in Employment Act, Georgia Equal Employment for Persons with Disabilities Code, and related statutes;
- Any other federal, state, or local civil or human rights law, including but not limited to any other local, state, or federal law, regulation, or ordinance in any state in the United States;
- Any public policy, contract, tort, or common law, or a grievance under the applicable collective bargaining agreement;
- Any claim for costs, fees, or other expenses including attorneys' fees incurred in these matters.

2. **Affirmations.** Executive affirms that Executive has not filed, caused to be filed, or presently is a party to any claim, complaint, or action against any Company Releasee in any forum or form; provided, however, that the foregoing does not affect any right to file an administrative charge with the EEOC, OSHA, the NLRB, or a charge or complaint under applicable laws with the SEC or any other Government Agency, subject to the restriction that if any such charge or complaint is filed, Executive agrees not to violate the confidentiality provisions of the Agreement or this Release, except by an order of a court

-10-

having competent jurisdiction, if required by applicable law, or if in connection with

confidential communications with a Government Agency or an investigation conducted by a Government Agency with appropriate jurisdiction. Additionally, no provision of this Release shall be interpreted so as to impede Executive (or any other individual) from reporting possible violations of federal law or regulation to any governmental agency or entity or making other disclosures under the whistleblower provisions of federal law or regulation or accepting any monetary reward in connection therewith, and Executive does not need the prior authorization of the Company to make any such reports or disclosures and Executive shall not be required to notify the Company that such reports or disclosures have been made. Executive further agrees and covenants that should Executive or any other person, organization, or other entity file, charge, claim, sue, or cause or permit to be filed any charge or claim with the EEOC, or any civil action, suit, or legal proceeding against any Company Releasee involving any matter occurring at any time in the past, Executive will not seek or accept any personal relief (including a judgment, relief, or settlement) in such charge, civil action, suit, or proceeding, unless otherwise required by applicable law. This Release does not limit Executive's right to receive an award for information provided to the SEC. Executive further affirms that Executive has reported all hours worked as of the date of this Release and has been paid and/or has received all leave (paid or unpaid), compensation, wages, bonuses, commissions, and/or benefits to which Executive may be entitled and that no other leave (paid or unpaid), compensation, wages, bonuses, commissions, and/or benefits are due to Executive, except as provided in the Agreement and this Release. Executive furthermore affirms that Executive has no known workplace injuries or occupational diseases.

3. **Confidentiality.** Executive agrees not to disclose any information regarding the existence or substance of the Agreement or this Release, except to Executive's spouse, tax advisor, and an attorney with whom Executive chooses to consult regarding Executive's consideration of the Agreement and this Release or as permitted by applicable law. Executive agrees and recognizes that all Confidential Information, must be protected as confidential and not copied, disclosed, or used other than for the benefit of the Company at any time unless and until such knowledge or information is in the public domain through no wrongful act by Executive. Executive further agrees not to divulge to anyone (other than the Company or any persons employed or designated by the Company), publish, or make use of any such Confidential Information without the prior written consent of the Company, except by an order of a court having competent jurisdiction or if in connection with confidential communications with a Government Agency or an investigation conducted by a Government Agency with appropriate jurisdiction. Nothing in this Section 3 is intended to interfere with Executive's right to engage in the conduct outlined in Section 2, or to otherwise interfere with Executive's rights under any applicable federal, state or local law(s).
4. **Notification of Allowable Disclosure of Trade Secret Information in the United States.** An individual may not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that: (a) is made (i) in confidence to a federal, state, or local government official, either directly or indirectly, or to an attorney; and (ii) solely for the purpose of reporting or investigating a suspected violation of law; or (b) is made in a complaint or other document that is filed under seal in a lawsuit or other proceeding. Further, an individual who files a lawsuit against his or her employer alleging retaliation for reporting a suspected violation of law the individual may disclose the trade secret to his or her attorney. The individual also may use the trade secret information in the court proceeding, provided that he or she files any document containing the trade secret under seal and does not disclose the trade secret except pursuant to a court order.

-11-

5. **Review Period.** Executive, by the voluntary act of signing below, acknowledges that Executive has been given a period of at least twenty-one (21) calendar days from the date Executive receives it to review this Release and to consult with an attorney prior to

execution of this Release. Executive agrees that any modifications made to this Release do not restart or affect in any manner the original twenty-one (21) calendar day consideration period. **EXECUTIVE SHALL NOT SIGN AND RETURN THIS RELEASE PRIOR TO THE SEPARATION DATE; JANUARY 2, 2025; PROVIDED, HOWEVER, THAT EXECUTIVE MUST RETURN THE SIGNED RELEASE TO THE COMPANY BY 5:00 P.M. p.m. CENTRAL ON THE SEPARATION DATE JANUARY 2, 2025 TO RECEIVE THE PAYMENTS AND OTHER BENEFITS DESCRIBED IN SECTION 2 OF THE AGREEMENT.** Executive understands and agrees that Executive shall not receive the consideration set forth in Section 2 of the Agreement if Executive fails to comply with the terms of this Section 5. The Company advises Executive to consult with an attorney of his/her choosing regarding this Release (at his/her own expense), which includes a release for claims of age discrimination under the Age Discrimination in Employment Act.

6. **Revocation Period and Effective Date.** If Executive signs and returns to the Company a copy of this Release by the Separation Date, January 2, 2025, Executive has a period of seven (7) days ("Revocation Period") following the date of such execution to revoke this Release. This Release will become effective and irrevocable on the eighth (8th) day following the date Executive signs this Release ("Release Effective Date") if not previously revoked. In order for the revocation to be effective, written notice must be received by the Company no later than close of business on the seventh (7th) day after Executive signs this Release at which time the Revocation Period shall expire.
7. **Governing Law and Interpretation.** This Release shall be governed by and construed in accordance with the laws of the state of Texas, without regard to its conflict of laws provision. In the event Executive or the Company breaches any provision of this Release, Executive and the Company affirm that either may institute an action to specifically enforce any term or provision of this Release. Should any provision of this Release be declared illegal or unenforceable by any court of competent jurisdiction and cannot be modified to be enforceable, excluding the general release language, such provision shall immediately become null and void, leaving the remainder of this Release in full force and effect.
8. **Non-Admission Non-admission of Wrongdoing.** The parties hereto agree that neither this Release nor the furnishing of the consideration for the release contained in the Agreement and this Release shall be deemed or construed at any time for any purpose as an admission by the Company or any Company Releasee of any liability or unlawful conduct of any kind.
9. **Amendment; Severability.** This Release may not be modified, altered, or changed except upon express written consent of the parties hereto wherein specific reference is made to this Release. The parties to this Release agree that should any government agency or court of competent jurisdiction declare or determine that any provision of the Agreement or this Release is illegal or invalid, the validity of the remaining parts, terms or provisions of the Agreement and this Release shall not be affected, and such provisions shall remain in full force and effect and any illegal or invalid part, term, or provision, will not be deemed to be a part of the Agreement or this Release.

-12-

10. **Entire Agreement.** This Release, the Agreement, and the Prior Agreements set forth the entire agreement between the parties hereto, and fully supersede any prior obligation of the Company to Executive. The parties hereto agree that if any conflict exists between the

provisions of this Agreement, the Release, and any Prior Agreements, those provisions providing greater protection to the Company and its affiliates shall control. Executive acknowledges that Executive has not relied on any representations, promises, or agreements of any kind

made to Executive in connection with Executive's decision to **accept** **enter into** the Agreement or this Release, except for those set forth in the Agreement or this Release.

11. HAVING ELECTED TO EXECUTE THE AGREEMENT AND THIS RELEASE, TO FULFILL THE PROMISES HEREIN AND THEREIN, AND TO RECEIVE THE SUMS AND BENEFITS IN SECTION 2 OF THE AGREEMENT, EXECUTIVE FREELY AND KNOWINGLY, AND AFTER DUE CONSIDERATION, ENTERED INTO THE AGREEMENT AND NOW ENTERS INTO THIS RELEASE INTENDING TO WAIVE, SETTLE, AND RELEASE ALL CLAIMS EXECUTIVE HAS OR MIGHT HAVE AGAINST THE COMPANY RELEASEES.

IN WITNESS WHEREOF, the parties hereto knowingly and voluntarily executed this Release as of the date indicated below:

Executive	Celanese Corporation:
Anne L. Puckett LORI J. RYERKERK	By: _____
	Name: _____
Signature:	Title: _____
Date:	Date: _____
Signature:	By: _____

Date:	Title: _____
_____	Date: _____

Exhibit B

Summary of LTI Awards

Exhibit **10.10(b)** **10.12(c).1**

Amended Schedule of Participants to Form of Non-CEO Amended and Restated Change in Control Agreement (12.31.2024)

Scott A. Richardson
Thomas F. Kelly
Mark C. Murray
Chuck B. Kyrish
Ashley B. Duffie

Summary of Non-Employee Director Compensation

Each non-employee director of Celanese Corporation (the "Company") is entitled to (i) an annual cash retainer of \$125,000, which is paid in quarterly installments, in arrears, and (ii) an annual equity retainer of \$175,000 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 stewardship committee (formerly known as the environmental, health, safety, quality and public policy committee committee) receives an annual fee of \$15,000, the chair of the compensation and management development committee receives an annual fee of \$20,000 and the chair of the audit committee receives an annual fee of \$25,000. The lead director independent chair (if any) receives an annual fee of \$35,000. \$75,000 paid in cash and an equity retainer of \$100,000. The lead director (if any) receives an annual fee of \$40,000. 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 deferrals plus or minus certain amounts based upon the market performance of specified measurement funds selected by the participant.

Exhibit 19.1

CELANESE CORPORATION

INSIDER TRADING POLICY AND PROCEDURES

As amended July 20, 2023

1.0 Purpose

This policy provides guidelines with respect to transactions in securities of Celanese Corporation (together with its subsidiaries, the "Company") and the handling of material, nonpublic information (as defined below) about the Company and other companies with which the Company may do business. This policy is intended to promote compliance with applicable U.S. securities laws and avoid situations that could damage the Company's reputation.

2.0 Scope

This policy applies to all directors, officers and employees of the Company. The Company may also determine that other persons should be subject to this policy, such as contractors and consultants, who have access to material, nonpublic information about the Company (such persons, together with directors, officers and employees, "Covered Persons"). This policy also applies to family members who reside with Covered Persons, anyone else who lives in their household and any family members who do not live in their household but whose transactions in Company Securities (as defined below) are directed by them or are subject to their influence or control ("Family Members"), as well as corporations or other business entities controlled, influenced or managed by them or their Family Members, and trusts for which such persons are a trustee or in which they have a beneficial or pecuniary interest ("Controlled Entities") and together with Covered Persons and Family Members, "Insider(s)"). This policy relates to securities issued by the Company or its subsidiaries ("Company Securities") including outstanding common stock and notes, as well as any other type of securities that the Company or its subsidiaries may issue and derivative securities related to such securities and, in certain circumstances, securities of other companies with which we do business, such as a customer or supplier of the Company, or that is involved in a transaction or possible transaction with the Company.

Additional restrictions under this policy apply to Section 16 Persons and Restricted Persons as defined and provided below.

3.0 Administration and Changes

The Deputy General Counsel, SEC/Finance and, in his or her absence, another attorney designated by the General Counsel ("SEC Counsel"), shall be responsible for administration and periodic review of this policy. All determinations and interpretations by SEC Counsel shall be final and not subject to further review.

The Chief Executive Officer, the Chief Financial Officer and the General Counsel may authorize changes to this policy, provided that those changes are consistent with this policy and applicable securities laws. All material changes to this policy must be approved by the Board of Directors of the Company.

4.0 Assistance

If any person has questions regarding this policy, whether general or specific, he or she is encouraged to contact the SEC Counsel's office. If any person is unsure whether the information he or she possesses is material and/or nonpublic, he or she should consult the SEC Counsel's office for guidance before trading in Company Securities. Training materials are available at one.celanese.com to further explain this policy and applicable securities laws.

5.0 General Policy

It is the policy of the Company to prohibit the unauthorized disclosure of nonpublic information acquired in the work-place and the misuse of material, nonpublic information in securities trading. Any Insider who possesses material, nonpublic information regarding the Company is restricted by this policy until such the information is publicly disclosed by the Company or is no longer material.

6.0 Specific Policies

6.1 Nondisclosure of Material, Nonpublic Information

6.1.1 All nonpublic information concerning the Company and its affairs is and remains the property of the Company.

6.1.2 It is against the Company's policy for any Insider to disclose material, nonpublic information to persons within the Company whose job or responsibilities do not require them to have that information or to provide that information to other persons outside of the Company (i.e., "tip") such as family, friends, business associates, consulting firms, analysts, individual investors, members of the investment community or news media, or any expert-networking firm or its employees, members or consultants, unless any such disclosure is made in accordance with the Company's policies regarding the protection or authorized external disclosure of Company information. If a Covered Person provides material, nonpublic information to another person (including, for example, a Family Member or a broker) and that person then trades in Company Securities, both that person and the Covered Person may be held liable. Persons with whom an Insider has a history, pattern or practice of sharing confidences—such as family members, close friends and financial and personal counselors—may be presumed to act on the basis of information known to the Insider; therefore, special care should be taken so that material, nonpublic information is not disclosed to such persons. This policy also applies to material, nonpublic information concerning other companies with which we do business, such as a customer or supplier of the Company, or that is involved in a transaction or possible transaction with the Company, obtained as a result of the Insider's relationship with the Company or from any expert-networking firm or its employees, members or consultants.

6.1.3 If any Insider inadvertently discloses material, nonpublic information he or she must immediately report the same to the General Counsel. The General Counsel will, in consultation with SEC Counsel, senior management, investor relations personnel and other appropriate persons or departments, determine whether and to what extent action is required in response thereto.

6.1.4 All inquiries to Insiders that are not authorized to speak on behalf of the Company from any persons who may seek information with regard to the Company or its businesses or activities must be directed to the Vice President of Investor Relations. If the person making the inquiry inappropriately persists, Insiders should simply state that they are not at liberty to discuss that information and then contact the Chief Financial Officer or the Vice President of Investor Relations promptly and inform him or her of the name of the person making the inquiry and the nature of the inquiry.

6.1.5 "Nonpublic" information includes any information concerning a company or its subsidiaries or their affairs (extending to customers, suppliers and business transactions) that has not been widely disseminated to the public through major news wire services, national or financial news services, or a filing with the Securities and Exchange Commission. We consider information to be widely disseminated only when two full trading days have lapsed since its public disclosure. The fact that rumors, speculation, or statements attributed to unidentified sources are public is insufficient to be considered widely disseminated even when the information is accurate. Information is considered "material" if a reasonable investor would be likely to take the information into account when deciding whether to buy, sell, hold, or vote securities. Any information that could be expected to affect the price of securities, whether it is positive or negative, should be considered material. There is no bright-line standard for assessing materiality; rather, materiality is based on an assessment of all of the facts and circumstances, and is often evaluated by enforcement authorities with the benefit of hindsight. While it is not possible to define all categories of material information, some categories of information that could depending on their significance be regarded as material include information relating to sales, earnings, corporate developments, new products, research projects, impairments, layoffs, acquisitions, divestitures, financings, joint ventures, threatened or actual litigation, liquidity problems, significant interruptions of business, significant environmental incidents, significant cybersecurity incidents, changes in debt ratings, changes in executive management, auditors, or the board, changes in dividend policy, declaration of a stock split, and the proposed or contemplated issuance, redemption, or announcement regarding planned repurchase of securities.

6.2 Trading Restrictions

6.2.1 It is unlawful, both civilly and criminally, and against this policy, for any Insider to purchase or sell, gift, or otherwise trade or provide advice concerning (or otherwise recommend the purchase or sale of) Company Securities or any securities of any other company with which the Company does business,

such as a customer or supplier of the Company, or that is involved in a transaction or possible transaction with the Company, while in possession of material, nonpublic information concerning the Company or such other entity, as applicable. Any such person must refrain from trading until the information has been publicly disseminated or is no longer material. The mere fact that an Insider is aware of material, nonpublic information is a bar to trading. It is no excuse that such person's reasons for trading were not based on the material, nonpublic information or are based on personal financial need.

6.2.2 Insiders who are required to make filings with the SEC pursuant to Section 16 of the Securities Exchange Act of 1934 due to their status as directors or officers of the Company ("**Section 16 Persons**") and certain other Covered Persons designated from time to time by SEC Counsel (as notified by SEC Counsel) (together with Section 16 Persons, "**Restricted Persons**"), will be permitted to transact in Company Securities only during the period beginning at the close of regular trading on the New York Stock Exchange (the "**NYSE**") on the second full trading day following the Company's widespread, public release of quarterly or year-end earnings, or, at the sole discretion of SEC Counsel, on the second full trading day following the date the Company's Form 10-Q or Form 10-K is filed, and ending at the close of trading on the NYSE on the last trading day that is two weeks before the end of the fiscal quarter in which that release occurs (such period called a "**Trading Window**"). If a Trading Window expires on a weekend or holiday, the period shall not be extended to the next trading day. Restricted Persons subject to this Section 6.2.2 shall not be permitted to purchase or sell Company Securities at any times other than during Trading Windows, subject to the limitation described in the next paragraph (in each case, except for purchases or sales pursuant to a plan meeting the requirements of Rule 10b5-1 of the Securities Exchange Act of 1934 ("**10b5-1 Plan**") and "Guidelines for 10b5-1 Plans" set forth in Appendix A below that has been pre-approved by SEC Counsel).

From time to time, an event may occur or an event may be under consideration that is material to the Company but has not been publicly disclosed. So long as the event remains (in the judgment of SEC Counsel) material and nonpublic, persons designated by SEC Counsel may not trade Company Securities, even during a Trading Window. In addition, the Company's financial results may be sufficiently material in a particular fiscal quarter that, in the judgment of SEC Counsel, some or all Insiders should refrain from trading in Company Securities even during the Trading Window described above. In either situation, SEC Counsel may notify certain Insiders that they should not trade in the Company's Securities, without disclosing the reason for the restriction. Such a period is called a "**Special Blackout Period**." The existence of a Special Blackout Period should not be communicated to any other person. In addition, during a Special Blackout Period you may not tip information or advise others to trade in Company Securities, except to advise your Family Members and Controlled Entities not to trade.

6.2.3 Regardless of whether a trade would occur during the Trading Window, certain Restricted Persons designated from time to time by SEC Counsel (as notified by SEC Counsel) and all Section 16 Persons must pre-clear all proposed transactions (either private or public transactions) with SEC Counsel (or, in the case of the SEC Counsel, the General Counsel). Any pre-clearance shall be initiated by contacting SEC Counsel at least two trading days before a proposed transaction is to take place. Each pre-clearance request shall be accompanied by a certification by the individual to SEC Counsel that (i) he or she is not in possession of material, nonpublic information concerning the Company or the

Company Securities, (ii) if a Section 16 Person, he or she has not engaged in an opposite way transaction during the prior six months that could expose him or her to liability under Section 16, and (iii) if applicable, the proposed transaction has been registered or complies with an applicable exemption under the Securities Act of 1933, as amended, such as those found under Rule 144. If a transaction is approved, the transaction must be executed by the end of the fifth full trading day after the approval is obtained, but regardless may not be executed if the individual acquires material, nonpublic information concerning the Company during that time. If a transaction is not completed within the period described above, the transaction must be approved again by the SEC Counsel before it may be executed.

The above pre-clearance requirement may also be satisfied by obtaining the approval of SEC Counsel of a 10b5-1 Plan. To be eligible for approval, the 10b5-1 Plan must be adopted and approved at a time when the Trading Window is open, there is no applicable Special Blackout Period in effect, and the relevant person does not otherwise possess material, nonpublic information and conform to certain requirements as described Appendix A, "Guidelines for 10b5-1 Plans". Any Section 16 Person (and/or their Family Members and Controlled Entities) entering into a 10b5-1 Plan will be required to execute a certain certification relating to the 10b5-1 Plan, and the material terms of the 10b5-1 Plan, other than with respect to price, will be required to be disclosed in the Company's periodic report for the quarter in which the 10b5-1 Plan is adopted, amended, or terminated. Certain restrictions on overlapping and single-trade plans also apply. Once a 10b5-1 Plan has been approved, any transactions effected pursuant thereto will not be subject to the pre-clearance requirement. Changes to an approved 10b5-1 Plan, or the termination of an approved 10b5-1 Plan, are strongly discouraged and must also be approved by SEC Counsel.

6.2.4 From time to time, the Company may engage in transactions in its own securities. It is the Company's policy to comply with all applicable securities and state laws (including appropriate approvals by the Board of Directors or appropriate committee, if required) when engaging in transactions in Company Securities. It is the Company's policy to pause repurchases in its own securities on the day of a sale by a Section 16 Person. The Company will not pre-clear transactions within five trading days of an announcement regarding planned repurchase of securities.

6.2.5 For the purposes of this policy, references to "trading," "transacting" and "transactions" include, among other things:

- (a) purchases and sales of Company Securities;
- (b) sales of Company Securities obtained through the exercise of employee stock options granted by the Company, including via broker-assisted cash exercise;
- (c) making gifts of Company Securities;
- (d) using Company Securities to secure a loan which is prohibited for Section 16 Persons described below in Section 6.3.3); and
- (e) exercise of a stock option by a Section 16 Person, which shall be subject to the Trading Windows and the pre-clearance procedures described above.

6.2.6 Except as specifically noted above or below, this policy does not apply to:

(a) the vesting of restricted stock or restricted stock units, or the exercise of a tax withholding right pursuant to which a Covered Person elects to have the Company withhold shares of stock to satisfy tax withholding requirements upon the vesting of any restricted stock or stock unit (but, as noted above, the policy does apply to any market sale of restricted stock or shares acquired from the vesting of stock units or the exercise of stock options by any Covered Person);

(b) purchases of Company Securities in a 401(k) plan resulting from an employee's periodic contribution of money to the plan pursuant to their payroll deduction election (provided that the policy does apply to certain elections an employee may make under the 401(k) plan, including to increase or decrease the percentage of periodic contributions that will be allocated to the Company stock fund, an election to make an intra-plan transfer of an existing account balance into or out of the Company stock fund, an election to borrow money against the 401(k) plan account if the loan will result in a liquidation of some or all of the Company stock fund balance, and an election to pre-pay a plan loan if the pre-payment will result in allocation of loan proceeds to the Company stock fund);

(c) purchases of Company Securities in an employee stock purchase plan resulting from an employee's periodic contribution of money to the plan pursuant to the election made at the time of enrollment in the plan (or purchases of Company Securities resulting from lump sum contributions to the plan, provided that an employee elected to participate by lump sum payment at the beginning of the applicable enrollment period), including regularly scheduled contributions to a Company-sponsored plan (provided that the policy does apply to an election to participate in the plan for any enrollment period, and to sales of Company Securities purchased pursuant to the plan (including intra-plan transfers into or out of, and withdrawals from, the Celanese Common Stock account in that plan));

(d) purchases of Company Securities under dividend reinvestment plans resulting from an employee's reinvestment of dividends paid on Company Securities (provided that the policy does apply to voluntary purchases of Company Securities resulting from additional contributions the employee chooses to make to the dividend reinvestment plan, to an election to participate in the plan or increase the level of plan participation, and to the sale of any Company Securities purchased pursuant to the plan);

(e) the exercise of stock options for cash or the delivery of previously owned Company stock, or the withholding of shares of stock to satisfy tax withholding requirements on the exercise of a stock option (but, as noted above, the policy does apply to any exercise of a stock option by a Section 16 Person);

(f) transferring shares to an entity that does not involve a change in the beneficial ownership of the shares (for example, transferring shares from one brokerage account to another brokerage that you control);

(g) sales of Company Securities as a selling shareholder in a registered public offering, including a "synthetic secondary" offering, in accordance with applicable securities laws; and

- (h) any other purchase of Company Securities from the Company or sales of Company Securities to the Company.

Notwithstanding anything to the contrary contained in this policy, any restriction that would be impermissible by the Company under its 401(k) savings plan pursuant to the Employee Retirement Income Security Act of 1974 (ERISA) shall be deemed null and void.

6.3 Special and Prohibited Transactions

6.3.1 Any Section 16 Person who purchases Company Securities in the open market may not sell any Company Securities of the same class in the open market during the six months following the purchase (or vice versa).

6.3.2 Short sales of Company Securities by Section 16 Persons are prohibited by this policy.

6.3.3 Extended "good 'til cancelled" and similar orders are prohibited by this policy. Purchases of Company Securities on margin or holding Company Securities in margin accounts, and pledges of or the placing of other encumbrances on Company Securities, such as pledging Company Securities as collateral for a loan, by Section 16 Persons and certain other Insiders designated from time to time by SEC Counsel (as notified by SEC Counsel), are prohibited by this policy.

6.3.4 Hedging or monetization transactions can be accomplished through a number of possible mechanisms, including through the use of financial instruments or derivative contracts such as put options, call options, forward sale contracts, prepaid variable forward contracts, equity swaps, collars and exchange funds. Such hedging transactions may permit an Insider to continue to own Company Securities obtained through employee benefit or equity plans or otherwise, but without the full risks and rewards of ownership. When that occurs, the Covered Person may no longer have the same objectives as the Company's other shareholders. All Insiders are prohibited from engaging in any transactions, acquiring any financial instrument, or entering into any derivative contract, directly or indirectly (including, without limitation, through any designee), that hedges or offsets, or is designed to hedge or offset, any decrease in the market value of Company Securities held directly or indirectly by an Insider.

6.4 Violations

Any individual's violation of the letter or spirit of this policy may subject the individual to Company-imposed sanctions, including discharge and/or legal proceedings, whether or not the individual's failure to comply results in a violation of law.

6.5 Post-Termination Transactions

This policy continues to apply to transactions in Company Securities even after termination of service or relationship with the Company. If an Insider is in possession of material, nonpublic information when his or her service or relationship terminates, that Insider may not trade in Company Securities until that information has become public or is no longer material. The pre-clearance procedures above, however, will cease to apply to transactions in Company Securities upon the opening of the Trading Window and, if applicable, expiration of any Special Blackout Period or other Company-imposed trading restrictions applicable at the time of the termination of service or relationship.

7.0 Annual Certification

All Covered Persons will be required to certify their understanding of and intent to comply with this policy at least annually.

Appendix A

Guidelines for 10b5-1 Plans

Rule 10b5-1 under the Securities Exchange Act of 1934, as amended (the "**Exchange Act**") provides an affirmative defense from insider trading liability. In order to be eligible to rely on this defense, Insiders must enter into a 10b5-1 Plan for transactions in Company Securities that meets certain conditions specified in the Rule 10b5-1. **Capitalized terms used in these guidelines without definition have the meaning set forth in the Company's Insider Trading Policies and Procedures (the "Policy").**

These guidelines are in addition to, and not in lieu of, the requirements and conditions of Rule 10b5-1. The SEC Counsel will interpret and administer these guidelines for compliance with Rule 10b5-1, the Policy and the requirements below. No personal legal or financial advice is being provided by the legal department regarding any 10b5-1 Plan or proposed trades. Insiders remain ultimately responsible for ensuring that their 10b5-1 Plans and contemplated transactions fully comply with applicable securities laws. It is recommended that Insiders consult with their own attorneys, brokers, or other advisors about any contemplated 10b5-1 Plan. **Note that for any Section 16 Person, the Company is required to disclose the material terms of his or her 10b5-1 Plan (and may be required to disclose the material terms of 10b5-1 Plans of Family Members and Controlled Entities of such persons), other than with respect to price, in its periodic report for the quarter in which the 10b5-1 Plan is adopted or terminated or modified (as described below).**

1. **Pre-Clearance Requirement.** The 10b5-1 Plan must be reviewed and approved in advance by the SEC Counsel (or, in the case of the SEC Counsel, by the General Counsel) at least two business days prior to the entry into the plan in accordance with the procedures set forth in the Policy and these guidelines. The Company may require that Insiders use a standardized form of 10b5-1 Plan.
2. **Time of Adoption.** Subject to pre-clearance requirements described above, the 10b5-1 Plan must be adopted at a time:
 - When the Insider is not aware of any material, nonpublic information; and
 - When the Trading Window is open, to the extent the Insider is subject to the Trading Windows under the Policy, and there is no applicable Special Blackout Period in effect.
3. **Plan Instructions.** Any 10b5-1 Plan adopted by any Insider must be in writing, signed, and either:
 - specify the amount, price and date of the sales (or purchases) of Company Securities to be effected;
 - provide a formula, algorithm or computer program for determining when to sell (or purchase) the Company Securities, the quantity to sell (or purchase) and the price; or
 - delegate decision-making authority with regard to these transactions to a broker or other agent without any material, nonpublic information about the Company or the Company Securities.

For the avoidance of doubt, Insiders may not subsequently influence how, when, or whether to effect purchases or sales with respect to the securities subject to an approved and adopted 10b5-1 Plan.

4. **No Hedging.** Insiders may not have entered into or altered a corresponding or hedging transaction or position with respect to the securities subject to the 10b5-1 Plan and must agree not to enter into any such transaction while the 10b5-1 Plan is in effect.
5. **Good Faith Requirements.** Insiders must enter into the 10b5-1 Plan in good faith and not as part of a plan or scheme to evade the prohibitions of Rules 10b-5 and 10b5-1 under the Exchange Act. Insiders must act in good faith with respect to the 10b5-1 Plan for the entirety of its duration.
6. **Certifications for Section 16 Persons.** Section 16 Persons and their Family Members and Controlled Entities that enter into 10b5-1 Plans must certify that they are: (1) not aware of any

material, nonpublic information about the Company or the Company Securities; and (2) adopting the 10b5-1 Plan in good faith and not as part of a plan or scheme to evade the prohibitions of Rules 10b-5 and 10b5-1 under the Exchange Act.

7. **Cooling Off Periods.** The first trade under the 10b5-1 Plan may not occur until the expiration of a cooling-off period as follows:

- For Section 16 Persons (as well as their Family Members and Controlled Entities), the later of (1) two business days following the filing of the Company's Form 10-Q or Form 10-K for the completed fiscal quarter in which the 10b5-1 Plan was adopted and (2) 90 calendar days after adoption of the 10b5-1 Plan; *provided, however*, that the required cooling-off period shall in no event exceed 120 days.
- For other Insiders, 30 days after adoption of the 10b5-1 Plan.

8. No Overlapping 10b5-1 Plans. An Insider may not enter into overlapping 10b5-1 Plans (subject to certain exceptions). Please consult the SEC Counsel with any questions regarding overlapping 10b5-1 Plans.

9. Single Transaction Plans. An Insider may not enter into more than one 10b5-1 Plan designed to effect the open-market purchase or sale of the total amount of securities as a single transaction during any rolling 12-month period (subject to certain exceptions). A single-transaction plan is "designed to effect" the purchase or sale of securities as a single transaction when the terms of the plan would, for practical purposes, directly or indirectly require execution in a single transaction.

10. Modifications and Terminations. Modifications/amendments and terminations of an existing 10b5-1 Plan are strongly discouraged due to legal risks, and can affect the validity of trades that have taken place under the plan prior to such modification/amendment or termination. Under Rule 10b5-1 and these guidelines, any modification/amendment to the amount, price, or timing of the purchase or sale of the securities underlying the 10b5-1 Plan will be deemed to be a termination of the current 10b5-1 Plan and creation of a new 10b5-1 Plan. If an Insider is considering administrative changes to a 10b5-1 Plan, such as changing the account information, the Insider shall consult with the SEC Counsel in advance to confirm that any such change does not constitute an effective termination of the plan.

As such, the modification/amendment of an existing 10b5-1 Plan must be reviewed and approved in advance by the SEC Counsel in accordance with pre-clearance procedures set forth in the Policy and these guidelines, and will be subject to all the other requirements set forth in Sections 2 -9 of these guidelines regarding the adoption of a new 10b5-1 Plan.

The termination (other than through an amendment or modification) of an existing 10b5-1 Plan must be reviewed and approved in advance by the SEC Counsel in accordance with pre-clearance procedures set forth in the Policy and these guidelines. Except in limited circumstances, the SEC Counsel will not approve the termination of a 10b5-1 Plan unless:

- The Insider is not aware of any material, nonpublic information; and
- The Trading Window is open, to the extent the Insider is subject to the Trading Windows under the Policy, and there is no applicable Special Blackout Period in effect.

List of Subsidiaries of Celanese Corporation
(As of **December 31, 2023** **December 31, 2024**)

Name of Company	Jurisdiction
Aggregate Ownership of more than 70% (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 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
Advanced Elastomer Systems Limited	United Kingdom
CCC Environmental Management and Solutions GmbH & Co. KG	Germany
CCC Environmental Management and Solutions Verwaltungs-GmbH	Germany
CdwlMex S. de R.L. de C.V.	Mexico
CE Mexico Holdings LLC	Delaware
CE Receivables LLC	Delaware
Celanese (Bermuda) EM/AC GP Limited	Bermuda
Celanese (Bermuda) EM/AC L.P.	Bermuda
Celanese (Bermuda) Holdings 2 L.P. LP	Bermuda
Celanese (Bermuda) Holdings GP Limited	Bermuda
Celanese (Bermuda) JV Holdings II GP Limited	Bermuda
Celanese (Bermuda) JV Holdings II L.P.	Bermuda
Celanese (Bermuda) Manufacturing Holdings Limited	Bermuda
Celanese (Bermuda) Mercury GP Limited	Bermuda
Celanese (China) Holding Co., Ltd.	China
Celanese (Germany) Infraser Holding 1 GmbH	Germany
Celanese (Germany) Infraser Holding 2 GmbH	Germany
Celanese (Malta) 2 Partnership	Germany
Celanese (Malta) Acetyls Holding Limited	Germany
Celanese (Malta) Company 2 Limited	Malta
Celanese (Malta) Company Limited	Malta
Celanese (Malta) EM Holdings Limited	Malta
Celanese (Malta) EUR FinCo Limited	Malta
Celanese (Malta) Finance Holdings Limited	Malta
Celanese (Malta) Finance Holdings 2 Limited	Malta
Celanese (Malta) Holdings 3 Limited	Malta
Celanese (Malta) JPY FinCo Limited	Malta
Celanese (Malta) Partnership	Malta
Celanese (Nanjing) Business Management Co. Ltd.	China
Celanese (Nanjing) Chemical Co., Ltd.	China
Celanese (Shanghai) Chemical Trading Co., Ltd.	China
Celanese (Shanghai) Electronic Materials Co., Ltd.	China
Celanese (Shanghai) International Trading Co., Ltd.	China
Celanese (Shanghai) Polymers Co., Ltd.	China
Celanese (Shenzhen) Investment Engineered Materials Co., Ltd.	China
Celanese (Shenzhen) New Materials Co., Ltd.	China
Celanese (Shenzhen) Performance Materials Co., Ltd.	China
Celanese (Suzhou) Engineering Plastics Co., Ltd.	China

Celanese (Shenzhen) Performance Materials Investment Co., Ltd.	China
Celanese (Suzhou) Engineering Plastics Co., Ltd.	China
Celanese (Switzerland) Acetyls Holdings Sàrl	Switzerland
Celanese (Switzerland) AT Holdings Sàrl	Switzerland
Celanese (Switzerland) Holdings Sàrl	Switzerland
Celanese (Switzerland) IP Holdings 2 Sàrl	Switzerland
Celanese (Switzerland) IP Holdings Sàrl	Switzerland
Celanese (Switzerland) IPCo Sàrl	Switzerland
Celanese (Thailand) Limited	Thailand
Celanese Acetate C.V.	Netherlands
Celanese Acetate LLC	Delaware
Celanese Acetate Holdings LLC	Delaware
Celanese Acetyls IP Germany GmbH	Germany
Celanese Americas LLC	Delaware
Celanese Beteiligungs 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 China Holdings LLC	Delaware
Celanese Comercial S. de R.L. de C.V.	Mexico
Celanese Deutschland Holding GmbH	Germany
Celanese Electronic Materials Hong Kong Limited	Hong Kong
Celanese Electronic Materials Kabushiki Kaisha	Japan
Celanese Electronic Materials UK Limited	United Kingdom
Celanese Emulsions Limited	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 2 Limited	Jersey
Celanese Foreign Holdings UK 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 Germany One GmbH	Germany
Celanese Holdings Germany Two GmbH	Germany
Celanese Holdings UK 1 Limited	United Kingdom
Celanese Holdings UK 2 Limited	United Kingdom
Celanese Holdings UK 3 Limited	United Kingdom
Celanese Hong Kong Holdings 1 LLC	Delaware
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 International Corporation	Delaware
Celanese IP Germany GmbH	Germany
Celanese IP Hungary Bt.	Hungary
Celanese ISH Holdings LLC	Delaware
Celanese Japan Limited	Japan
Celanese Kabushiki Kaisha	Japan/Delaware
Celanese Korea Ltd.	Korea
Celanese Ltd.	Texas
Celanese Materials India Limited	India
Celanese Materials Korea Inc.	Korea
Celanese Materials México S. de R.L. de C.V.	Mexico
Celanese Mediterranean Holdings LLC	Delaware
Celanese Mercury Holdings Inc.	Delaware
Celanese Mercury Holdings UK Limited	United Kingdom
Celanese Mercury Property Germany GmbH	Germany
Celanese Mexico Holdings LLC	Delaware
Celanese Microcircuits Industries, Ltd.	Bermuda
Celanese Operations México S. de R.L. de C.V.	Mexico
Celanese Performance Solutions Belgium BV	Belgium
Celanese Performance Solutions Company Limited	Taiwan
Celanese Performance Solutions Germany GmbH	Germany
Celanese Performance Solutions Singapore Pte. Ltd.	Singapore
Celanese Performance Solutions Switzerland Sàrl	Switzerland
Celanese Polymer Products (Thailand) Company Limited	Thailand
Celanese Polymer Products Canada Company	Canada
Celanese Polymer Products Canada Holdings Inc.	Canada
Celanese Polymer Products Netherlands B.V.	Netherlands
Celanese Polymer Products UK Ltd.	United Kingdom
Celanese Polymer Products, LLC	Delaware
Celanese Polymers Holding, Inc.	Delaware
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 Property Holding Germany GmbH	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 UK Limited	United Kingdom
Celanese Sales U.S. Ltd.	Texas
Celanese Services Belgium BV	Belgium
Celanese Services Germany GmbH	Germany
Celanese Services Italy S.r.l.	Italy
Celanese Services Singapore Pte. Ltd.	Singapore
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 Emulsions PTE. LTD.	Singapore
Celanese Singapore PTE. LTD.	Singapore
Celanese Singapore VAM PTE. LTD.	Singapore
Celanese Singapore Emulsions PTE. LTD. Specialty Products, Inc.	Singapore Delaware
Celanese Specialty Products Austria GmbH	Austria
Celanese Switzerland AG	Switzerland
Celanese Turkey Performans Çözümleri Limited Şirketi	Turkey
Celanese Uentrop GmbH	Germany
Celanese US Holdings LLC	Delaware
Celanese US IPCo, Inc.	Delaware
Celanese Ventas Mexico S. de R.L. de C.V.	Mexico
Celanese Worldwide Holdings 2 LLC	Delaware
Celanese Worldwide Holdings 3 Corporation	Delaware
Celanese Worldwide Holdings 4 LLC	Delaware
Celanese Worldwide Holdings 5 LLC	Delaware

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
DP Polymer Products (UK) Ltd	United Kingdom
(Celanese Polymer Products UK Ltd. effective February 2024)	
DPP Polymer Products Canada Company	Canada
(Celanese Polymer Products Canada Company effective February 2024)	
DPP Polymer Products Canada Holding Inc.	Canada
(Celanese Polymer Products Canada Holdings Inc. effective February 2024)	
Du Pont Apollo (Shenzhen) Limited	China
(Celanese (Shenzhen) Engineered Materials Co., Ltd. effective February 2024)	
Du Pont China Limited	Delaware
(Celanese Mercury Holdings Inc. effective February 2024)	
Du Pont Kabushiki Kaisha	Japan/Delaware
(Celanese Kabushiki Kaisha effective February 2024)	
DuPont (Hong Kong) Electronic Materials Limited	Hong Kong
(Celanese Electronic Materials Hong Kong Limited effective February 2024)	
DuPont (Korea) Inc	Korea
(Celanese Materials Korea Inc. effective February 2024)	
DuPont (Shanghai) Electronic Materials Co., Ltd.	China
(Celanese (Shanghai) Electronic Materials Co., Ltd. effective February 2024)	
DuPont (UK) Electronic Materials Limited	United Kingdom
(Celanese Electronic Materials UK Limited effective February 2024)	
DuPont De Nemours (Nederland) B.V.	Netherlands
(Celanese Polymer Products Netherlands B.V. effective February 2024)	
DuPont Deutschland Real Estate GmbH	Germany
(Celanese Mercury Property Germany GmbH effective February 2024)	
DuPont Deutschland Real Estate Holding GmbH	Germany
(Celanese Property Holding Germany GmbH effective February 2024)	
DuPont Electronic Materials Kabushiki Kaisha	Japan
(Celanese Electronic Materials Kabushiki Kaisha effective February 2024)	
DuPont Electronics Microcircuits Industries, Ltd.	Bermuda
(Celanese Microcircuits Industries, Ltd. effective February 2024)	
DuPont Performance Solutions (Singapore) Pte. Ltd.	Singapore
(Celanese Performance Solutions Singapore Pte. Ltd. effective February 2024)	
DuPont Performance Solutions Belgium B.V.	Belgium
(Celanese Performance Solutions Belgium BV effective February 2024)	
DuPont Performance Solutions Deutschland GmbH	Germany
DuPont Performance Solutions Limited	Taiwan
(Celanese Performance Solutions Company Limited effective February 2024)	
DuPont Performance Solutions Switzerland Sàrl	Switzerland
(Celanese Performance Solutions Switzerland Sàrl effective February 2024)	
DuPont Performans Çözümleri Endüstriyel Ürünler Ticaret Limited Şirketi	Turkey
(Celanese Turkey Performans Çözümleri Limited Şirketi effective February 2024)	
DuPont Polymer Products (Thailand) Limited	Thailand
(Celanese Polymer Products (Thailand) Company Limited effective February 2024)	
DuPont Polymer Products, LLC	Delaware
(Celanese Polymer Products, LLC effective February 2024)	
DuPont Polymers, Inc.	Delaware
(Celanese Polymers Holding, Inc. effective February 2024)	
DuPont Specialty Products Austria GmbH	Austria
DuPont Trading (Shanghai) Co., Ltd.	China
(Celanese (Shanghai) Chemical Trading Co., Ltd. effective February 2024)	

DuPont Uentrop GmbH	Germany
(Celanese Uentrop GmbH effective February 2024)	
Elwood Limited	Bermuda
FKAT LLC	Delaware
Grupo Celanese, S. de R.L. de C.V.	Mexico
Holding Softer America S. de R.L. de C.V	Mexico
Infraserv Verwaltungs GmbH	Germany
KEP Americas Engineering Plastics, LLC	Delaware
Laird 2 Limited	United Kingdom
(Celanese Mercury Holdings UK Limited effective February 2024)	
Nutrinova IP Germany GmbH	Germany
Performance Solutions do Brasil Comércio de Polímeros Ltda	Brazil
Performance Solutions Holding, Inc.	Delaware
Performance Solutions Hong Kong Company Limited	Hong Kong
Performance Solutions Japan Kabushiki Kaisha	Japan
Performance Solutions Luxembourg S.à r.l.	Luxembourg
Performance Specialty Products (India) Private Limited	India
Performance Specialty Products Argentina S.A.U.	Argentina
Performance Specialty Products Sverige AB	Sweden
PM China, Inc.	Delaware
Polymer Products France SAS	France
Polymer Products Italy S.r.l.	Italy

Polymer Solutions Ibérica S.L.U.	Spain
Polymers & Resins de México S. de R.L. de C.V.	Mexico
PP EMEA Holding 1 B.V.	Netherlands
PT Celanese Indonesia Operations	Indonesia
PT Celanese Indonesia Services	Indonesia
RIOMAVA GmbH	Germany
Santoprene Production Pensacola LLC	Delaware
Servicios Corporativos Celanese S. de R.L. de C.V.	Mexico
SP Asia, LLC	Delaware
SP China, Inc.	Delaware
SP EMEA Holding 2 B.V.	Netherlands
SP India Holding 1 B.V.	Netherlands
SP International Holding 1 B.V.	Netherlands
Specialty Products Czech Republic s.r.o.	Czech Republic
Specialty Products DPP, Inc.	Delaware
(Celanese Specialty Products, Inc. effective February 2024)	
Specialty Products Hungary Kft.	Hungary
Specialty Products Poland sp. z.o.o.	Poland
T&I NL Holding B.V.	Netherlands
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
UM Umweltmanagement GmbH & Co. KG	Germany
UM Umweltmanagement Verwaltungs GMBH	Germany

Aggregate Ownership of 70% or less

Celanese Filaments-Americas, LLC ₁	Delaware
Celanese Filaments-Europe, B.V.₁	Netherlands
Celanese Xingda Filaments Company Limited₁	China
Ceramer GmbH₂	Germany
CTE Petrochemicals Co.₃	Cayman Islands
DuBay Polymer GmbH₃	Germany
DuPont Teijin Hongji Films Ningbo Co. Ltd.₄	China
Fairway Methanol LLC₃	Delaware
Fortron (Shanghai) International Trading Co. Ltd.₃	China
Fortron Industries, LLC₃	North Carolina
Fortron China Holdings LLC₃	Delaware
InfraServ GmbH & Co. Gendorf KG₅	Germany
Infraserv GmbH & Co. Höchst KG₆	Germany
InfraServ GmbH & Co. Wiesbaden KG₇	Germany
Korea Engineering Plastics Co., Ltd.₃	Korea
Kunming Cellulose Fibers Company, Limited₆	China
Mylar Hongji Films Foshan Co. Ltd.₄	China
Mylar Specialty Films China Limited₉	China
Mylar Specialty Films Incorporated₃	Delaware
Mylar Specialty Films Luxembourg S.A.₃	Luxembourg
Mylar Specialty Films Netherlands B.V.₃	Netherlands
Mylar Specialty Films UK Limited₃	United Kingdom

Celanese Xingda Filaments Company Limited ¹	China
CTE Petrochemicals Co. ²	Cayman Islands
DuBay Polymer GmbH ²	Germany
DuPont Filaments Europe, BV ¹	Netherlands
DuPont Hongji Films Foshan Co. Ltd. ³	China
DuPont Teijin Films China Ltd. ⁴	Hong Kong
(Mylar Specialty Films China Limited effective February 2024)	
DuPont Teijin Films Luxembourg S.A. ²	Luxembourg
(Mylar Specialty Films Luxembourg S.A. effective February 2024)	
DuPont Teijin Films Netherlands B.V. ²	Netherlands
DuPont Teijin Films UK Ltd. ²	United Kingdom
(Mylar Specialty Films UK Limited effective February 2024)	
DuPont Teijin Films U.S. Limited Partnerships	Delaware
(Mylar Specialty Films U.S. Limited Partnership effective February 2024)	
DuPont Teijin Hongji Films Ningbo Co. Ltd. ³	China
Fairway Methanol LLC ^{2 10}	Delaware
Fortron (Shanghai) International Trading Co. Ltd. ²	China
Fortron Industries, LLC ²	North Carolina
Fortron China Holdings LLC ²	Delaware
InfraServ GmbH & Co. Gendorf KG ⁶	Germany
Infraserv GmbH & Co. Höchst KG ⁷	Germany
InfraServ GmbH & Co. Wiesbaden KG ⁸	Germany
Korea Engineering Plastics Co., Ltd. ²	Korea
Kunming Cellulose Fibers Company, Limited ⁹	China
National Methanol Company ^{10 11}	Saudi Arabia
Nantong Cellulose Fibers Company, Limited ^{11 12}	China
Nutrinova Germany GmbH ^{9 8}	Germany
Nutrinova Holdings GmbH ^{9 8}	Germany
Nutrinova Netherlands B.V. ^{9 8}	Netherlands
Nutrinova US LLC ^{9 8}	Delaware
Teijin-DuPont Films, Incorporated ²	Delaware
(Mylar Specialty Films Incorporated effective February 2024)	
Toray Celanese Co. Ltd. ^{2 3}	Japan
Yncoris GmbH & Co. KG ^{12 13}	Germany
Zhuhai Cellulose Fibers Company, Limited ^{9 8}	China

- 1 Aggregate ownership is 70.00%
- 2 Aggregate ownership is 50.00% 40.00%
- 3 Aggregate ownership is 26.01% 50.00%
- 4 Aggregate ownership is 51.00% 26.01%
- 5 Aggregate ownership is 49.93% 29.90%
- 6 Aggregate ownership is 29.90% 31.20%
- 7 Aggregate ownership is 31.20% 7.90%
- 8 Aggregate ownership is 7.90% 30.00%
- 9 Aggregate ownership is 30.00% 51.00%
- 10 Aggregate ownership is 25.00% 49.93%
- 11 Aggregate ownership is 30.68%

25.00%

- 12 Aggregate ownership is 21.90% 30.68%
- 13 Aggregate ownership is 21.90%

Exhibit 22.1

List of Guarantor Subsidiaries

Celanese US Holdings LLC (the "Issuer"), a 100% owned subsidiary of Celanese Corporation (the "Parent"), has 3.500% Senior Notes due 2024, 5.900% Senior Notes due 2024, 1.250% Senior Notes due 2025, 6.050% Senior Notes due 2025, 1.400% Senior Notes due 2026, 4.777% Senior Notes due 2026, 2.125% Senior Notes due 2027, 6.165% Senior Notes due 2027, 0.625% Senior Notes due 2028, 6.350% 6.600% Senior Notes due 2028(a), 5.337% Senior Notes due 2029, 6.330% Senior Notes due 2029, 6.550% 6.800% Senior Notes due 2030(a), 6.379% Senior Notes due 2032 and 6.700% 6.950% Senior Notes due 2033(a) (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.

(a) Effective November 15, 2024, interest rate increased by 0.25% as a result of downgrade in credit rating.

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

We consent to the incorporation by reference in the registration statements on Form S-8 (No. (Nos. 333-122789, 333-128048, 333-158734, 333-158736, 333-180932, 333-166358, 333-193836, 333-224420, and 333-271816) and on Form S-3 (No. 333-271048) of our report dated February 23, 2024 February 21, 2025, with respect to the consolidated financial statements of Celanese Corporation and the effectiveness of internal control over financial reporting.

/s/ KPMG LLP

Dallas, Texas

February 23, 2024 21, 2025

Exhibit 31.1

CERTIFICATION
PURSUANT TO 17 CFR 240.13a-14
PROMULGATED UNDER
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, **Lori J. Ryerkerk**, **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/ **LORI J. RYERKERK** **SCOTT A. RICHARDSON**

Lori J. Ryerkerk **Scott A. Richardson**

Chair of the Board of Directors,

President, Chief Executive Officer and President Director

Date: **February 23, 2024** **February 21, 2025**

Exhibit 31.2

**CERTIFICATION
PURSUANT TO 17 CFR 240.13a-14
PROMULGATED UNDER
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Chuck B. Kyrish, 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/ CHUCK B. KYRISH

Chuck B. Kyrish
Senior Vice President and
Chief Financial Officer

Date: February 23, 2024 February 21, 2025

Exhibit 32.1

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of Celanese Corporation (the "Company") on Form 10-K for the period ending December 31, 2023 December 31, 2024 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Lori J. Ryerkerk, Chair of the Board of Directors, Scott A. Richardson, President, Chief Executive Officer and President Director 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 SCOTT A. RICHARDSON

Lori J. Ryerkerk Scott A. Richardson

Chair of the Board of Directors,

President, Chief Executive Officer and President Director

Date: February 23, 2024 February 21, 2025

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, 2023 December 31, 2024 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Chuck B. Kyrish, Senior Vice President and Chief Financial Officer of the Company, hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

1. The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ CHUCK B. KYRISH

Chuck B. Kyrish

Senior Vice President and

Chief Financial Officer

Date: February 23, 2024 February 21, 2025

Exhibit 97

**CELANESE CORPORATION
INCENTIVE-BASED COMPENSATION RECOUPMENT (CLAWBACK) POLICY
(Financial Restatements)**

I. Policy and Purpose

It is the policy of Celanese Corporation (the "Company") that, in the event the Company is required to prepare a Financial Restatement, the Company shall recover, reasonably promptly, the amount of any Incentive-Based Compensation Received by a Covered Executive during the Recovery Period and may recover (in the Committee's discretion) the amount of any Incentive-Based Compensation Received by an Other Covered Person during the Recovery Period, in each case, that exceeds the amount that otherwise would have been Received had it been determined based on the restated financial statements, without regard to the reason for such Financial Restatement, including whether or not it involved fraud or intentional misconduct.

II. Definitions

As used herein, the following terms have the following meanings:

- A. "Covered Executive" means any "officer" of the Company as defined under Rule 16a-1(f) under the Securities Exchange Act of 1934, as amended (*i.e.* officers who are or were subject to the reporting requirements of Section 16 under such Act).
- B. "Financial Reporting Measure" means (i) any measure that is determined and presented in accordance with the accounting principles used in preparing the Company's financial statements and any measure derived wholly or in part from such a measure, and (ii) any measure based in whole or in part on the Company's stock price or total shareholder return. A Financial Reporting Measure need not necessarily be presented in the Company's financial statements or included in a filing with the SEC.
- C. "Financial Restatement" means a restatement of the Company's financial statements (i) due to the Company's material non-compliance with any financial reporting requirement under the federal securities laws, including any such correction that is material to previously issued financial statements ("Big R" restatement), or (ii) to correct an error that is not material to previously-issued financial statements, but that would result in a material misstatement if the error were not corrected or left uncorrected in the current period ("little r" restatement).
- D. "Incentive-Based Compensation" means any compensation granted, earned, or vested based in whole or in part on the Company's attainment of a Financial Reporting Measure and that was Received by a person (i) on or after October 2, 2023 and after the person began service as a Covered Executive or an Other Covered Person, and (ii) who served as a Covered Executive or Other Covered Person at any time during the relevant performance period for the Incentive-Based Compensation. For the avoidance of doubt, incentive-based compensation that is granted, earned and vested based solely on continued service for a specified period of time shall not be considered "Incentive-Based Compensation."

- E. "Other Covered Persons" means any employee of the Company and its direct and direct subsidiaries, affiliated entities, successors and assigns, other than any Covered Executive, (i) who receives equity awards from the Company as a part of the employee's normal compensation plan or as a new hire; or (ii) who participates in the Company's annual incentive bonus programs (or any successor plans or programs).
- F. "Recovery Period" means the three completed fiscal years immediately preceding the earlier of (i) the date that the Company concludes, or reasonably should have concluded it is required to prepare a Financial Restatement, all as determined pursuant to Rule 10D-1 under the Securities Exchange Act of 1934, as amended (collectively, "Rule 10D-1"), or (ii) the date a court, regulator or other authorized body directs the Company to prepare a Financial Restatement, and in each case any transition period of less than nine months that is within or immediately following such three fiscal years.
- G. Incentive-Based Compensation is deemed to be "Received" in the fiscal period during which the relevant Financial Reporting Measure is attained, regardless of when the compensation is actually awarded, granted, vested, delivered, or paid.

III. Recovery

- A. *Determination of Recoupment Amount.*
- Promptly following any Financial Restatement, the Committee shall determine whether the amount of Incentive-Based Compensation Received by any Covered Executive or Other Covered Person during the applicable Recovery Period exceeds the amount that would have been Received if determined or calculated based on the Company's restated financial results. To assist in making such determination, the Committee is authorized to retain or obtain advice from accounting, financial, legal or other advisors as it may deem advisable, and to approve the fees and other retention terms of any such advisors. The Committee may consult with the full Board or other committee(s) of the Board (including the Audit Committee) as it deems appropriate regarding any Financial Restatement.
 - In the event the Committee so concludes, such excess amount of Incentive-Based Compensation Received by Covered Executives shall be subject to recoupment by the Company pursuant to this Policy and such excess amount of Incentive-Based Compensation Received by Other Covered Executives may be subject to recoupment by the Company pursuant to this Policy. For Incentive-Based

Compensation based on stock price or total shareholder return, or otherwise where the amount of erroneously awarded compensation is not subject to mathematical recalculation directly from the information in a Financial Restatement, the Committee will determine the amount based on a reasonable estimate of the effect of the Financial Restatement on the relevant stock price, total shareholder return or other measure. In all cases, the calculation of the excess amount of Incentive-Based Compensation to be recovered will be determined without regard to any taxes paid with respect to

such compensation. The Company will maintain and will provide to the New York Stock Exchange ("NYSE") documentation of all determinations and actions taken in complying with this Policy with respect to Covered Executives.

B. *Recoupment Process.* The Company may effect any recovery pursuant to this Policy by requiring payment of such amount(s) to the Company, by set-off, by reducing future compensation, by cancelling vested or unvested equity awards or by such other means or combination of means as the Committee determines to be appropriate and that are permitted by law (which means need not be the same for all Covered Executives or Other Covered Persons). The Company need not recover the excess amount of Incentive-Based Compensation if and to the extent that the Committee determines that such recovery is impracticable, subject to and in accordance with any applicable exceptions under the New York Stock Exchange listing rules, and not required under Rule 10D-1, including if the Committee determines that the direct expense paid to a third party to assist in enforcing this Policy would exceed the amount to be recovered after making a reasonable attempt to recover such amounts, or if recovery would cause an otherwise tax-qualified retirement plan, under which benefits are broadly available to similarly-situated U.S. employees of the Company and its subsidiaries, to risk losing its tax-qualified status.

C. *Implementation of Recoupment Requirements.* The Company is authorized to take appropriate steps to implement this Policy with respect to Incentive-Based Compensation arrangements. Each Covered Executive and Other Covered Persons will be required, upon the later of the effectiveness of this Policy or such person's becoming a Covered Executive, as applicable, to acknowledge and agree in writing, in a form determined by and acceptable to the Company, that such Covered Executive (i) is subject to this Policy and that the Policy will apply during and after such Covered Executive's employment with the Company or a subsidiary and (ii) will abide by this Policy's terms (including the return of any amount(s) the Company is required to recover under this Policy and Rule 10D-1), as well as any other acknowledgments required by the Company.

D. *Failure to Repay Required Amounts.* If a Covered Executive fails to repay when due, following a demand by the Company, an amount required to be recovered (as determined by the Committee pursuant to this Policy), the Company shall take all actions reasonable and appropriate to recover such amount from the applicable Covered Executive. Such Covered Executive shall, if the Company so demands, be required to reimburse the Company for any and all expenses reasonably incurred (including legal fees) in recovering such amount.

E. *Excluded Compensation.* Recoupment under this Policy is not required with respect to (i) any compensation Received by an individual prior to such individual becoming a Covered Executive or Other Covered Person and (ii) any compensation Received by an individual who was not a Covered Executive or Other Covered Person at any time during the performance period for which such compensation is received.

IV. Policy Administration and Other Matters

A. *Administering Committee.* This Policy is administered by the Compensation and Management Development Committee (the "Committee") of the Company's Board of Directors. Solely with respect to application of this Policy to Other Covered Persons, the Committee may delegate its authority to administer this Policy to any officer of the Company. In the event the Committee so delegates its authority, any references herein to the Committee shall be deemed to include such delegate. Any determinations made by the Committee or its delegate will be made in its or their sole discretion and are final, conclusive and binding on all affected individuals.

B. *Policy Interpretation and Amendments.* Except as limited by law, the Committee has full power, authority and discretion to construe, interpret and apply this Policy. This Policy is intended to comply with, and as applicable to be administered and interpreted consistently with, and subject to the exceptions set forth in, NYSE Listing Standard 303A.14 and Rule 10D-1. Any interpretations of this Policy and determinations made by the Committee will be made in its sole discretion and are final, conclusive and binding on all affected individuals. The Committee may amend this Policy from time to time in its discretion and shall amend this Policy as it deems necessary, including as and when it determines that it is legally required by any federal securities laws, SEC rule or the rules of the NYSE. The Committee may terminate this Policy at any time.

C. *Policy Scope; Not Exclusive.* Any right of recoupment or recovery pursuant to this Policy is in addition to, and not in lieu of, any other remedies or rights of recoupment that may be available to the Company pursuant to the terms of any other policy, any employment agreement or plan or award terms, and any other legal remedies available to the Company; provided that the Company shall not duplicatively recoup amounts pursuant to such other policy, terms or remedies to the extent such amounts are recovered pursuant to this Policy.

D. *No Indemnification or Reimbursement of Costs.* The Company shall not indemnify any Covered Executive or Other Covered Person against the loss of any Incentive-Based Compensation (or provide any advancement of expenses in such instance), and shall not pay for, or reimburse the cost of, third-party insurance purchased by any Covered Executives or Other Covered Persons to cover potential recoupment obligations under this Policy.

Policy Adopted On: October 19, 2023

DISCLAIMER

THE INFORMATION CONTAINED IN THE REFINITIV CORPORATE DISCLOSURES DELTA REPORT™ IS A COMPARISON OF TWO FINANCIALS PERIODIC REPORTS. THERE MAY BE MATERIAL ERRORS, OMISSIONS, OR INACCURACIES IN THE REPORT INCLUDING THE TEXT AND THE COMPARISON DATA AND TABLES. IN NO WAY DOES REFINITIV OR THE APPLICABLE COMPANY ASSUME ANY RESPONSIBILITY FOR ANY INVESTMENT OR OTHER DECISIONS MADE BASED UPON THE INFORMATION PROVIDED IN THIS REPORT. USERS ARE ADVISED TO REVIEW THE APPLICABLE COMPANY'S ACTUAL SEC FILINGS BEFORE MAKING ANY INVESTMENT OR OTHER DECISIONS.

©2025, Refinitiv. All rights reserved. Patents Pending.