



Science.
Applied to Life.™

2022 Annual Report

The background of the entire page is a long-exposure photograph of a multi-level highway interchange at night. The image is dominated by vibrant, multi-colored light trails from cars, creating a sense of motion and speed. The colors range from cool blues and purples to warm oranges and reds. The perspective is from a high angle, looking down on the complex network of roads and overpasses.

Accelerating our transformation

Dear Shareholders,

Last year marked the 120-year anniversary of 3M. Many successful companies are founded on one big idea: for us, it was the power of material science to change the world. That's our purpose as an enterprise, and it continues to drive us today.

3M stands for quality, innovation and integrity. We apply our science every day, around the world, to protect industrial workers, make roadways safer and help patients heal faster. Our science reshapes the future of manufacturing, enhances the quality of homes, and improves the performance of automobiles and electronics. It helped the world through the COVID-19 pandemic, and today enables a more sustainable future: in 2022 alone, our innovations helped customers avoid nearly 20 million metric tons of CO₂ emissions.

At the same time, we recognize our company is not reaching its full potential. We must, and will, do more to create value for our customers and shareholders. That is why we are driving operational improvements day-to-day, while accelerating 3M's transformation into a stronger, leaner, more focused company.

Accelerating 3M's Transformation

In 2022, we focused on delivering for our customers and shareholders in a challenging economic environment, and taking actions that are foundational to defining our path forward.

We addressed inflation through price actions, and proactively reduced costs and structure as demand softened throughout the year. To navigate supply chain disruptions, we did what was necessary to serve our customers, improve cycle times and manage inventory — which included moving product in different ways, opening a new distribution center in the United States, and utilizing new capabilities to better manage our flow of goods in real time. We navigated COVID-related lockdowns in China, reached agreement with the Flemish government to restart operations in Zwijndrecht, Belgium, and exited our Russian business.



Mike Roman
Chairman of the Board and Chief Executive Officer

As always, we rolled out innovations to solve customer needs across our market-leading businesses:

- In Safety and Industrial, for example, our new robotic paint repair system received prestigious industry honors.
- Our Consumer business launched Scotch™ Cushion Lock™, a sustainable alternative to plastic bubble wrap that was recognized by *Fast Company* as one of its World Changing Ideas.
- We advanced our leadership in wound care, which includes our negative pressure wound therapies becoming the first solution of its kind to surpass 2,000 peer-reviewed studies.
- And in Transportation and Electronics, we introduced new thermal barrier films to improve performance of electric car batteries — just one element of our \$500 million automotive electrification platform, which delivered 30% organic growth in 2022.

To accelerate our innovation pipeline, we invested \$3.6 billion in the combination of research and development and capital expenditures. Over the past five years, our scientists have earned an average of 3,500 patents per year.

This letter refers to non-GAAP measures such as earnings per share-diluted, adjusted for special items and net debt. Full financial data and non-GAAP reconciliations of earnings per share-diluted, adjusted for special items (refer to the Overview section) and net debt (refer to the Financial Condition and Liquidity section) are included in Item 7 of 3M's 2022 Annual Report on Form 10-K.

✓

We are accelerating our transformation into a stronger, leaner, more focused company.

Organic growth companywide was 1.2%, which included a 2.0 percentage point headwind from the decline in disposable respirator demand and our exit of Russia. We delivered earnings per share of \$10.18 — or \$10.10 on an adjusted basis — while strengthening our balance sheet and reducing total debt by \$1.4 billion. We generated \$5.6 billion in operating cash flow, enabling us to invest in our businesses, and return \$4.8 billion to shareholders through dividends and share repurchases.

Importantly, we took actions to position 3M for long-term success.

Creating Long-Term Shareholder Value through Health Care Spin

We actively managed our portfolio to unlock value for shareholders. In July we announced our plan to spin off our Health Care business, creating two well-capitalized, world-class companies with greater focus, and better positioned to drive growth and innovation. 3M will remain a global material science leader aligned to key megatrends such as electronics, safety, mobility and sustainability. The standalone Health Care business will be a leading global technology company focused on wound care, oral care, healthcare IT, and biopharma filtration.

In addition, last year we divested our Food Safety business, receiving approximately \$1 billion in consideration and reducing our outstanding share count by 16 million. We divested our floor products business in Western Europe, while acquiring the

technology assets of LeanTec, a provider of digital management solutions for the automotive aftermarket segment.

With respect to legal matters, we are focused on addressing Combat Arms and PFAS litigation by defending ourselves in court or negotiating resolutions as appropriate.

Last year, we also announced we will exit all PFAS manufacturing and work to eliminate PFAS in our products by the end of 2025. While PFAS can be safely made and used, our decision is based on careful consideration of the external landscape, including regulatory trends and changing stakeholder expectations. We have already reduced our use of PFAS through ongoing research and development, and will continue to innovate new solutions for customers.

We simplified and streamlined our supply chain organization, and advanced our digital strategies to better serve customers. This includes expanding our use of data and analytics to better serve customers and improve our operational agility.

In 2022, we continued to follow through on our sustainability goals, including our \$1 billion commitment to achieve carbon neutrality, reduce water use, improve water quality and reduce our use



of plastics. 3M is on track to meet or exceed each of those goals. We have reduced our carbon footprint by more than 35% and water usage by more than 15% since 2019. In the last two years alone, we have reduced our use of virgin fossil-based plastic by over 50 million pounds. We are ahead of schedule in installing state-of-the-art filtration technologies in factories around the world — we now have capabilities up and running at all three of our largest water-using sites in the United States, and in Zwijndrecht. Our energy management efforts were also recently recognized by the U.S. Department of Energy, which noted our “history of superior contributions to achieving sustainability goals.”

To help our people be at their best, we supported employee health, safety and well-being through new flexible work arrangements and factory investments. We are reimagining the future of work, combining the best of virtual and in-person. We have introduced new office designs that support meaningful onsite experiences, and can flex as business demands evolve. 3M’s employee resource networks are also expanding, with a 25% increase in global membership over the last few years.

We continue to advance diversity, equity and inclusion in our company and communities. We are working to double our representation of underrepresented groups within 3M, and double our spending with diverse suppliers. We are implementing multiple strategies to strengthen education, and recently partnered with the White House and other leading companies to increase STEM equity. Each of our business groups is executing initiatives — last year, for instance, we installed high-performance road materials in more than 30 school zones around the world to increase pedestrian visibility and help children get to class safely.

Our people remain committed to doing business the right way, with unwavering integrity. In 2022, 3M was recognized by Ethisphere® as one of the World’s Most Ethical Companies® for the ninth consecutive year.

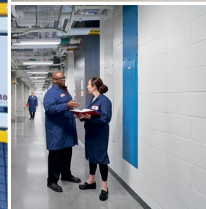
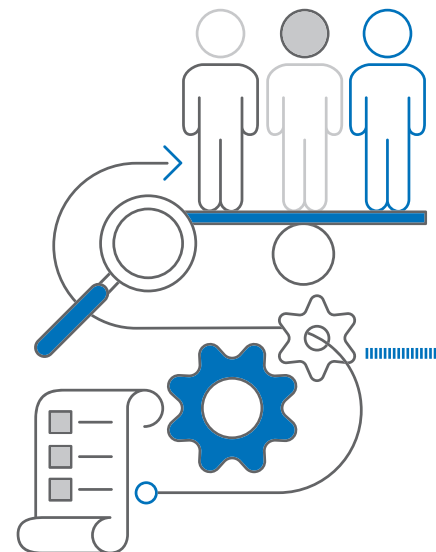


Driving Operational Performance in 2023

We expect macroeconomic challenges to persist in 2023. While we have taken actions to improve our operational performance, we are not satisfied. We are taking additional actions to reduce costs, structure and inventory, building on those actions taken in 2022. In January, we announced the reduction of approximately 2,500 global manufacturing roles to align with adjusted production volumes. As we prepare for the Health Care spin-off, we are also taking a more comprehensive look at all of our operations to drive improvement. We will take additional actions throughout 2023 to improve supply chain performance, drive simplification, and bring



Our people remain committed to doing business the right way, with unwavering integrity.



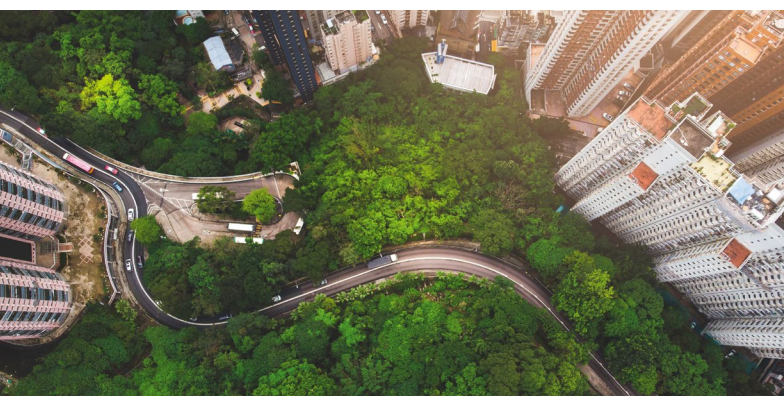
us even closer to our customers. As global supply chains continue to improve, we will also focus on reducing working capital, which is our most significant opportunity to strengthen cash flow.

3M succeeds in difficult times because we remain close to customers and continue to invest in innovation. Automotive electrification, industrial automation, biopharma processing, and home improvement are just a few examples of large, fast-growing markets where we are investing, and where 3M innovation can make a difference. Investments in growth, productivity and sustainability will remain a priority in 2023.

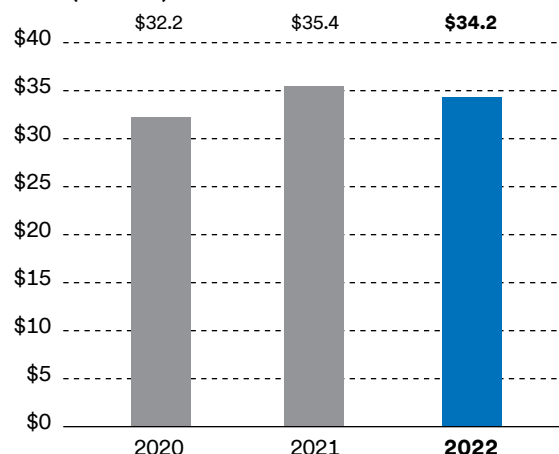
As always, underpinning all of our work will be the strengths of 3M: our people, industry-leading innovation, advanced manufacturing, global capabilities, and iconic brands. These strengths form a strong foundation, built up over 120 years. We will continue to add to that foundation and transform for the future. I am confident we will exit 2023 a stronger, leaner, and more focused 3M — better positioned to deliver value for all stakeholders who have placed their trust in us, including you, our shareholders.



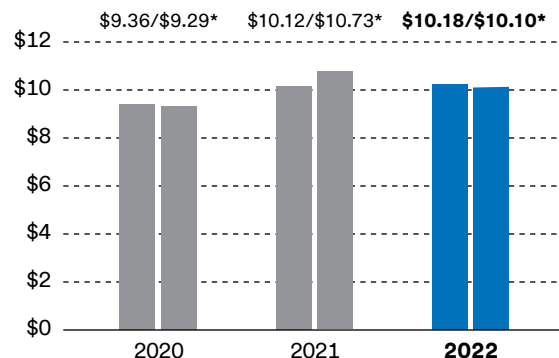
Mike Roman
Chairman of the Board and Chief Executive Officer



Sales (billions)



Earnings per share-diluted



Cash dividends paid per share



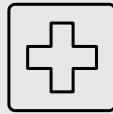



*Earnings per share-diluted, adjusted for special items (non-GAAP measures). See the Overview section of Item 7 of 3M's 2022 Annual Report on Form 10-K for further details.

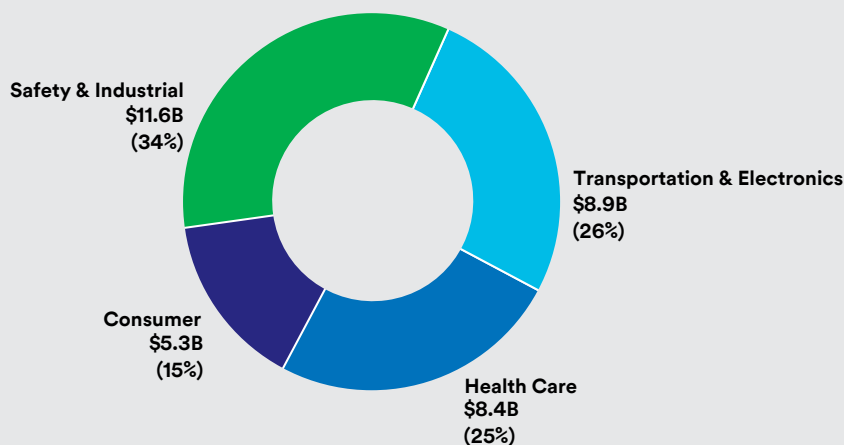
2022 financial results

GAAP earnings per share	Adjusted earnings per share*	GAAP operating income margins	Adjusted operating income margins*	Free cash flow conversion*
\$10.18	\$10.10	19.1%	20.8%	66%
+0.6% year-on-year	-5.8% year-on-year	-170 basis points year-on-year	-140 basis points year-on-year	
Net sales	Organic sales	Impact of acquisitions, net of divestitures, on worldwide sales	Impact of currency on worldwide sales	
\$34.2B	+1.2%	-0.5%	-3.9%	
-3.2% year-on-year	year-on-year	year-on-year	year-on-year	
Investment in research and development	\$1.9B	Investment in capital expenditures	\$1.7B	100% of new products in development contain a Sustainability Value Commitment

Organic sales growth business group (year-on-year)

	
Safety & Industrial	Transportation & Electronics
+1.0%	+1.2%
	
Health Care	Consumer
+3.2%	-0.9%

Total sales by business group



Dividends	\$3.4B	Share Repurchases	\$1.5B
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*2022 operating cash flow of \$5.6 billion. Full financial data and non-GAAP reconciliations of free cash flow conversion (refer to the Financial Condition and Liquidity section) and certain amounts adjusted for special items (refer to the Overview section) are included in Item 7 of 3M's 2022 Annual Report on Form 10-K.

Our businesses

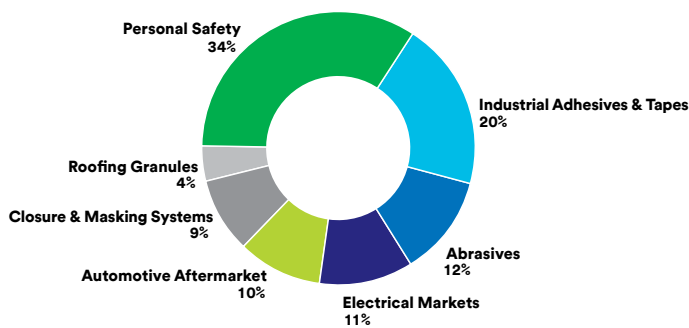
Safety & Industrial

Accelerating safety and industry performance by serving the industrial, electrical and safety markets.

2022 performance

(\$M)	2022
Sales	\$11,604
Sales growth	(3.2)%
Organic sales growth	1.0%
Operating margins	10.3%

2022 sales by business



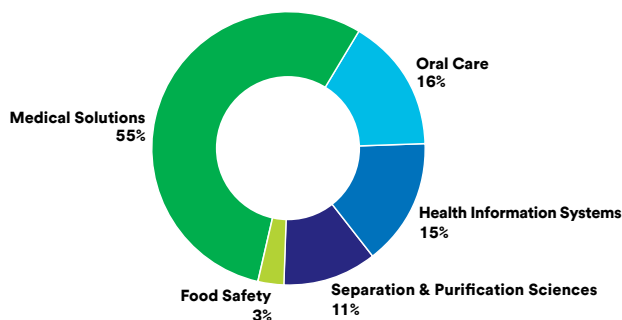
Health Care

Leveraging science and technology to improve the delivery of health care and patient outcomes.

2022 performance

(\$M)	2022
Sales	\$8,421
Sales growth	(2.0)%
Organic sales growth	3.2%
Operating margins	21.6%

2022 sales by business



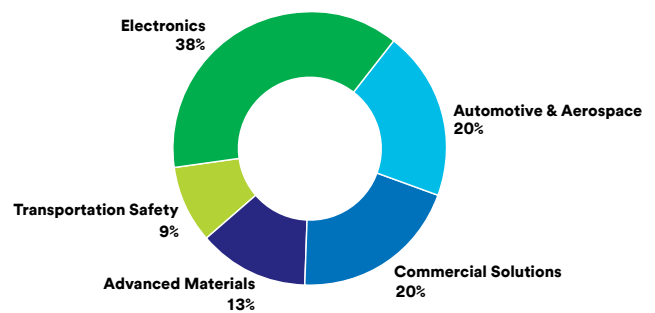
Transportation & Electronics

Moving transportation and a connected world forward by serving automotive and electronic OEM customers.

2022 performance

(\$M)	2022
Sales	\$8,902
Sales growth	(3.9)%
Organic sales growth	1.2%
Operating margins	11.4%

2022 sales by business



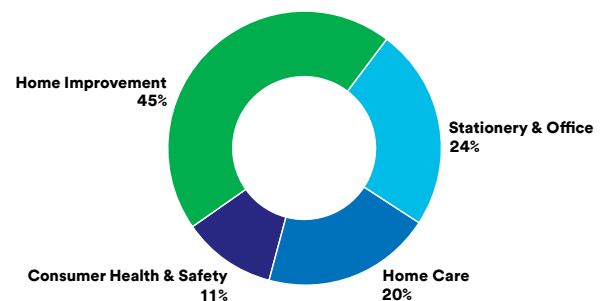
Consumer

Innovating to improve homes, work and life by serving global consumers.

2022 performance

(\$M)	2022
Sales	\$5,298
Sales growth	(3.9)%
Organic sales growth	(0.9)%
Operating margins	18.8%

2022 sales by business



Financial summary

(Dollars in millions, except per share amounts)

	2022	2021	2020
Operating Results			
Net sales	\$34,229	\$35,355	\$32,184
Operating income	6,539	7,369	7,161
Net income attributable to 3M	5,777	5,921	5,449
Per share – basic	10.21	10.23	9.43
Per share – diluted	10.18	10.12	9.36
Financial Ratios			
Percent of sales			
Cost of sales	56.2%	53.2%	51.6%
Selling, general and administrative expense, net of gain on sale of business divestitures and goodwill impairment expense	19.3	20.4	20.3
Research, development and related expenses	5.4	5.6	5.8
Operating income	19.1	20.8	22.3
Net income attributable to 3M	16.9	16.7	16.9
Additional Information			
Cash dividends paid	3,369	3,420	3,388
Purchases of treasury stock*	1,464	2,199	368
Capital returned to shareholders	4,833	5,619	3,756
Stock price at year-end	119.92	177.63	174.79
Total assets	46,455	47,072	47,344
Long-term debt (excluding current portion)	14,001	16,056	17,989
Capital expenditures	1,749	1,603	1,501
Depreciation and amortization	1,831	1,915	1,911
Research, development and related expenses	1,862	1,994	1,878
Number of employees at year-end	92,000	95,000	95,000
Average shares outstanding – basic (in millions)	566.0	579.0	577.6
Average shares outstanding – diluted (in millions)	567.6	585.3	582.2

*In addition – reduced outstanding shares by 16 million via exchange offer related to Food Safety divestiture in 2022.

**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, 2022**

or

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from _____ to _____

Commission file number 1-3285

3M COMPANY

State of Incorporation: **Delaware**

I.R.S. Employer Identification No. **41-0417775**

Principal executive offices: **3M Center, St. Paul, Minnesota 55144**

Telephone number: **(651) 733-1110**

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 \$.01 Per Share	MMM	New York Stock Exchange
	MMM	Chicago Stock Exchange, Inc.
0.950% Notes due 2023	MMM23	New York Stock Exchange
1.500% Notes due 2026	MMM26	New York Stock Exchange
1.750% Notes due 2030	MMM30	New York Stock Exchange
1.500% Notes due 2031	MMM31	New York Stock Exchange

Note: The common stock of the registrant is also traded on the SIX Swiss 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. Yes No

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 voting stock held by nonaffiliates of the registrant, computed by reference to the closing price and shares outstanding, was approximately \$63.3 billion as of January 31, 2023 (approximately \$73.7 billion as of June 30, 2022, the last business day of the registrant's most recently completed second quarter).

Shares of common stock outstanding at January 31, 2023: 550.5 million

DOCUMENTS INCORPORATED BY REFERENCE

Parts of the Company's definitive proxy statement (to be filed pursuant to Regulation 14A within 120 days after Registrant's fiscal year-end of December 31, 2022) for its annual meeting to be held on May 9, 2023, are incorporated by reference in this Form 10-K in response to Part III, Items 10, 11, 12, 13 and 14.

3M COMPANY
FORM 10-K
For the Year Ended December 31, 2022

Pursuant to Part IV, Item 16, a summary of Form 10-K content follows, including hyperlinked cross-references (in the EDGAR filing). This allows users to easily locate the corresponding items in Form 10-K, where the disclosure is fully presented. The summary does not include certain Part III information that will be incorporated by reference from the proxy statement, which will be filed after this Form 10-K filing.

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3M COMPANY
ANNUAL REPORT ON FORM 10-K
For the Year Ended December 31, 2022
PART I

Item 1. Business.

3M Company was incorporated in 1929 under the laws of the State of Delaware to continue operations begun in 1902. The Company's ticker symbol is MMM. As used herein, the term "3M" or "Company" includes 3M Company and its subsidiaries unless the context indicates otherwise. In this document, for any references to Note 1 through Note 19, refer to the Notes to Consolidated Financial Statements in Item 8.

Available Information

The Securities and Exchange Commission (SEC) maintains a website that contains reports, proxy and information statements, and other information regarding issuers, including the Company, that file electronically with the SEC. The public can obtain any documents that the Company files with the SEC at <http://www.sec.gov>. The Company files annual reports, quarterly reports, proxy statements and other documents with the SEC under the Securities Exchange Act of 1934 (Exchange Act).

3M also makes available free of charge through its website (<http://investors.3M.com>) the Company's Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and, if applicable, amendments to those reports filed or furnished pursuant to the Exchange Act as soon as reasonably practicable after the Company electronically files such material with, or furnishes it to, the SEC.

General

3M is a diversified technology company with a global presence in the following businesses: Safety and Industrial; Transportation and Electronics; Health Care; and Consumer. 3M is among the leading manufacturers of products for many of the markets it serves. Most 3M products involve expertise in product development, manufacturing and marketing, and are subject to competition from products manufactured and sold by other technologically oriented companies.

Business Segments

3M manages its operations in four business segments. The reportable segments are Safety and Industrial, Transportation and Electronics, Health Care, and Consumer. 3M's four business segments bring together common or related 3M technologies, enhancing the development of innovative products and services and providing for efficient sharing of business resources. In July 2022, 3M announced its intention to spin off the Health Care business as a separate public company (see Note 3 for additional information). Refer to segment descriptions summarized below (Financial information and other disclosures relating to 3M's business segments and operations in major geographic areas are provided in the Notes to Consolidated Financial Statements):

Business Segment	Safety and Industrial	Transportation and Electronics	Health Care	Consumer
Underlying divisions/businesses <i>Refer to Note 2 for disaggregated revenue information</i>	<ul style="list-style-type: none"> • Abrasives • Automotive aftermarket • Closure and masking systems • Electrical markets • Industrial adhesives and tapes • Personal safety • Roofing granules 	<ul style="list-style-type: none"> • Advanced materials • Automotive and aerospace • Commercial solutions • Display materials and systems • Electronics materials solutions • Transportation safety 	<ul style="list-style-type: none"> • Health information systems • Medical solutions • Oral care • Separation and purification sciences • Food safety (divested in 2022) 	<ul style="list-style-type: none"> • Consumer health and safety • Home care • Home improvement • Stationery and office
Representative revenue-generating activities, products or services	<ul style="list-style-type: none"> • Industrial abrasives and finishing for metalworking applications • Autobody repair solutions • Closure systems for personal hygiene products, masking, and packaging materials • Electrical products and materials for construction and maintenance, power distribution and electrical original equipment manufacturers (OEMs) • Structural adhesives and tapes • Respiratory, hearing, eye and fall protection solutions • Natural and color-coated mineral granules for shingles 	<ul style="list-style-type: none"> • Advanced ceramic solutions • Attachment tapes, films, sound and temperature management for transportation vehicles • Premium large format graphic films for advertising and fleet signage • Light management films and electronics assembly solutions • Packaging and interconnection solutions • Reflective signage for highway, and vehicle safety 	<ul style="list-style-type: none"> • Health care procedure coding and reimbursement software • Skin, wound care, and infection prevention products and solutions • Dentistry and orthodontia solutions • Filtration and purification systems 	<ul style="list-style-type: none"> • Consumer bandages, braces, supports and consumer respirators • Cleaning products for the home • Retail abrasives, paint accessories, car care DIY products, picture hanging and consumer air quality solutions • Stationery products <p>Some seasonality impacts this business segment related to back-to-school, generally in the third quarter of each year</p>
Example brands/offerings	<ul style="list-style-type: none"> • 3M™ Cubitron™ II abrasives • Scotch-Brite™ Abrasives • Scotch & Temflex Vinyl Tapes, Scotchkote Coatings, Dynatel locators, Scotchcast resins • Collision repair and paint spray products • Reclosable fasteners; tapes and label materials for durable goods • Electrical infrastructure products; medium voltage cable accessories and insulation tapes • 3M™ VHB™ Bonding tapes; Scotch® masking, packaging and filament tapes • Disposable respirators and fall protection products • Scotchgard™ Protector for shingles 	<ul style="list-style-type: none"> • 3M™ Nextel™ Ceramic fibers and textiles • Thinsulate™ Acoustic Insulation products and automotive components • 3M™ Novec™ Engineered Fluids • 3M™ Scotchlite™ graphic films, 3M™ Scotchcal™ and 3M™ Controltac™ Commercial graphics • Electronic display enhancement films and optically clear adhesives • Electronic interconnect products • 3M™ Diamond Grade™ DG3 reflective sheeting for transportation safety 	<ul style="list-style-type: none"> • 3M™ 360 Encompass™ medical coding systems • 3M™ Tegaderm™ wound dressings, V.A.C.® Therapy Systems and disposable respirators in the health care channel • 3M™ Filtek™ and 3M™ RelyX™ dental filing materials and cements; 3M™ Clarity™ aligners • Biopharma and other filtration systems, bags, capsules and components 	<ul style="list-style-type: none"> • ACET™, FUTURO™ and Nexcare™ personal health care products • Scotch-Brite™ cleaning supplies, sponges, brushes, and scouring pads; Scotchgard™ products • Scotch® tapes and other products, Filtrete™ filters and Command™ adhesive products • Post-it® products
Representative market trends or opportunities	<ul style="list-style-type: none"> • Personal safety • Connected bodyshop • Grid modernization • Robotics and automation 	<ul style="list-style-type: none"> • Automotive/mobility • Electronic materials • Semiconductor • Graphic and architectural films 	<ul style="list-style-type: none"> • Wound care • Healthcare IT • Biopharma filtration 	<ul style="list-style-type: none"> • Home improvement • Consumer safety & well-being • Package protection & shipping • Appearance auto care

Distribution

3M products are sold through numerous distribution channels, including directly to users and through numerous e-commerce and traditional wholesalers, retailers, jobbers, distributors and dealers in a wide variety of trades in many countries around the world. Management believes the confidence of wholesalers, retailers, jobbers, distributors and dealers in 3M and its products — a confidence developed through long association with skilled marketing and sales representatives — has contributed significantly to 3M’s position in the marketplace and to its growth.

Resources

Human Capital

On December 31, 2022, the Company employed approximately 92,000 people (full-time equivalents), with approximately 37,000 employed in the United States and 55,000 employed internationally. The ability to recruit, retain, develop, protect, and fairly compensate its global workforce are enablers of 3M's success. This includes four general categories of focus: Health and Safety; Development; Diversity, Equity and Inclusion; and Compensation and Benefits.

Health and Safety

3M is committed to the safety, health, and well-being of its employees. The Company continuously evaluates opportunities to raise safety and health standards, visiting sites to identify and manage environmental health and safety risks; evaluating compliance with regulatory requirements and 3M policy; and maintaining a global security operation for the protection of facilities and people on 3M sites. 3M also promotes a culture of health and well-being through disease prevention programs, on-site clinical services, employee assistance programs, and comprehensive health care benefits.

Development

Developing employees contributes to growing 3M's business. 3M maintains talent and succession planning processes, including regular review by the Company's chief executive officer (CEO) and reporting up through the Board of Directors. The Company has a suite of high-potential leadership development programs which brings a consistent approach to leadership development. 3M also has development programs for managers and supervisors and provides learning opportunities for all employees, in addition to regular coaching and support from their supervisor. With the Company's global online employee learning platform, employees are able to access unique, just-in-time development resources in over 15 languages to support their career aspirations and advance their skills.

Diversity, Equity and Inclusion

A diverse, global workforce and inclusive culture that provides fair and equitable opportunities helps 3M remain competitive, advance its innovation culture, and serve customers. 3M focuses on attracting and advancing top talent and has publicly committed to advance global diversity in management across all dimensions, with additional specific goals to continue advancing pay equity and to increase the Company's diversity with underrepresented groups. 3M supports these values with an internal CEO Inclusion Council, a forum led by senior management to advance diversity, equity, and inclusion initiatives. The Company also plans to invest \$50 million over 2020 to 2025 to address racial opportunity gaps through workforce development initiatives in the communities in which its employees live and 3M business operates.

Compensation and Benefits

3M has a trust-based approach to work that empowers employees to work where and when they can best achieve their goals, which supports attraction and retention of talent around the globe. In addition to a professional and flexible work environment that promotes innovation, well-being, and rewards performance, 3M's total compensation for employees includes a variety of components that support sustainable employment and the ability to build a strong financial future, including competitive market-based pay and comprehensive benefits. In addition to earning a base salary, eligible employees are compensated for their contributions to the Company's goals with both short-term cash incentives and long-term equity-based incentives. Through its global pay philosophy, principles and consistent implementation, 3M is committed to providing fair and equitable pay for employees. Eligible full-time employees in the United States also have access to medical, dental, and vision plans; savings and retirement plans; a 3M employee stock purchase plan; and other resources. Some of these benefits can also be available to regular part-time employees who work at least 20 hours a week. Programs and benefits differ internationally for a variety of reasons, such as local legal requirements, market practices, and negotiations with works councils, trade unions, and other employee representative bodies.

Raw Materials

In 2022, many geopolitical, logistics, and disruptive events caused imbalance in the global supply chain, similar to the past few years. The Company experienced raw material price inflation and constrained supply throughout the global marketplace and continued to deploy productivity projects to minimize the impact. To help manage disruption in its manufacturing operations, 3M deployed careful management of existing raw material inventories, strategic relationships with key suppliers, and qualification of additional supply sources. 3M manages spend category price risks through negotiated supply contracts and price protection agreements. In addition, 3M evaluates suppliers' conformance with environmental and social compliance requirements. Overall, on a consolidated basis, 3M experienced net raw material price inflation in 2022.

Patents, Trademarks and Licenses

The Company's products are sold around the world under various trademarks. The Company also owns, or holds licenses to use, numerous U.S. and foreign patents. The Company's research and development activities generate a steady stream of inventions that are covered by new patents or trade secrets. Patents applicable to specific products extend for varying periods according to the date of patent application filing or patent grant and the legal term of patents in the various countries where patent protection is obtained. The actual protection afforded by a patent, which can vary from country to country, depends upon the type of patent, the scope of its coverage and the availability of legal remedies in the country.

The Company believes that its trademarks, patents, and trade secrets provide an important competitive advantage in many of its businesses. In general, no single patent or group of related patents is in itself essential to the Company as a whole or to any of the Company's business segments.

Government Regulation and Environmental Law Compliance

The Company's business operations are subject to various governmental regulations in the U.S. and internationally, including, among others, those related to product liability; antitrust; intellectual property; environmental, health, and safety; tax; the U.S. Foreign Corrupt Practices Act and other anti-bribery laws, international import and export requirements and trade sanctions compliance; regulations of the U.S. Food and Drug Administration (FDA) and similar foreign agencies, U.S. federal healthcare program-related laws and regulations, such as the False Claims Act, anti-kickback laws and the Sunshine Act.

3M's manufacturing operations are affected by national, state and local environmental laws and regulations around the world. The Company places consistent emphasis on environmental responsibility. 3M has made, and plans to continue making, necessary expenditures for compliance with applicable laws and regulations. 3M is also involved in remediation actions relating to environmental matters from past operations at certain sites (refer to "Environmental Matters and Litigation" in Note 16, Commitments and Contingencies).

Environmental expenditures relating to existing conditions caused by past operations that do not contribute to current or future revenues are expensed. Reserves for liabilities for anticipated remediation costs are recorded on an undiscounted basis when they are probable and reasonably estimable, generally no later than the completion of feasibility studies, the Company's commitment to a plan of action, or approval by regulatory agencies. Environmental expenditures for capital projects that contribute to current or future operations generally are capitalized and depreciated over their estimated useful lives.

In 2022, 3M expended approximately \$317 million on capital projects for environmental purposes as defined below. Capital projects for environmental purposes include waste reduction and pollution control programs such as, water usage reduction and water quality improvement equipment, scrubbers, containment structures, solvent recovery units and thermal oxidizers. Capital expenditures for similar projects are presently expected to approach approximately \$646 million for 2023 and 2024 in aggregate.

Although an estimate of certain nearer-term capital expenditures is provided above, 3M cannot predict with certainty whether future costs of compliance with government regulations (including environmental regulations) will have a material effect on its capital expenditures, earnings or competitive position.

Information about our Executive Officers

Following is a list of the executive officers of 3M, and their age, present position, the year elected to their present position and other positions they have held during the past five years. No family relationships exist among any of the executive officers named, nor is there any undisclosed arrangement or understanding pursuant to which any person was selected as an officer. This information is presented in the table below as of the date of the 10-K filing (February 8, 2023).

Name	Age	Present Position	Year Elected to Present Position	Other Positions Held during 2018 - 2022
Michael F. Roman	63	Chairman of the Board and Chief Executive Officer	2019	Chief Executive Officer, 2018-2019 Chief Operating Officer and Executive Vice President, 2017-2018 Executive Vice President, Industrial Business Group, 2014-2017
John P. Banovetz	55	Executive Vice President, Chief Technology Officer and Environmental Responsibility	2021	Senior Vice President, Chief Technology Officer and Environmental Responsibility, 2021 Senior Vice President, Innovation and Stewardship and Chief Technology Officer, 2020 Senior Vice President of Research and Development and Chief Technology Officer, 2017-2019
Karina Chavez	49	Senior Vice President and Chief Strategy Officer	2021	Senior Vice President, Customer Operations, 2020-2021 Global Business Director, Home Improvement Business, 2017-2020
Zoe Dickson	49	Executive Vice President and Chief Human Resources Officer	2021	Senior Vice President, Talent, Learning and Insights, 2021 Vice President, Organization Effectiveness and Talent, Human Resources, 2020-2021 Vice President, Organization Effectiveness, Human Resources 2019-2020 Vice President, Global Human Resources Business Operations, Human Resources 2018-2019 HR Director, Consumer Business Group 2016-2018
Peter D. Gibbons	61	Group President, Enterprise Operations	2021	Chief Executive Officer, Tirehub, 2018-2021 Executive Vice President, Global Development and Product Supply & CSCO, Mattel, Inc, 2013-2018
Eric D. Hammes	48	Executive Vice President, Chief Country Governance and Services Officer	2021	Senior Vice President, Manufacturing & Supply Chain, 2019-2021 Senior Vice President, Business Transformation & Information Technology, 2017-2019 Vice President, Corporate Controller and Chief Accounting Officer, 2014-2017
Ashish K. Khandpur	55	Group President, Transportation & Electronics	2021	Executive Vice President, Transportation & Electronic Business Group, 2019-2021 Executive Vice President, Electronics & Energy Business Group, 2017-2019 Senior Vice President, Research and Development, and Chief Technology Officer, 2014-2017
Jeffrey R. Lavers	59	Group President, Consumer Business Group and Interim Group President, Health Care Business Group	2022	Executive Vice President, Consumer Business Group, 2020-2021 Vice President and General Manager, Automotive and Aerospace Solutions Division, 2019-2020 Vice President and General Manager, Construction and Home Improvement Division, 2015-2019
Mark Murphy	54	Executive Vice President, Chief Information and Digital Officer	2021	Chief Information Officer, Abbott Laboratories, 2020-2021 Global Chief Information Officer and Vice President, BTS, Abbott Laboratories, 2018-2020 Medical Devices Chief Information Officer and Divisional VP, Abbott Laboratories, 2017-2018
Monish Patolawala	53	Executive Vice President, Chief Financial and Transformation Officer	2021	Senior Vice President and Chief Financial Officer 2020-2021 Chief Financial Officer, Health Care and Vice President, Operational Transformation, General Electric, 2019-2020 Chief Financial Officer, Health Care, General Electric, 2015-2019
Kevin H. Rhodes	60	Executive Vice President, Chief Legal Affairs Officer	2022	Senior Vice President and Deputy General Counsel, 2021 Vice President and Deputy General Counsel, 2019-2021 President and Chief Intellectual Property Counsel, Office of Intellectual Property Counsel and 3M Innovative Properties 2008-2019
Michael G. Vale	56	Group President, Safety & Industrial Business Group	2021	Executive Vice President, Safety & Industrial Business Group, 2019-2021 Executive Vice President, Health Care Business Group, 2016-2019

Cautionary Note Concerning Factors That May Affect Future Results

This Annual Report on Form 10-K, including “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in Part II, Item 7, contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. The Company may also make forward-looking statements in other reports filed with the Securities and Exchange Commission, in materials delivered to shareholders and in press releases. In addition, the Company’s representatives may from time to time make oral forward-looking statements.

Forward-looking statements relate to future events and typically address the Company’s expected future business and financial performance. Words such as “plan,” “expect,” “aim,” “believe,” “project,” “target,” “anticipate,” “intend,” “estimate,” “will,” “should,” “could,” “forecast” and other words and terms of similar meaning, typically identify such forward-looking statements. In particular, these include, among others, statements relating to:

- worldwide economic, political, regulatory, international trade, geopolitical, capital markets and other external conditions, such as interest rates, monetary policy, financial conditions of our suppliers and customers, trade restrictions such as tariffs and retaliatory counter measures, inflation, recession, military conflicts, and natural and other disasters or climate change affecting the operations of the Company or our suppliers and customers,
- risks related to unexpected events such as the public health crises associated with the coronavirus (COVID-19) global pandemic,
- liabilities and the outcome of contingencies related to certain fluorochemicals known as "PFAS," as well as matters related to the Company's plans to discontinue the use of PFAS,
- the Company’s strategy for growth, future revenues, earnings, cash flow, uses of cash and other measures of financial performance, and market position,
- competitive conditions and customer preferences,
- foreign currency exchange rates and fluctuations in those rates,
- new business opportunities, product and service development, and future performance or results of current or anticipated products and services,
- fluctuations in the costs and availability of purchased components, compounds, raw materials and energy,
- information technology systems including implementation of an enterprise resource planning (ERP) system,
- security breaches and other disruptions to information technology infrastructure,
- the scope, nature or impact of acquisition, strategic alliance and divestiture activities,
- operational execution, including inability to generate productivity improvements as estimated,
- future levels of indebtedness, common stock repurchases and capital spending,
- future access to credit markets and the cost of credit,
- pension and postretirement obligation assumptions and future contributions,
- asset impairments,
- tax liabilities and effects of changes in tax rates, laws or regulations,
- the proposed spin-off of the Company's Health Care business to establish two separate public companies,
- the voluntary chapter 11 proceedings initiated by the Company's Aearo Entities, and
- laws and regulations, as well as legal compliance risks (including third-party risks), and legal and regulatory proceedings related to the same, including with regards to environmental matters and product liability, in the United States and other countries in which we operate.

The Company assumes no obligation to update or revise any forward-looking statements.

Forward-looking statements are based on certain assumptions and expectations of future events and trends that are subject to risks and uncertainties. Actual future results and trends may differ materially from historical results or those reflected in any such forward-looking statements depending on a variety of factors. Important information as to these factors can be found in this document, including, among others, “Management’s Discussion and Analysis of Financial Condition and Results of Operations” under the headings of “Overview,” “Financial Condition and Liquidity” and annually in “Critical Accounting Estimates.” Discussion of these factors is incorporated by reference from Part I, Item 1A, “Risk Factors,” of this document, and should be considered an integral part of Part II, Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations.” For additional information concerning factors that may cause actual results to vary materially from those stated in the forward-looking statements, see our reports on Form 10-K, 10-Q and 8-K filed with the SEC from time to time.

Item 1A. Risk Factors.

Provided below is a cautionary discussion of what we believe to be the most important risk factors applicable to the Company. Discussion of these factors is incorporated by reference into and considered an integral part of Part II, Item 7, "Management's Discussion and Analysis of Financial Conditions and Results of Operations."

Risks Related to the Global Economy and Public Health Crises

** The Company's results are impacted by the effects of, and changes in, worldwide economic, political, regulatory, international trade, geopolitical, and other external conditions.*

The Company operates in more than 70 countries and derives approximately 60 percent of its revenues from outside the United States, and, accordingly, the Company's operations and the execution of its business strategies and plans are subject to global competition and economic and geopolitical risks that are beyond its control, such as, among other things, disruptions in financial markets, economic downturns, military conflicts, public health emergencies such as COVID-19, political changes and trends such as protectionism, economic nationalism resulting in government actions impacting international trade agreements or imposing trade restrictions such as tariffs and retaliatory counter measures, and government deficit reduction and other austerity measures in locations or industries in which the Company operates. Further escalation of specific trade tensions, including those between the U.S. and China, or more broadly in global trade conflict, could adversely impact the Company's business and operations around the world. The Company's business is also impacted by social, political, and labor conditions in locations in which the Company or its suppliers or customers operate; adverse changes in the availability and cost of capital; monetary policy; interest rates; inflation; recession; commodity prices; currency volatility or exchange control; ability to expatriate earnings; and other laws and regulations in the jurisdictions in which the Company or its suppliers or customers operate. For example, changes in local economic condition or outlooks, such as lower economic growth rates in China, Europe, or other key markets, impact the demand or profitability of the Company's products.

The global economy has been impacted by the military conflict between Russia and Ukraine. The U.S. and other governments have imposed export controls on certain products and financial and economic sanctions on certain industry sectors and parties in Russia. 3M suspended operations of its subsidiaries in Russia in March 2022 and, in September 2022, committed to a plan to exit the related net assets through an intended sale of the subsidiaries. 3M also has other operations that source certain raw materials from suppliers in Russia and has experienced related supply disruption due to the conflict. These geopolitical tensions could result in, among other things, cyberattacks, further supply chain disruptions impacting downstream customers, higher energy costs, lower consumer demand, and changes to foreign exchange rates and financial markets, any of which may adversely affect the Company's business and supply chain.

Climate change, as well as related environmental and social regulations, may negatively impact the Company or its customers and suppliers, in terms of availability and cost of natural resources, sources and supply of energy, product demand and manufacturing, and the health and well-being of individuals and communities in which we or our suppliers or customers operate.

** Unexpected events, such as those related to the coronavirus (COVID-19) public health crisis, may increase the Company's cost of doing business and disrupt the Company's operations.*

3M, as a global company, is impacted by unexpected events, including war, acts of terrorism, public health crises (such as the COVID-19 pandemic), civil unrest, natural disasters, and severe weather in the locations in which the Company or its suppliers or customers operate, and these events have adversely affected, and could in the future adversely affect, the Company's operations and financial performance. For example, the global pandemic associated with COVID-19, including related evolving governmental responses to the pandemic, has significantly increased economic and demand uncertainty, and has impacted and will continue to impact 3M's operations, including its supply chain and its manufacturing and distribution capabilities. Although COVID-19 increased demand for certain 3M products, it also resulted in decreased demand from certain end markets, made it more difficult for 3M to serve customers, and resulted in conditions that had the potential to damage 3M's reputation, including third-party price gouging, counterfeiting, and other illegal or fraudulent activities involving 3M's products. Furthermore, COVID-19 has impacted and may further impact the broader economies of affected countries, including negatively impacting economic growth, the proper functioning of financial and capital markets, foreign currency exchange rates, and interest rates. As the pandemic evolves, demand for personal protection products such as disposable respirators has experienced a decline from prior levels. 3M is not able to predict the impact of unexpected events, such as the COVID-19 pandemic, and unexpected events may have a material adverse effect on 3M's consolidated results of operations or financial condition.

** Foreign currency exchange rates and fluctuations in those rates may affect the Company's ability to realize projected growth rates in its sales and earnings.*

Because the Company's financial statements are denominated in U.S. dollars and approximately 60 percent of the Company's revenues are derived from outside the United States, the Company's results of operations and its ability to realize projected growth rates in sales and earnings could be adversely affected if the U.S. dollar strengthens significantly against foreign currencies. For a discussion of the impact of foreign currency exchange rates on the Company, see Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations."

Risks Related to Legal and Regulatory Proceedings

** The Company faces liabilities related to certain fluorochemicals, which could adversely impact our results.*

As previously reported, governments in the United States and internationally have increasingly been regulating a broad group of perfluoroalkyl and polyfluoroalkyl substances produced by the Company, collectively known as "PFAS." 3M has noticed several global regulatory trends related to PFAS, including declining emission standards and limits set as to the presence of certain compounds in various media, and the inclusion of a broadening group of PFAS. Developments in these and other global regulatory trends may require additional actions by 3M, including investigation, remediation, and compliance, or may result in additional litigation and enforcement action costs.

The Company has been voluntarily cooperating with various local, state, federal (primarily the U.S. Environmental Protection Agency (EPA)), and international agencies in their review of the environmental and health effects of certain PFAS produced by the Company.

The PFAS group contains several categories and classes of durable chemicals and materials with properties that include oil, water, temperature, chemical, and fire resistance, as well as electrical insulating properties. The strength of the carbon-fluorine bond also means that these compounds do not easily degrade. These characteristics have made PFAS substances critical to the manufacture of electronic devices such as cell phones, tablets, and semi-conductors. They are also used to help prevent contamination of medical products like surgical gowns and drapes. Commercial aircraft and low-emissions vehicles also rely on PFAS technology. PFAS compounds are manufactured by various companies, including 3M, and are used in everyday products, including some manufactured by 3M. As science and technology evolve and advance, and in response to evolving knowledge and the understanding that certain PFAS compounds had the potential to build up over time, 3M announced in 2000 that we would voluntarily phase out production of two PFAS substances, perfluorooctanoate (PFOA) and perfluorooctane sulfonate (PFOS) globally as a precautionary measure. We phased out of materials used to produce certain repellants and surfactant products, with most of these activities in the U.S. completed by the end of 2002. Phased out products included Aqueous Film Forming Foam (AFFF) and certain coatings for food packaging, for example. The Company continues to review, control, or eliminate the presence of certain PFAS in purchased materials, as intended substances in products, or as byproducts of some of 3M's current manufacturing processes, products, and waste streams.

3M announced in December 2022 it will take two actions: exiting all PFAS manufacturing by the end of 2025; and working to discontinue the use of PFAS across its product portfolio by the end of 2025. 3M's decision is based on careful consideration and a thorough evaluation of the evolving external landscape, including multiple factors such as accelerating regulatory trends focused on reducing or eliminating the presence of PFAS in the environment and changing stakeholder expectations. The Company recognized a \$0.8 billion pre-tax charge in the fourth quarter of 2022 associated with this announcement related to asset impairments, and will incur additional expenses in connection with its exit activities. In addition, these two announced actions (the "exit") involve risks, including the actual timing, costs, and financial impact of such exit; the Company's ability to complete such exit, on the anticipated timing or at all; potential governmental or regulatory actions relating to PFAS manufacturing and production, or the Company's exit plans; the Company's ability to identify and manufacture acceptable substitutes for the discontinued products, and the possibility that such substitutes will not achieve the anticipated or desired commercial or operational results; potential litigation relating to the Company's exit plans; and the possibility that the planned exit will involve greater costs than anticipated, or otherwise have negative impacts on the Company's relationships with its customers and other counterparties.

3M currently is defending lawsuits concerning various PFAS-related products and chemistries, and is subject to unasserted and asserted claims and governmental regulatory proceedings and inquiries related to the production and use of PFAS in a variety of jurisdictions, as discussed in Note 16, "Commitments and Contingencies," within the Notes to Consolidated Financial Statements. 3M has seen increased public and private lawsuits being filed on behalf of states, counties, cities, and utilities alleging, among other things, harm to the general public and damages to natural resources, some of which are pending in the Aqueous Film Forming Foam (AFFF) multi-district litigation and some of which are pending in other jurisdictions. Various factors or developments in these and other disclosed actions could result in future charges that could have a material adverse effect on 3M. For example, we recorded a pre-tax charge of \$897 million, inclusive of legal fees and other related obligations, in the first quarter of 2018 with respect to the settlement of a matter brought by the State of Minnesota involving the presence of PFAS in the groundwater, surface water, fish or other aquatic life, and sediments in the state. Governmental inquiries, lawsuits, or laws and regulations involving PFAS could lead to our incurring liability for damages or other costs, civil or criminal proceedings, the imposition of fines and penalties, or other remedies, including orders to conduct remediation, as well as restrictions on or added costs for our business operations going forward, including in the form of restrictions on discharges at our manufacturing facilities, requiring the installation of control technologies, suspension or shutdown of facility operations, switching costs in seeking alternative sources of supply, potential customer damage claims due to supply disruptions or otherwise, and reporting requirements or bans on PFAS and PFAS-containing products manufactured by the Company.

** The Company is subject to risks related to international, federal, state, and local treaties, laws, and regulations, as well as compliance risks related to legal or regulatory requirements, contract requirements, policies and practices, or other matters that require or encourage the Company or its suppliers, vendors, or channel partners to conduct business in a certain way. The outcome of legal and regulatory proceedings related to compliance with these treaties, laws, regulations, and requirements could have a material adverse effect on the Company's ability to execute its strategy and its results of operations.*

The Company is subject to risks related to international, federal, state, and local treaties, laws, and regulations, including those involving product liability; antitrust; intellectual property; environmental, health, and safety; tax; the U.S. Foreign Corrupt Practices Act and other anti-bribery laws; international import and export requirements and trade sanctions compliance; regulations of the U.S. Food and Drug Administration (FDA) and similar foreign agencies; U.S. federal healthcare program-related laws and regulations including the False Claims Act, anti-kickback laws, and the Sunshine Act; and other matters. The Company is also subject to compliance risks related to legal or regulatory requirements, contract requirements, policies and practices, or other matters that require or encourage the Company and its suppliers, vendors, or channel parties, to conduct business in a certain way. Legal compliance risks also include third-party risks where the Company's suppliers, vendors, or channel partners have business practices that are inconsistent with 3M's Supplier Responsibility Code, 3M performance requirements, or with legal requirements.

The Company's results of operations could be adversely impacted if the costs to comply with these evolving treaties, laws, regulations, and requirements are greater than projected by the Company. In addition, the outcome of legal and regulatory proceedings related to compliance with these treaties, laws, regulations, and requirements are difficult to reliably predict, may differ from the Company's expectations, and can result in, among other things, criminal or civil sanctions, including fines; limitations on the extent to which the Company can conduct business; and private rights of action that result in litigation exposure, including expenses and costs incurred in connection with settlement or court proceedings, for the Company. Although the Company maintains general liability insurance to mitigate monetary exposure, the amount of liability that may result from certain of these risks may not always be covered by, or could exceed, the applicable insurance coverage. Various factors or developments can lead the Company to change current estimates of liabilities and related insurance receivables where applicable, or make such estimates for matters previously not susceptible of 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 future charges that could have a material adverse effect on the Company's results of operations or cash flows. In addition, negative publicity related to the matters noted above or other matters involving the Company may negatively impact the Company's reputation. The Company also relies on patent and other intellectual property protection, and challenges to the Company's intellectual property rights, or claims that the Company's activities interfere with the intellectual property rights of a third party, could cause the Company to incur significant expenses to assert or defend against such claims, could result in reduced revenue, and could damage the Company's reputation, any of which could have an adverse effect on the Company. For a more detailed discussion of the legal proceedings involving the Company and the associated accounting estimates, see the discussion in Note 16, "Commitments and Contingencies," within the Notes to Consolidated Financial Statements.

Risks Related to Our Products and Customer Preferences

** The Company's results are affected by competitive conditions and customer preferences.*

Demand for the Company's products, which impacts revenue and profit margins, is affected by, among other things, (i) the development and timing of the introduction of competitive products; (ii) the Company's pricing strategies; (iii) changes in customer order patterns, such as changes in the levels of inventory maintained by customers, vendors, or channel partners; (iv) changes in customers' preferences for our products, including the success of products offered by our competitors, and changes in customer designs for their products that can affect the demand for some of the Company's products; and (v) changes in the business environment related to disruptive technologies, such as artificial intelligence, block-chain, expanded analytics, and other enhanced learnings from increasing volume of available data.

** The Company's growth objectives are largely dependent on the timing and market acceptance of its new product offerings, including its ability to continually renew its pipeline of new products and to bring those products to market.*

This ability is subject to difficulties or delays in product development, such as the inability to identify viable new products, obtain adequate intellectual property protection, or gain market acceptance of new products. There are no guarantees that new products will prove to be commercially successful.

** The Company's future results are subject to vulnerability with respect to materials and fluctuations in the costs and availability of purchased components, compounds, raw materials, energy, and labor due to shortages, increased demand and wages, logistics, supply chain interruptions, manufacturing site disruptions, regulatory developments, natural disasters, and other disruptive factors.*

The Company depends on various components, compounds, raw materials, and energy (including oil and natural gas and their derivatives) supplied by others for the manufacturing of its products. Supplier relationships have been and could be interrupted in the future due to supplier material shortage, climate impacts, natural and other disasters, and other disruptive events such as military conflicts, or be terminated. Any sustained interruption in the Company's receipt of adequate supplies, supply chain disruptions impacting the distribution of products, or disruption to key manufacturing sites' operations due to natural and other disasters or events, such as government actions relating to discharge or emission permits or other legal or regulatory requirements, could have a material adverse effect on the Company. In addition, there can be no assurance that the Company's processes to minimize volatility in component and material pricing will be successful or that future price fluctuations or shortages will not have a material adverse effect on the Company.

Risks Related to Our Business

** The Company employs information technology systems to support its business and collect, store, and use proprietary and confidential information, including ongoing phased implementation of an enterprise resource planning (ERP) system as part of business transformation on a worldwide basis over the next several years. Security and data breaches, cyberattacks, and other cybersecurity incidents involving the Company's information technology systems and infrastructure could disrupt or interfere with the Company's operations; result in the compromise and misappropriation of proprietary and confidential information belonging to the Company or its customers, suppliers, and employees; and expose the Company to numerous expenses, liabilities, and other negative consequences, any or all of which could adversely impact the Company's business, reputation, and results of operations.*

In the ordinary course of business, the Company relies on centralized and local information technology networks and systems, some of which are provided, hosted, or managed by vendors and other third parties, to process, transmit, and store electronic information, and to manage or support a variety of businesses. Additionally, the Company collects and stores certain data, including proprietary business information, and has access to confidential or personal information in certain of our businesses that is subject to privacy and cybersecurity laws, regulations, and customer-imposed controls. Third parties and threat actors, including organized criminals, nation-state, or nation-state supported actors, regularly attempt to gain unauthorized access to the Company's information technology networks and infrastructure, data, and other information, and many such attempts are increasingly sophisticated. Despite our cybersecurity and business continuity measures (including employee and third-party training, monitoring of networks and systems, patching, maintenance, and backup of systems and data), the Company's information technology networks and infrastructure are still potentially susceptible to attack, compromise, damage, disruption, or shutdown, including as a result of the exploitation of known or unknown hardware or software vulnerabilities in our systems or in the systems of our vendors and third-party service providers, the introduction of computer viruses or ransomware, service or cloud provider disruptions or security breaches, phishing attempts, employee error or malfeasance, power outages, telecommunication or utility failures, systems failures, natural disasters, or other catastrophic events. The Company's increased adoption of remote working, initially driven by the pandemic, also introduces additional threats and risk of disruptions to our information technology networks and infrastructure. Despite our cybersecurity measures, it is possible for security vulnerabilities or a cyberattack to remain undetected for an extended time period, up to and including several years, and the prioritization of decisions with respect to security measures and remediation of known vulnerabilities that we and the vendors and other third parties upon which we rely make may prove inadequate to protect against attacks. While we and third parties we utilize have experienced, and expect to continue to experience, cyberattacks on and breaches and disruptions of the Company's and the third parties' information technology systems and infrastructure, we do not believe that any such incidents to date have had a material impact on the Company. Any cybersecurity incident or information technology network disruption could result in numerous negative consequences, including the risk of legal claims or proceedings, investigations or enforcement actions by U.S., state, or foreign regulators; liabilities or penalties under applicable laws and regulations, including privacy laws and regulations in the U.S. and other jurisdictions; interference with the Company's operations; the incurrence of remediation costs; loss of intellectual property protection; the loss of customer, supplier, or employee relationships; and damage to the Company's reputation, any of which could adversely affect the Company's business. Although the Company maintains insurance coverage for various cybersecurity and business continuity risks, there can be no guarantee that all costs or losses incurred will be fully insured.

** Acquisitions, strategic alliances, divestitures, and other strategic events resulting from portfolio management actions and other evolving business strategies, and possible organizational restructuring, could affect future results.*

The Company monitors its business portfolio and organizational structure and has made and may continue to make acquisitions, strategic alliances, divestitures, and changes to its organizational structure. With respect to acquisitions and strategic alliances, future results will be affected by, as applicable, the Company's ability to integrate acquired businesses quickly and obtain the anticipated synergies and the Company's ability to operationalize and derive anticipated benefits from alliances. Divestitures may include continued financial involvement in the divested businesses, such as through guarantees or other financial arrangements, following the transaction, will result in the loss of revenue associated with the businesses that are divested, and may result in unexpected liabilities through indemnification or other risk-shifting mechanisms in the applicable divestiture agreement. Any of the foregoing could adversely affect the Company's future results.

** The Company's future results may be affected by its operational execution, including scenarios where the Company generates fewer productivity improvements than planned.*

The Company's financial results depend on the successful execution of its business operating plans. The Company utilizes various tools, such as continuous improvement, to improve productivity and reduce expenses and engages in ongoing global business transformation to improve operational efficiency, productivity, and the speed and efficiency with which it serves customers. This is enabled by the ongoing multi-year phased implementation of an ERP system. There can be no assurance that we will realize the benefits of such activities, or that such activities will not result in unexpected consequences, such as a reduced ability to generate sales or provide the experience that our customers, suppliers, vendors, and channel partners expect from us. In addition, the ability to adapt to business model and other changes, including responding to evolving customer needs and service expectations, are important, and, if not done successfully, could negatively impact the Company's ability to win new business and enhance revenue and 3M's brand. Operational challenges, including those related to customer service, pace of change and productivity improvements, could have a material adverse effect on the Company's business, financial conditions and results of operations.

Risks Related to Financial and Capital Markets and Tax Matters

** The Company's defined benefit pension and postretirement plans are subject to financial market risks that could adversely impact our results.*

The performance of financial markets and discount rates impact the Company's funding obligations under its defined benefit plans. Significant changes in market interest rates, decreases in the fair value of plan assets and investment losses on plan assets, and legislative or regulatory changes relating to defined benefit plan funding may increase the Company's funding obligations and adversely impact its results of operations and cash flows.

** Change in the Company's credit ratings could increase cost of funding.*

The Company's credit ratings are important to 3M's cost of capital. The major rating agencies routinely evaluate the Company's credit profile and assign debt ratings to 3M. This evaluation is based on a number of factors, which include financial strength, business and financial risk, as well as transparency with rating agencies and timeliness of financial reporting. As of December 2022, 3M has a credit rating of A1, stable outlook from Moody's Investors Service, and a credit rating of A+, CreditWatch negative from S&P Global Ratings. The Company's credit ratings have served to lower 3M's borrowing costs and facilitate access to a variety of lenders. The addition of further leverage to the Company's capital structure could impact 3M's credit ratings in the future. Failure to maintain strong investment grade ratings would adversely affect the Company's cost of funding and could adversely affect liquidity and access to capital markets.

** Changes in tax rates, laws, or regulations could adversely impact our financial results.*

The Company's business is subject to tax-related external conditions, such as tax rates, tax laws and regulations, changing political environments in the U.S. and foreign jurisdictions that impact tax examination, and assessment and enforcement approaches. In addition, changes in tax laws including further regulatory developments arising from U.S. or international tax reform legislation could result in a tax expense or benefit recorded to the Company's Consolidated Statement of Earnings. In connection with the Base Erosion and Profit Shifting (BEPS) Integrated Framework provided by Organization for Economic Cooperation and Development (OECD), determination of multi-jurisdictional taxation rights and the rate of tax applicable to certain types of income may be subject to potential change. Due to the evolving nature of global tax laws and regulations and compliance approaches, it is currently not possible to assess the ultimate impact of these actions on our financial statements, but these actions could have an adverse impact on the Company's financial results.

Risks Related to the Voluntary Chapter 11 Proceedings Initiated by the Company's Aearo Entities

** The Company is subject to risks related to its subsidiaries' chapter 11 proceedings.*

On July 26, 2022, Aearo Technologies and certain of its related entities ("Aearo Entities"), all wholly owned subsidiaries of the Company, voluntarily initiated chapter 11 proceedings seeking bankruptcy court supervision to establish a trust – funded by the Company – to address potential liabilities related to Dual-Ended Combat Arms – Version 2 earplugs and mask/respirator products historically manufactured and sold by Aearo Entities. This represents a change in strategy for managing the Combat Arms Version 2 earplugs and Aearo respirator mask/asbestos alleged litigation liabilities. Aearo Entities were acquired by the Company in 2008 and they, along with its related subsidiaries, have operated as Company subsidiaries since that time. 3M has entered into a funding agreement with Aearo Entities and committed to fund a trust to satisfy all claims determined to be entitled to compensation, and to support Aearo Entities as they continue to operate during the chapter 11 proceedings. There are a number of risks and uncertainties associated with the chapter 11 proceedings, including, among others, those related to: legal risks related to the chapter 11 proceedings; potential impacts to the Company's reputation and relationships with its customers, suppliers, federal contracting officials, employees, regulators, and other counterparties and community members; impacts to the Company's liquidity or results of operations, including risks related to the amount that will be necessary to fully and finally resolve all of the Company's obligations to make payments to resolve such claims under the terms of its funding and indemnification agreement with Aearo Entities; the costs of chapter 11 proceedings and length of time necessary to resolve the cases; and Aearo Entities' ability to reach acceptable agreements with claimants and navigate the chapter 11 proceedings to obtain approval and consummation of a plan of reorganization. Due to the inherent uncertainty of litigation, the Company cannot predict the timing, outcome, or financial impact of this matter, or any other ongoing or future litigation.

Risks Related to the Planned Spin-off of the Company's Health Care Business

** The Company is subject to risks related to its plan to spin off its Health Care business.*

On July 26, 2022, the Company announced its intent to spin off its Health Care business, resulting in two standalone public companies, in a transaction that is intended to be tax-free for the Company's stockholders for U.S. federal income tax purposes. The spin-off will be subject to the satisfaction of a number of conditions, including final approval by the Company's board of directors, the filing and effectiveness of a Form 10 registration statement, the receipt of a private letter ruling from the Internal Revenue Service and a tax opinion from external counsel, and other customary conditions. The failure to satisfy all of the required conditions, many of which are outside of the Company's control, could delay the completion of the spin-off relative to the anticipated timeline or prevent it from occurring. Any delay in the completion of the spin-off or any change to the anticipated terms of the transaction could reduce the expected benefits of the transaction, or delay the time at which such benefits are realized. There can also be no assurance that the anticipated benefits of the transaction will be realized if the spin-off is completed, or that the costs or dis-synergies of the transaction (including costs of related restructuring transactions), will not exceed the anticipated amounts. Whether or not the spin-off is ultimately completed, the pendency of the transaction may impose challenges on the Company and its business, including potential business disruption; the diversion of management time on matters relating to the transaction; the impact on the Company's ability to retain talent; and potential impacts on the Company's relationships with its customers, employees, regulators, and other counterparties. In addition, while it is intended that the transaction would be tax-free to the Company's stockholders for U.S. federal income tax purposes, there is no assurance that the transactions will qualify for this treatment. If the spin-off was ultimately determined to be taxable, the Company, the Health Care business, or the Company's stockholders could incur income tax liabilities that could be significant. Any of these factors could negatively impact our business, financial condition, results of operations, cash flows, and the price of our common stock.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

In the U.S., 3M's general offices, corporate research laboratories, and certain division laboratories are located in St. Paul, Minnesota. The Company operates 61 manufacturing facilities in 29 states. Internationally, the Company operates 83 manufacturing and converting facilities in 28 countries.

3M owns the majority of its physical properties. 3M's physical facilities are highly suitable for the purposes for which they were designed. Because 3M is a global enterprise characterized by substantial inter-segment cooperation, properties are often used by multiple business segments.

Item 3. Legal Proceedings.

Discussion of legal matters is incorporated by reference from Part II, Item 8, Note 16, “Commitments and Contingencies,” of this document, and should be considered an integral part of Part I, Item 3, “Legal Proceedings.”

Item 4. Mine Safety Disclosures.

Pursuant to Section 1503 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (the “Act”), the Company is required to disclose, in connection with the mines it operates, information concerning mine safety violations or other regulatory matters in its periodic reports filed with the SEC. The information concerning mine safety violations or other regulatory matters required by Section 1503(a) of the Act is included in Exhibit 95 to this annual report.

PART II

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

Equity compensation plans’ information is incorporated by reference from Part III, Item 12, “Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters,” of this document, and should be considered an integral part of Item 5. At January 31, 2023, there were 62,488 shareholders of record. 3M’s stock ticker symbol is MMM and is listed on the New York Stock Exchange, Inc. (NYSE), the Chicago Stock Exchange, Inc., and the SIX Swiss Exchange. Cash dividends declared and paid totaled \$1.49 and \$1.48 per share for each quarter in 2022 and 2021, respectively. 3M typically declares and pays dividends in the same quarter.

Issuer Purchases of Equity Securities

Repurchases of 3M common stock are made to support the Company’s stock-based employee compensation plans and for other corporate purposes. In November 2018, 3M’s Board of Directors replaced the Company’s February 2016 repurchase program with a new repurchase program. This new program authorizes the repurchase of up to \$10 billion of 3M’s outstanding common stock, with no pre-established end date.

Issuer Purchases of Equity Securities (registered pursuant to Section 12 of the Exchange Act)

Period	Total Number of Shares Purchased (1)	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs (2)	Maximum Approximate Dollar Value of Shares that May Yet Be Purchased under the Plans or Programs (Millions)
January 1 - 31, 2022	1,458,623	\$ 176.61	1,458,623	\$ 5,329
February 1 - 28, 2022	1,445,206	147.03	1,441,534	5,117
March 1 - 31, 2022	1,871,301	145.61	1,871,301	4,845
January 1 - March 31, 2022	4,775,130	155.51	4,771,458	
April 1 - 30, 2022	—	—	—	4,845
May 1 - 31, 2022	—	—	—	4,845
June 1 - 30, 2022	—	—	—	4,845
April 1 - June 30, 2022	—	—	—	
July 1 - 31, 2022	—	—	—	4,845
August 1 - 31, 2022	—	—	—	4,845
September 1 - 30, 2022	1,665,747	114.10	1,665,747	4,655
July 1 - September 30, 2022	1,665,747	114.10	1,665,747	
October 1 - 31, 2022	2,831,831	114.21	2,831,831	4,331
November 1 - 30, 2022	1,002,117	126.87	1,002,117	4,204
December 1 - 31, 2022	378,006	125.91	378,006	4,157
October 1 - December 31, 2022	4,211,954	118.27	4,211,954	
January 1 - December 31, 2022	10,652,831	134.31	10,649,159	

- (1) The total number of shares purchased includes: (i) shares purchased under the Board’s authorizations described above, and (ii) shares purchased in connection with the exercise of stock options.
- (2) The total number of shares purchased as part of publicly announced plans or programs includes shares purchased under the Board’s authorizations described above.

Item 6. [Reserved].

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

Management’s Discussion and Analysis of Financial Condition and Results of Operations (MD&A) is designed to provide a reader of 3M’s financial statements with a narrative from the perspective of management. 3M’s MD&A is presented in eight sections:

- Overview
- Results of Operations
- Performance by Business Segment
- Performance by Geographic Area
- Critical Accounting Estimates
- New Accounting Pronouncements
- Financial Condition and Liquidity
- Financial Instruments

Forward-looking statements in Item 7 may involve risks and uncertainties that could cause results to differ materially from those projected (refer to the section entitled “Cautionary Note Concerning Factors That May Affect Future Results” in Item 1 and the risk factors provided in Item 1A for discussion of these risks and uncertainties).

Additional information about results of operations and financial condition for 2021 and 2020 can be found in “Management’s Discussion and Analysis of Financial Condition and Results of Operations” sections in 3M’s Current Report on Form 8-K dated April 26, 2022 (which updated 3M’s 2021 Annual Report on Form 10-K).

OVERVIEW

3M is a diversified global manufacturer, technology innovator and marketer of a wide variety of products and services. Effective in the first quarter of 2022, 3M made the following changes:

- Changes in measure of segment operating performance used by 3M’s chief operating decision maker—impacting 3M’s disclosed measure of segment profit/loss (business segment operating income). See additional information in Note 19. 3M’s disclosed disaggregated revenue was also updated as a result of the changes in segment reporting. See additional information in Note 2.
- Changes to non-GAAP measures - certain amounts adjusted for special items. Refer to the *Certain amounts adjusted for special items - (non-GAAP measures)* section below for additional information.

Information provided herein reflects the impact of these changes for all periods presented.

3M manages its operations in four operating business segments: Safety and Industrial; Transportation and Electronics; Health Care; and Consumer. From a geographic perspective, any references to EMEA refer to Europe, Middle East and Africa on a combined basis. References are made to organic sales change (which include both organic volume impacts and selling price impacts), which is defined as the change in net sales, absent the separate impacts on sales from foreign currency translation and acquisitions, net of divestitures. Acquisition and divestiture sales change impacts, if any, are measured separately for the first twelve months post-transaction. 3M believes this information is useful to investors and management in understanding ongoing operations and in analysis of ongoing operating trends.

3M is impacted by the global pandemic and related effects associated with the coronavirus (COVID-19). Risk factors with respect to COVID-19 can be found in Item 1A “Risk Factors” in this document. Given the diversity of 3M’s businesses, some of the factors relative to COVID-19 increase the demand for 3M products, while others decrease demand or make it more difficult for 3M to serve customers. Certain resulting impacts are referenced in various discussions within this Item 7. Overall, the impact of the COVID-19 pandemic on 3M’s consolidated results of operations was primarily driven by factors related to changes in demand for products and disruption in global supply chains. 3M is not able to predict the extent to which the COVID-19 pandemic may have a material effect on its consolidated results of operations or financial condition.

In 2022, 3M’s costs for significant litigation (see *Certain amounts adjusted for special items - (non-GAAP measures)* section below) totaled approximately \$2.3 billion pre-tax and included, among things, pre-tax charges associated with steps toward resolving Combat Arms Earplugs litigation and associated with additional commitments to address PFAS-related matters at its Zwijndrecht, Belgium site (approximately \$1.3 billion and \$355 million, respectively, in 2022). These matters are further discussed in Note 16. In 2022, 3M also completed the split-off of its Food Safety Division business resulting in a pre-tax gain of \$2.7 billion and committed to a plan to exit PFAS manufacturing by the end of 2025 resulting in a 2022 pre-tax charge of \$0.8 billion related to impairment as discussed in Note 15. See *Certain amounts adjusted for special items - (non-GAAP measures)* section below for additional discussion of these and other special items.

3M Belgium has experienced interruptions to portions of the manufacturing at its site in Zwijndrecht, Belgium, as more fully discussed in Note 16. As discussed in Note 16, 3M Belgium received agreement with authorities in June 2022 to begin the process toward restarting operations at the Zwijndrecht facility. 3M Belgium has provided information required by the Flemish environmental authorities to receive agreement from the authorities to restart operations, and has done so for production or sampling purposes. Belgian government authorities continue to maintain oversight of these operations and compliance with applicable requirements. In December 2022, 3M Belgium received an official infraction report from the Flemish Environmental Inspectorate and continues to work with the government authorities to comply with applicable legal requirements. See further discussion in Note 16.

3M is also impacted by the Russia-Ukraine conflict. In light of a number of factors, 3M suspended operations of its subsidiaries in Russia in March 2022, the net sales of which were less than one percent of 3M's consolidated net sales for 2021. Further, in September 2022, management committed to a plan to exit and dispose of the related net assets through an intended sale of the subsidiaries. The associated charge in 2022 related to this action is further discussed in Note 15. 3M also has other operations that source certain raw materials from suppliers in Russia and have experienced related supply disruption due to the conflict. Further supply disruption could lead to downstream customer impacts.

Though 3M monitors relevant factors as well as options to mitigate potential impacts, it is not able to predict the extent to which these circumstances may have a material effect on 3M's consolidated results of operations or financial condition. Relevant risk factors can be found in Item 1A "Risk Factors" in this Annual Report on Form 10-K.

Operating income margin and earnings per share attributable to 3M common shareholders – diluted:

The following table provides the increases (decreases) in operating income margins and diluted earnings per share.

	Year ended December 31,			
	2022		2021	
	Percent of net sales	Earnings per diluted share	Percent of net sales	Earnings per diluted share
Same period last year	20.8 %	\$ 10.12	22.3 %	\$ 9.36
Net costs for significant litigation	1.4	0.61	1.0	0.37
Gain on business divestitures	—	—	(1.2)	(0.52)
Divestiture-related restructuring actions	—	—	0.2	0.08
Total special items	1.4	0.61	—	(0.07)
Same period last year, excluding special items	22.2	10.73	22.3	9.29
Increase/(decrease) due to:				
Total organic growth/productivity and other	1.0	0.56	0.7	1.07
Raw material impact	(2.4)	(1.13)	(0.8)	(0.27)
Divestitures	—	(0.05)	—	(0.05)
Foreign exchange impacts	—	(0.39)	—	0.16
Other expense (income), net	N/A	0.02	N/A	0.27
Income tax rate	N/A	0.06	N/A	0.32
Shares of common stock outstanding	N/A	0.30	N/A	(0.06)
Current period, excluding special items	20.8	10.10	22.2	10.73
Net costs for significant litigation	(6.7)	(3.20)	(1.4)	(0.61)
Divestiture costs	(0.2)	(0.08)	—	—
Gain on business divestitures	8.0	4.73	—	—
Divestiture-related restructuring actions	(0.1)	(0.05)	—	—
Russia exit charges	(0.3)	(0.20)	—	—
PFAS manufacturing exit costs	(2.4)	(1.12)	—	—
Total special items	(1.7)	0.08	(1.4)	(0.61)
Current period	19.1 %	\$ 10.18	20.8 %	\$ 10.12

The Company refers to various "adjusted" amounts or measures on an "adjusted basis". These exclude special items. These non-GAAP measures are further described and reconciled to the most directly comparable GAAP financial measures in the *Certain amounts adjusted for special items - (non-GAAP measures)* section below.

A discussion related to the components of year-on-year changes in operating income margin and earnings per diluted share follows:

Organic growth/productivity and other:

- In 2022, the following components impacted operating margins and earnings per diluted share year-on-year:
 - Declines in disposable respirator demand year-on-year negatively impacted operating margins by 0.3 percent and earnings per share by \$0.29.
 - Remaining organic growth/productivity and other impacts resulted in a net year-on-year benefit \$0.85 to earnings per share and 1.3 percent to operating margins which was impacted by the following:
 - Benefits from strong pricing, spending discipline and 2021 restructuring actions
 - Manufacturing headwinds from global supply chain challenges; geopolitical impacts due to the Russia/Ukraine conflict as well as ongoing COVID-related challenges in China
 - Second quarter of 2021 benefit of \$91 million pre-tax (\$0.12 per share after tax) from the impact of the favorable decision of the Brazilian Supreme Court regarding the calculation of past social taxes
 - Increased investments in growth, productivity and sustainability
- In 2021, organic volume growth and ongoing cost management increased operating income margins and earnings per diluted share year-on-year offset by manufacturing headwinds from global supply chain challenges and increased compensation/benefit costs. The following also impacted results or provide additional information:
 - 2021 benefit of \$91 million pre-tax (\$0.12 per share after tax) from a favorable Brazilian Supreme Court decision that concluded on the impact of state value-added tax when determining Brazil's federal sales-based social tax—essentially lowering the social tax that 3M should have paid in prior periods.
 - 3M continued prioritization of investments in growth and sustainability.
 - 2021 benefit from higher selling prices, restructuring actions taken in 2020 and positive/negative impact of year-over-year change in non-divestiture-related restructuring charges, net of adjustments, for respective periods. Note 5 provides additional information relative to restructuring actions.
 - Lower year-on-year net gains related to certain property sales.
 - COVID-impacts recognized on certain assets in 2020.
- In 2021, higher defined benefit pension and postretirement service cost increased expense year-on-year.

Raw material impact:

- In 2022, 3M continued to experience inflationary pressures with year-on-year increases in raw material and logistics costs driven by many geopolitical, logistics, and disruptive events that caused imbalance in the global supply chain.
- In 2021, 3M experienced higher raw material, logistics, and outsourced manufacturing costs from strong end-market demand, ongoing COVID-19 and related global supply chain challenges that were further magnified by extreme weather events, such as February 2021 winter storm Uri in the U.S.

Acquisitions/divestitures:

- Divestiture impacts in 2022 include lost income from divested businesses and remaining stranded costs (net of transition arrangement income). 3M completed the split-off of the Food Safety business in September 2022 (discussed in Note 3). The impact also includes lost income from deconsolidation of the Aearo Entities in July 2022 (discussed in Note 16).
- Divestiture impacts in 2021 are primarily comprised of the lost income from the divestiture of the Company's drug delivery business (sale completed in May 2020).

Foreign exchange impacts:

- Foreign currency impacts (net of hedging) decreased operating income by approximately \$271 million and \$103 million (or a decrease in pre-tax earnings of approximately \$280 million and \$119 million) year-on-year for 2022 and 2021, respectively. These estimates include: (a) the effects of year-on-year changes in exchange rates on translating current period functional currency profits into U.S. dollars and on current period non-functional currency denominated purchases or transfers of goods between 3M operations, and (b) year-on-year changes in transaction gains and losses, including derivative instruments designed to reduce foreign currency exchange rate risks.

Other expense (income), net:

- Lower income related to higher non-service cost components of pension and postretirement expense increased expense year-on-year for 2022. Higher income related to non-service cost components of pension and postretirement expense decreased expense year-on-year for 2021.
- Interest expense (net of interest income) decreased in 2022 compared to the same period year-on-year driven by debt maturities in the ordinary course and interest income on invested cash.
- Interest expense (net of interest income) decreased in 2021 compared to the same period year-on-year due in part to interest expense savings from early debt extinguishment actions in 2020.

Income tax rate:

- Certain items above reflect specific income tax rates associated therewith. Overall, the effective tax rates for 2022, 2021, and 2020 were 9.6 percent, 17.8 percent, and 19.7 percent, respectively. These reflect a decrease of 8.2 percentage points from 2021 to 2022 and a decrease of 1.9 percentage points from 2020 to 2021. The primary factors that decreased the Company's effective tax rate for 2022 were the tax efficient structure associated with the gain on split-off of the Food Safety business (see Note 3). The primary factors that decreased the Company's effective tax rate in 2021 were geographical income mix and favorable adjustments in 2021 related to impacts of U.S. international tax provisions.
- On an adjusted basis (as discussed below), the effective tax rates for 2022, 2021, and 2020 were 17.7 percent, 18.1 percent, and 20.5 percent, respectively. These reflect a decrease of 0.4 percent percentage points from 2021 to 2022 and a decrease of 2.4 percentage points from 2020 to 2021.

Shares of common stock outstanding:

- Lower shares outstanding increased earnings per share per diluted share for 2022, while higher shares outstanding decreased earnings per share diluted share for 2021.

Certain amounts adjusted for special items - (non-GAAP measures):

In addition to reporting financial results in accordance with U.S. GAAP, 3M also provides non-GAAP measures that adjust for the impacts of special items. For the periods presented, special items include the items described below. Operating income, segment operating income (loss), income before taxes, net income, earnings per share, and the effective tax rate are all measures for which 3M provides the reported GAAP measure and a measure adjusted for special items. The adjusted measures are not in accordance with, nor are they a substitute for, GAAP measures. While the Company includes certain items in its measure of segment operating performance, it also considers these non-GAAP measures in evaluating and managing its operations. The Company believes that discussion of results adjusted for special items is useful to investors in understanding underlying business performance, while also providing additional transparency to the special items. Special items impacting operating income are reflected in Corporate and Unallocated, except as described below with respect to net costs for significant litigation and PFAS manufacturing exit costs. The determination of these items may not be comparable to similarly titled measures used by other companies.

In the first quarter of 2022, the Company changed the extent of matters and charges/benefits it includes within special items with respect to net costs for significant litigation. Previously, 3M included net costs, when significant, associated with changes in accrued liabilities related to respirator mask/asbestos litigation and PFAS-related other environmental matters, along with the associated tax impacts. These non-GAAP measure changes involved including net costs for litigation related to 3M's Combat Arms Earplugs, expanding net costs to include external legal fees and insurance recoveries associated with the applicable matters in addition to changes in accrued liabilities, and to include all such net costs for the applicable matters, not just when considered significant. Information provided herein reflects the impact of these changes for all periods presented.

Special items for the periods presented include:

Net costs for significant litigation:

- These relate to 3M's respirator mask/asbestos, PFAS-related other environmental, and Combat Arms Earplugs matters (as discussed in Note 16). Net costs include the impacts of any changes in accrued liabilities, external legal fees, and insurance recoveries, along with associated tax impacts. Prior to initiating voluntary chapter 11 bankruptcy proceedings in July 2022, net costs related to Combat Arms Earplugs and Aearo-respirator mask/asbestos matters along with non-Aearo respirator mask/asbestos matters were reflected as special items in the Safety and Industrial business segment. During the bankruptcy period, net costs related to Combat Arms Earplugs and Aearo-respirator mask/asbestos matters are reflected as corporate special items in Corporate and Unallocated while those associated with non-Aearo respirator mask/asbestos matters continue to be reflected as special items in the Safety and Industrial business segment. Net costs associated with PFAS-related other environmental matters are primarily reflected as corporate special items in Corporate and Unallocated.

Divestiture costs:

- These include costs related to separating and divesting substantially an entire business segment of 3M following public announcement of its intended divestiture.

Gain on business divestitures:

- In 2022, 3M recorded a gain related to the split-off and combination of its Food Safety business with Neogen Corporation. In 2020, 3M recorded a gain primarily related to the divestiture of its Drug Delivery business. Refer to Note 3 for further details.

Divestiture-related restructuring actions:

- In the third quarter of 2022, following the split-off of the Food Safety business, and in 2020, following the divestiture of the Drug Delivery business, (see Note 3) management approved and committed to undertake certain restructuring actions addressing corporate functional costs across 3M in relation to the magnitude of amounts previously allocated to the divested businesses. Refer to Note 5 for further details.

Russia exit charges:

- In the third quarter of 2022, 3M recorded a charge primarily related to impairment of net assets in Russia in connection with management's committed exit and disposal plan. Refer to Note 15 for further details.

PFAS manufacturing exit costs:

- These costs relate to 3M's December 2022 commitment to a plan to exit PFAS manufacturing by the end of 2025. Charges for the applicable period relate to asset impairments. These charges were reflected within the Transportation and Electronics business segment. Refer to Note 15 for further details.

(Dollars in millions, except per share amounts)	Operating Income (Loss)										Earnings per diluted share percent change	
	Safety and Industrial	Safety and Industrial Margin	Transportation and Electronics	Transportation and Electronics Margin	Total Company	Total Company Margin	Income Before Taxes	Provision for Income Taxes	Effective Tax Rate	Net Income Attributable to 3M		Earnings per Diluted Share
Year ended December 31, 2020 GAAP	\$ 2,588	23.6%	\$ 1,701	20.2%	\$ 7,161	22.3 %	\$ 6,795	\$ 1,337	19.7 %	\$ 5,449	\$ 9.36	
Adjustments for special items:												
Net costs for significant litigation	205		—		353		353	136		217	0.37	
Gain on business divestitures	—		—		(389)		(389)	(86)		(303)	(0.52)	
Divestiture-related restructuring actions	—		—		55		55	9		46	0.08	
Total special items	205		—		19		19	59		(40)	(0.07)	
Year ended December 31, 2020 adjusted amounts (non-GAAP measures)	\$ 2,793	25.5%	\$ 1,701	20.2%	\$ 7,180	22.3 %	\$ 6,814	\$ 1,396	20.5 %	\$ 5,409	\$ 9.29	
Year ended December 31, 2021 GAAP	\$ 2,466	20.6%	\$ 1,880	20.3%	\$ 7,369	20.8 %	\$ 7,204	\$ 1,285	17.8 %	\$ 5,921	\$ 10.12	8 %
Adjustments for special items:												
Net costs for significant litigation	249		—		463		463	104		359	0.61	
Total special items	249		—		463		463	104		359	0.61	
Year ended December 31, 2021 adjusted amounts (non-GAAP measures)	\$ 2,715	22.7%	\$ 1,880	20.3%	\$ 7,832	22.2 %	\$ 7,667	\$ 1,389	18.1 %	\$ 6,280	\$ 10.73	16 %
Year ended December 31, 2022 GAAP	\$ 1,199	10.3%	\$ 1,012	11.4%	\$ 6,539	19.1 %	\$ 6,392	\$ 612	9.6 %	\$ 5,777	\$ 10.18	1 %
Adjustments for special items:												
Net costs for significant litigation	1,414		—		2,291		2,291	476		1,815	3.20	
Divestiture costs	—		—		60		60	13		47	0.08	
Gain on business divestitures	—		—		(2,724)		(2,724)	(39)		(2,685)	(4.73)	
Divestiture-related restructuring actions	—		—		41		41	9		32	0.05	
Russia exit charges	—		—		109		109	(2)		111	0.20	
PFAS manufacturing exit costs	—		800		800		800	162		638	1.12	
Total special items	1,414		800		577		577	619		(42)	(0.08)	
Year ended December 31, 2022 adjusted amounts (non-GAAP measures)	\$ 2,613	22.5%	\$ 1,812	20.4%	\$ 7,116	20.8 %	\$ 6,969	\$ 1,231	17.7 %	\$ 5,735	\$ 10.10	(6)%

Sales and operating income (loss) by business segment:

The following tables contain sales and operating income (loss) results by business segment for the years ended December 31, 2022 and 2021. Refer to the section entitled “Performance by Business Segment” later in MD&A for additional discussion concerning 2022 versus 2021 results, including Corporate and Unallocated. Refer to Note 19 for additional information on business segments.

(Dollars in millions)	2022			2021			% change	
	Net Sales	% of Total	Operating Income (Loss)	Net Sales	% of Total	Operating Income (Loss)	Net Sales	Operating Income (Loss)
Business Segments								
Safety and Industrial	\$ 11,604	33.9 %	\$ 1,199	\$ 11,981	33.9 %	\$ 2,466	(3.2) %	(51.4) %
Transportation and Electronics	8,902	26.0	1,012	9,262	26.2	1,880	(3.9)	(46.2)
Health Care	8,421	24.6	1,815	8,597	24.3	2,037	(2.0)	(10.9)
Consumer	5,298	15.5	994	5,513	15.6	1,162	(3.9)	(14.4)
Corporate and Unallocated	4	—	1,519	2	—	(176)		
Total Company	\$ 34,229	100.0 %	\$ 6,539	\$ 35,355	100.0 %	\$ 7,369	(3.2) %	(11.3) %

Year ended December 31, 2022

Worldwide Sales Change By Business Segment	Organic sales	Acquisitions	Divestitures	Translation	Total sales change
Safety and Industrial	1.0 %	— %	— %	(4.2) %	(3.2) %
Transportation and Electronics	1.2	—	(0.5)	(4.6)	(3.9)
Health Care	3.2	—	(1.4)	(3.8)	(2.0)
Consumer	(0.9)	—	(0.4)	(2.6)	(3.9)
Total Company	1.2	—	(0.5)	(3.9)	(3.2)

Sales by geographic area:

Percent change information compares the years ended December 31, 2022 and 2021 with the same prior year period, unless otherwise indicated. Additional discussion of business segment results is provided in the Performance by Business Segment section.

Year ended December 31, 2022

	Americas	Asia Pacific	Europe, Middle East & Africa	Other Unallocated	Worldwide
Net sales (millions)	\$ 18,400	\$ 9,901	\$ 5,928	\$ —	\$ 34,229
% of worldwide sales	53.8 %	28.9 %	17.3 %		100.0 %
Components of net sales change:					
Organic sales	2.6	0.3	(0.6)		1.2
Divestitures	(0.6)	(0.4)	(0.6)		(0.5)
Translation	(0.3)	(6.5)	(9.8)		(3.9)
Total sales change	1.7 %	(6.6) %	(11.0) %		(3.2) %

Year ended December 31, 2021

	Americas	Asia Pacific	Europe, Middle East & Africa	Other Unallocated	Worldwide
Net sales (millions)	\$ 18,097	\$ 10,600	\$ 6,660	\$ (2)	\$ 35,355
% of worldwide sales	51.2 %	30.0 %	18.8 %		100.0 %
Components of net sales change:					
Organic sales	9.8	8.5	6.3		8.8
Divestitures	(0.6)	—	(1.1)		(0.5)
Translation	0.3	2.3	3.8		1.6
Total sales change	9.5 %	10.8 %	9.0 %		9.9 %

Additional information beyond what is included in the preceding tables is as follows:

- For the full year 2022, in the Americas geographic area, U.S. total sales were flat which included increased organic sales of 1 percent. Total sales in Mexico increased 8 percent which included increased organic sales of 12 percent. In Canada, total sales increased 9 percent which included increased organic sales of 13 percent. In Brazil, total sales increased 15 percent which included increased organic sales of 12 percent. In the Asia Pacific geographic area, China total sales decreased 6 percent which included decreased organic sales of 3 percent. In Japan, total sales decreased 12 percent which included increased organic sales of 2 percent.
- For the full year 2021, in the Americas geographic area, U.S. total sales increased 8 percent which included increased organic sales of 8 percent. Total sales in Mexico increased 18 percent which included increased organic sales of 16 percent. In Canada, total sales increased 18 percent which included increased organic sales of 11 percent. In Brazil, total sales increased 18 percent which included increased organic sales of 22 percent. In the Asia Pacific geographic area, China total sales increased 17 percent which included increased organic sales of 11 percent. In Japan, total sales were flat which included increased organic sales of 2 percent.

Managing currency risks:

The stronger U.S. dollar had a negative impact on sales in full year 2022 compared to the same periods last year. Net of the Company's hedging strategy, foreign currency negatively impacted earnings in full year 2022 compared to the same period last year. 3M utilizes a number of tools to manage currency risk related to earnings including natural hedges such as pricing, productivity, hard currency, hard currency-indexed billings, and localizing source of supply. 3M also uses financial hedges to mitigate currency risk. In the case of more liquid currencies, 3M hedges a portion of its aggregate exposure, using a 12, 24 or 36 month horizon, depending on the currency in question. For less liquid currencies, financial hedging is frequently more expensive with more limitations on tenor. Thus, this risk is largely managed via local operational actions using natural hedging tools as discussed above. In either case, 3M's hedging approach is designed to mitigate a portion of foreign currency risk and reduce volatility, ultimately allowing time for 3M's businesses to respond to changes in the marketplace.

Financial condition:

Refer to the section entitled "Financial Condition and Liquidity" later in MD&A for a discussion of items impacting cash flows.

In November 2018, 3M's Board of Directors replaced the Company's February 2016 repurchase program with a new repurchase program. This new program authorizes the repurchase of up to \$10 billion of 3M's outstanding common stock, with no pre-established end date. In 2022, the Company purchased \$1.5 billion of its own stock, compared to \$2.2 billion of stock purchases in 2021. As of December 31, 2022, approximately \$4.2 billion remained available under the authorization. In February 2023, 3M's Board of Directors declared a first-quarter 2023 dividend of \$1.50 per share, an increase of 1 percent. This marked the 65th consecutive year of dividend increases for 3M.

Raw materials:

Refer to the section entitled "Raw materials" in Item 1 for discussion of 3M's sources and availability of raw materials in 2022.

Pension and postretirement defined benefit/contribution plans:

On a worldwide basis, 3M's pension and postretirement plans were 96 percent funded at year-end 2022. The primary U.S. qualified pension plan, which is approximately 70 percent of the worldwide pension obligation, was 97 percent funded and the international pension plans were 116 percent funded. The U.S. non-qualified pension plan is not funded due to tax considerations and other factors. Asset returns in 2022 for the primary U.S. qualified pension plan were -17.4 percent, as 3M strategically invests in both growth assets and fixed income matching assets to manage its funded status. For the primary U.S. qualified pension plan, the expected long-term rate of return on an annualized basis for 2023 is 7.5 percent. The primary U.S. qualified pension plan year-end 2022 discount rate was 5.18%, up 2.29 percentage points from the year-end 2021 discount rate of 2.89%. The increase in U.S. discount rates resulted in a decreased valuation of the projected benefit obligation (PBO). The primary U.S. qualified pension plan's funded status remained at 97% as of December 31, 2022 due to the lower PBO resulting from the discount rate increase, offset by the negative returns of the plan's assets. Additional detail and discussion of international plan asset returns and discount rates is provided in Note 13 (Pension and Postretirement Benefit Plans).

3M expects to contribute approximately \$100 million to \$200 million of cash to its global defined benefit pension and postretirement plans in 2023. The Company does not have a required minimum cash pension contribution obligation for its U.S. plans in 2023. 3M expects global defined benefit pension and postretirement expense in 2023 to decrease by approximately \$30 million pre-tax when compared to 2022. Refer to "Critical Accounting Estimates" within MD&A and Note 13 (Pension and Postretirement Benefit Plans) for additional information concerning 3M's pension and post-retirement plans.

RESULTS OF OPERATIONS

Net Sales:

Refer to the preceding “Overview” section and the “Performance by Business Segment” section later in MD&A for additional discussion of sales change.

Operating Expenses:

(Percent of net sales)	2022	2021	Change
Cost of sales	56.2 %	53.2 %	3.0 %
Selling, general and administrative expenses (SG&A)	26.5	20.4	6.1
Research, development and related expenses (R&D)	5.4	5.6	(0.2)
Gain on business divestitures	(8.0)	—	(8.0)
Goodwill impairment expense	0.8	—	0.8
Operating income margin	19.1 %	20.8 %	(1.7)%

The Company is continuing the ongoing deployment of an enterprise resource planning (ERP) system on a worldwide basis, with these investments impacting cost of sales, SG&A, and R&D.

Cost of Sales:

Cost of sales, measured as a percent of sales, increased in 2022 when compared to the same period last year. Increases were primarily due to 2022 special item costs for significant litigation from additional commitments to address PFAS-related matters at 3M's Zwijndrecht, Belgium site (discussed in Note 16), higher raw materials and logistics costs, manufacturing productivity headwinds which were further magnified by the shutdown of certain operations in Belgium and progress on restarting previously-idled operations, and investments in growth, productivity and sustainability. On a percent of sales basis, these increases were partially offset by increases in selling prices.

Selling, General and Administrative Expenses:

SG&A, measured as a percent of sales, increased in 2022 when compared to the same period last year. SG&A was impacted by increased special item costs for significant litigation primarily related to steps toward resolving Combat Arms Earplugs litigation (discussed in Note 16) resulting in a 2022 second quarter pre-tax charge of approximately \$1.2 billion, certain impairment costs related to exiting PFAS manufacturing (see Note 15), costs related to exiting Russia (see Note 15), divestiture-related restructuring charges (see Note 5), and continued investment in key growth initiatives. These increases were partially offset by restructuring benefits and ongoing general 3M cost management.

Research, Development and Related Expenses:

R&D, measured as a percent of sales, decreased in 2022 when compared to the same period last year. 3M continues to invest in a range of R&D activities from application development, product and manufacturing support, product development and technology development aimed at disruptive innovations.

Gain on Business Divestitures:

In the third quarter of 2022, 3M recorded a pre-tax gain of \$2.7 billion (\$2.7 billion after tax) related to the split-off and combination of its Food Safety business with Neogen Corporation. Refer to Note 3 for further details.

Goodwill Impairment Expense:

As a result of 3M's commitment to exit per- and polyfluoroalkyl substance (PFAS) manufacturing, 3M recorded a goodwill impairment charge related to the Advanced Materials reporting unit (within the Transportation and Electronics business). Refer to Note 15 for further details.

Other Expense (Income), Net:

See Note 6 for a detailed breakout of this line item.

Interest expense (net of interest income) decreased in 2022 compared to the same period year-on-year driven by debt maturities in the ordinary course and interest income on invested cash. Interest expense (net of interest income) decreased in 2021 compared to the same period year-on-year due in part to interest expense savings from early debt extinguishment actions in 2020.

The non-service pension and postretirement net benefit decreased \$49 million and increased \$163 million in 2022 and 2021, respectively. The lower year-on-year benefit in 2022 was primarily due to higher interest costs due to higher discount rates as of the year-end 2021, lower expected returns on plan assets for 2023, partially offset by a reduction in actuarial loss amortization, which was driven by the lower discount rates. Refer to Note 13 for additional details.

Provision for Income Taxes:

(Percent of pre-tax income)	2022	2021
Effective tax rate	9.6 %	17.8 %

Factors that impacted the tax rates between years are further discussed in the Overview section above and in Note 10.

The tax rate can vary from quarter to quarter due to discrete items, such as the settlement of income tax audits, changes in tax laws, and employee share-based payment accounting; as well as recurring factors, such as the geographic mix of income before taxes.

Refer to Note 10 for further discussion of income taxes.

Income from Unconsolidated Subsidiaries, Net of Taxes:

(Millions)	2022	2021
Income (loss) from unconsolidated subsidiaries, net of taxes	\$ 11	\$ 10

Income (loss) from unconsolidated subsidiaries, net of taxes, is attributable to the Company's accounting under the equity method for ownership interests in certain entities such as Kindeva following 3M's divestiture of the drug delivery business in 2020. In the fourth quarter of 2022, 3M sold its remaining ownership interest in Kindeva resulting in an immaterial gain.

Net Income (Loss) Attributable to Noncontrolling Interest:

(Millions)	2022	2021
Net income (loss) attributable to noncontrolling interest	\$ 14	\$ 8

Net income (loss) attributable to noncontrolling interest represents the elimination of the income or loss attributable to non-3M ownership interests in 3M consolidated entities. The primary noncontrolling interest relates to 3M India Limited, of which 3M's effective ownership is 75 percent.

PERFORMANCE BY BUSINESS SEGMENT

Item 1, Business Segments, provides an overview of 3M's business segments. In addition, disclosures relating to 3M's business segments are provided in Note 19. Effective in the first quarter of 2022, the measure of segment operating performance used by 3M's chief operating decision maker (CODM) changed and, as a result, 3M's disclosed measure of segment profit/loss (business segment operating income) was updated for all comparative periods presented. The change to business segment operating income aligns with the update to how the CODM assesses performance and allocates resources for the Company's business segments (see Note 19 for additional details).

Information provided herein reflects the impact of these changes for all periods presented. 3M manages its operations in four business segments. The reportable segments are Safety and Industrial; Transportation and Electronics; Health Care; and Consumer.

Corporate and Unallocated:

In addition to these four business segments, 3M assigns certain costs to “Corporate and Unallocated,” which is presented separately in the preceding business segments table and in Note 19. Corporate and Unallocated operating income includes “corporate special items” and “other corporate expense-net”. Corporate special items include net costs for significant litigation associated with Combat Arms Earplugs and Aearo-respirator mask/asbestos matters during the chapter 11 bankruptcy period (which began in July 2022) and with PFAS-related other environmental matters (see Note 16). Corporate special items also include divestiture costs, gain/loss on business divestitures (see Note 3), divestiture-related restructuring costs (see Note 5), and Russia exit costs (see Note 15). Divestiture costs include costs related to separating and divesting substantially an entire business segment of 3M following public announcement of its intended divestiture. Other corporate expense-net includes items such as net costs related to limited unallocated corporate staff and centrally managed material resource centers of expertise costs, corporate philanthropic activity, and other net costs that 3M may choose not to allocate directly to its business segments. Other corporate expense-net also includes costs and income from transition supply, manufacturing and service arrangements with Neogen Corporation following the split-off of 3M's Food Safety business in 2022 and with the acquirer of the former Drug Delivery business following its 2020 divestiture. Items classified as revenue from this activity are included in Corporate and Unallocated net sales. Because Corporate and Unallocated includes a variety of miscellaneous items, it is subject to fluctuation on a quarterly and annual basis.

Corporate and Unallocated operating expenses decreased in 2022, when compared to the same period last year. The subsections below provide additional information.

Corporate Special Items

Refer to the *Certain amounts adjusted for special items - (non-GAAP measures)* section for additional details on the impact of special items and to Note 19 for additional information on the components of corporate special items. Corporate special item net costs decreased in 2022 year over year primarily due to the gain on divestiture associated with the 2022 split-off of the Food Safety business (discussed in Note 3) partially offset by additional commitments in 2022 to address PFAS-related matters, including at 3M's Zwijndrecht, Belgium site (discussed in Note 16).

Other Corporate Expense - Net

Other corporate operating expenses, net, increased when compared to the same period last year primarily due to a \$91 million pre-tax benefit from the impact of the favorable decision of the Brazilian Supreme Court included in the second quarter of 2021 regarding the calculation of past social taxes.

Operating Business Segments:

Information related to 3M's business segments is presented in the tables that follow with additional context in the corresponding narrative below the tables.

Safety and Industrial Business (33.9% of consolidated sales):

	2022	2021
Sales (millions)	\$ 11,604	\$ 11,981
Sales change analysis:		
Organic sales	1.0%	7.3%
Translation	(4.2)	1.9
Total sales change	(3.2%)	9.2%
Business segment operating income (loss) (millions)	\$ 1,199	\$ 2,466
Percent change	(51.4%)	(4.7%)
Percent of sales	10.3 %	20.6 %
Adjusted business segment operating income (millions) (non-GAAP measure)	\$ 2,613	\$ 2,715
Percent change	(3.7) %	(2.8) %
Percent of sales	22.5 %	22.7 %

The preceding table also displays business segment operating income (loss) information adjusted for special items. For Safety and Industrial these adjustments include net costs for respirator mask/asbestos (Aearo-related and non-Aearo related) and Combat Arms Earplugs litigation matters. During the Aearo chapter 11 bankruptcy period (which began in July 2022 — see Note 16), net costs related to Combat Arms Earplugs and Aearo-respirator mask/asbestos matters are reflected as corporate special items in Corporate and Unallocated while those associated with non-Aearo respirator mask/asbestos matters continue to be reflected as special items in the Safety and Industrial business segment. Refer to the *Certain amounts adjusted for special items - (non-GAAP measures)* section for additional details.

Year 2022 results:

Sales in Safety and Industrial were down 3.2 percent in U.S. dollars.

On an organic sales basis:

- Sales increased in electrical markets, abrasives, automotive aftermarket, roofing granules, closure and masking systems, and industrial adhesives and tapes and decreased in personal safety.
- Growth from continued improving general industrial manufacturing activity and other end-market demand was partially offset by the disposable respirator sales decline within personal safety, which negatively impacted year-on-year organic growth by 4.5 percentage points.

Business segment operating income margins decreased year-on-year due to special item costs for significant litigation primarily related to steps toward resolving Combat Arms Earplugs litigation (discussed in Note 16) resulting in a 2022 second quarter pre-tax charge of approximately \$1.2 billion. Margins were also impacted by increased raw materials and logistics costs, manufacturing productivity headwinds, partially offset by selling price actions, spending discipline and restructuring actions. Adjusting for special item costs for significant litigation (non-GAAP measure), business segment operating income margins decreased year-on-year as displayed above.

Year 2021 results:

Sales in Safety and Industrial were up 9.2 percent in U.S. dollars.

On an organic sales basis:

- Sales increased in abrasives, industrial adhesives and tapes, automotive aftermarket, electrical markets, roofing granules, and closure and masking systems and decreased in personal safety.
- Growth was driven by improving general industrial manufacturing activity and other end-market demand partially offset by prior-year strong pandemic-related respirator mask demand.

Business segment operating income margins decreased year-on-year due to increases in raw materials, logistics and special item costs for significant litigation; lower gain on sale of properties; and manufacturing productivity impacts that were partially offset by sales growth leverage, and benefits from restructuring actions and lower related charges. Adjusting for special item costs for significant litigation (non-GAAP measure), business segment operating income margins decreased year-on-year as displayed above.

Transportation and Electronics Business (26.0% of consolidated sales):

	2022	2021
Sales (millions)	\$ 8,902	\$ 9,262
Sales change analysis:		
Organic sales	1.2 %	8.7 %
Divestitures	(0.5)	—
Translation	(4.6)	1.5
Total sales change	(3.9)%	10.2 %
Business segment operating income (millions)	\$ 1,012	\$ 1,880
Percent change	(46.2)%	10.6 %
Percent of sales	11.4 %	20.3 %
Adjusted business segment operating income (millions) (non-GAAP measure)	\$ 1,812	\$ 1,880
Percent change	(3.6) %	10.6 %
Percent of sales	20.4 %	20.3 %

The preceding table also displays business segment operating income (loss) information adjusted for special items. For Transportation and Electronics these adjustments include PFAS manufacturing exit costs. Refer to the *Certain amounts adjusted for special items - (non-GAAP measures)* section for additional details.

Year 2022 results:

Sales in Transportation and Electronics were down 3.9 percent in U.S. dollars.

On an organic sales basis:

- Sales increased in automotive and aerospace, commercial solutions and advanced materials, and decreased in transportation safety and electronics.
- Growth was held back by weaker consumer electronics end-market demand and ongoing impacts of semiconductor supply chain constraints on automotive markets.

Divestitures:

- Divestiture impact relates to lost Transportation and Electronics sales year-on-year from deconsolidation of the Aearo Entities in July 2022.

Business segment operating income margins decreased year-on-year due to special item charges for PFAS manufacturing exit costs related to asset impairments (discussed in Note 15) resulting in a 2022 fourth quarter pre-tax charge of \$0.8 billion. Margins were also impacted by increased raw materials and logistics costs, manufacturing productivity headwinds which were further magnified by the shutdown of certain operations in Belgium and investments in auto electrification, partially offset by selling price actions, strong spending discipline and restructuring actions. Adjusting for special item PFAS manufacturing exit costs (non-GAAP measure), business segment operating income margins increased year-on-year as displayed above.

Year 2021 results:

Sales in Transportation and Electronics were up 10.2 percent in U.S. dollars.

On an organic sales basis:

- Sales increased in advanced materials, commercial solutions, automotive and aerospace, electronics and transportation safety.
- Growth benefited from improving automotive-end market activity such as increases in car and light truck builds, strong demand in data center, semiconductor, interconnect and consumer electronics markets and increased advertising spend and return to workplace trends partially offset by impacts from semiconductor supply chain constraints.

Business segment operating income margins increased year-on-year due to sales growth leverage, benefits from restructuring actions and lower related charges, and COVID impacts recognized on certain assets in 2020 that were partially offset by increases in raw materials and logistic costs, manufacturing productivity impacts, and increased compensation and benefit costs.

Health Care Business (24.6% of consolidated sales):

	2022	2021
Sales (millions)	\$ 8,421	\$ 8,597
Sales change analysis:		
Organic sales	3.2 %	10.2 %
Divestitures	(1.4)	(2.0)
Translation	(3.8)	1.6
Total sales change	(2.0) %	9.8 %
Business segment operating income (millions)	\$ 1,815	\$ 2,037
Percent change	(10.9) %	22.5 %
Percent of sales	21.6 %	23.7 %

Year 2022 results:

Sales in Health Care were down 2.0 percent in U.S. dollars.

On an organic sales basis:

- Sales increased in separation and purification, health information systems, food safety and medical solutions, and was flat in oral care.
- Growth continues to be impacted by COVID-related trends on elective procedure volumes and ongoing inflationary pressures.

Divestitures:

- Divestiture impact relates to the lost sales year-on-year from the divestiture from the Food Safety Division split-off transaction and combination with Neogen completed in the third quarter of 2022.

Business segment operating income margins decreased year-on-year due to increased raw materials and logistics costs along with manufacturing productivity headwinds, investments in the business and transaction-related costs associated with the announced divestiture of the food safety business (see Note 3), partially offset by sales growth (including selling price actions), strong spending discipline and restructuring actions.

As discussed in Note 3, in July 2022, 3M announced its intention to spin off the Health Care business as a separate public company. 3M expects to initially retain a 19.9% ownership position in the Health Care business.

Year 2021 results:

Sales in Health Care were up 9.8 percent in U.S. dollars.

On an organic sales basis:

- Sales increased in oral care, separation and purification, food safety, health information systems and medical solutions.
- Growth benefited from higher year-on-year dental procedures, continued high demand for biopharma filtration solutions for COVID-related vaccine and therapeutic development and manufacturing, rising elective procedure volumes in the first six months of 2021 and due to improving hospital information technology investments.

Divestitures:

- In May 2020, 3M completed the sale of substantially all of its drug delivery business.

Business segment operating income margins increased year-on-year due to sales growth leverage and benefits from restructuring actions and lower related charges that were partially offset by supply chain disruptions, increases in raw materials and logistics costs, deal-related costs associated with the announced divestiture of the food safety business (see Note 3), manufacturing productivity impacts, increased compensation and benefit costs, and increased investments in growth.

Consumer Business (15.5% of consolidated sales):

	2022	2021
Sales (millions)	\$ 5,298	\$ 5,513
Sales change analysis:		
Organic sales	(0.9) %	9.8 %
Divestitures	(0.4)	—
Translation	(2.6)	1.0
Total sales change	(3.9) %	10.8 %
Business segment operating income (millions)	\$ 994	\$ 1,162
Percent change	(14.4) %	3.8 %
Percent of sales	18.8 %	21.1 %

Year 2022 results:

Sales in Consumer were down 3.9 percent in U.S. dollars.

On an organic sales basis:

- Sales increased in stationery and office and home care, was flat in consumer health and safety, and decreased in home improvement.
- Growth was impacted by softening trends in the Consumer retail business as consumers pulled back on discretionary spending and retailers took actions to reduce their inventories. These impacts were partially offset by demand for Scotch Blue™ painter's tape, Scotch-Brite™, and Post-it®-solutions.

Business segment operating income margins decreased year-on-year as a result of increased raw materials, logistics and outsourced hardgoods manufacturing costs along with manufacturing productivity headwinds and investments in the business, partially offset by sales growth (including selling price actions), strong spending discipline and restructuring actions.

Year 2021 results:

Sales in Consumer were up 10.8 percent in U.S. dollars.

On an organic sales basis:

- Sales increased in stationery and office, home improvement, consumer health and safety and home care.
- Growth driven by continued strength in the market with strong demand for Command™ adhesives, Filtrete™ air quality solutions, Meguiars™ auto care and Scotch Blue™ painter's tape and from ongoing strength in demand for packaging and shipping products, Post-it®-solutions and Scotch® brand office tapes as the business laps last year's COVID-related comparisons.

Business segment operating income margins decreased year-on-year as a result of increases in raw materials, logistics, and outsourced hardgoods manufacturing costs, manufacturing productivity impacts, and increased compensation and benefit costs that more than offset leverage from sales growth and benefits from restructuring actions and lower related charges.

PERFORMANCE BY GEOGRAPHIC AREA

While 3M manages its businesses globally and believes its business segment results are the most relevant measure of performance, the Company also utilizes geographic area data as a secondary performance measure. Export sales are generally reported within the geographic area where the final sales to 3M customers are made. A portion of the products or components sold by 3M's operations to its customers are exported by these customers to different geographic areas. As customers move their operations from one geographic area to another, 3M's results will follow. Thus, net sales in a particular geographic area are not indicative of end-user consumption in that geographic area. Financial information related to 3M operations in various geographic areas is provided in Note 2 and Note 19.

Refer to the "Overview" section for a summary of net sales by geographic area and business segment.

Geographic Area Supplemental Information

(Millions, except Employees)	Employees as of December 31,		Capital Spending		Property, Plant and Equipment - net as of December 31,	
	2022	2021	2022	2021	2022	2021
Americas	54,000	56,000	\$ 1,321	\$ 1,046	\$ 6,066	\$ 5,864
Asia Pacific	18,000	18,000	182	216	1,389	1,582
Europe, Middle East and Africa	20,000	21,000	246	341	1,723	1,983
Total Company	92,000	95,000	\$ 1,749	\$ 1,603	\$ 9,178	\$ 9,429

Employment:

Employment decreased in 2022 when compared to 2021. The above table includes the impact of acquisitions, net of divestitures and other actions.

Capital Spending/Net Property, Plant and Equipment:

Investments in property, plant and equipment enable growth across many diverse markets, helping to meet product demand and increasing manufacturing efficiency. 3M is increasing its investment in manufacturing and sourcing capability in order to more closely align its product capability with its sales in major geographic areas in order to best serve its customers throughout the world with proprietary, automated, efficient, safe and sustainable processes. Capital spending is discussed in more detail later in MD&A in the section entitled “Cash Flows from Investing Activities.”

CRITICAL ACCOUNTING ESTIMATES

Information regarding significant accounting policies is included in Note 1 to the consolidated financial statements. As stated in Note 1, the preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make certain estimates and assumptions. Such estimates and assumptions are subject to inherent uncertainties which may result in actual amounts differing from these estimates.

The Company considers the items below to be critical accounting estimates. Critical accounting estimates are those estimates made in accordance with generally accepted accounting principles that involve a significant level of estimation uncertainty and have had or are reasonably likely to have a material impact on the financial condition or results of operations of the Company. Senior management has discussed the development, selection and disclosure of its critical accounting estimates with the Audit Committee of 3M’s Board of Directors.

Legal Proceedings:

Assessments of lawsuits and claims can involve a series of complex judgments about future events, the outcomes of which are inherently uncertain, and can rely heavily on estimates and assumptions. The Company accrues an estimated liability for legal proceeding claims that are both probable and reasonably estimable in accordance with Accounting Standard Codification (ASC) 450, *Contingencies*. Please refer to the section entitled “Process for Disclosure and Recording of Liabilities Related to Legal Proceedings” (contained in “Legal Proceedings” in Note 16) for additional information about such estimates.

Pension and Postretirement Obligations:

The Company applies certain estimates for the discount rates and expected return on plan assets in determining its defined benefit pension and postretirement obligations and related net periodic benefit costs. The below further describes these estimates. Note 13 provides the weighted averages of these assumptions as of applicable dates and for respective periods and additional information on how the rates were determined.

Discount rate

The defined benefit pension and postretirement obligation represents the present value of the benefits that employees are entitled to in the future for services already rendered as of the measurement date. The Company measures the present value of these future benefits by projecting benefit payment cash flows for each future period and discounting these cash flows back to the December 31 measurement date, using the yields of a portfolio of high quality, fixed-income debt instruments that would produce cash flows sufficient in timing and amount to settle projected future benefits. Service cost and interest cost are measured separately using the spot yield curve approach applied to each corresponding obligation. Service costs are determined based on duration-specific spot rates applied to the service cost cash flows. The interest cost calculation is determined by applying duration-specific spot rates to the year-by-year projected benefit payments. The spot yield curve approach does not affect the measurement of the total benefit obligations as the change in service and interest costs offset the actuarial gains and losses recorded in other comprehensive income. Changes in expected benefit payment and service cost cash flows, as well as ongoing changes in market activity and yields, cause these rates to be subject to uncertainty.

Using this methodology, the Company determined discount rates for its plans as follow:

	U.S. Qualified Pension	International Pension (weighted average)	U.S. Postretirement Medical
December 31, 2022 Liability:			
Benefit obligation	5.18 %	4.39 %	5.13 %
2023 Net Periodic Benefit Cost Components:			
Service cost	5.27 %	4.06 %	5.26 %
Interest cost	5.11 %	4.39 %	5.05 %

Expected return on plan assets

The expected return on plan assets for the primary U.S. qualified pension plan is based on strategic asset allocation of the plan, long-term capital market return expectations, and expected performance from active investment management. For the primary U.S. qualified pension plan, the expected long-term rate of return on an annualized basis for 2023 is 7.50%, an increase from 6.00% in 2022. Return on assets assumptions for international pension and other post-retirement benefit plans are calculated on a plan-by-plan basis using plan asset allocations and expected long-term rate of return assumptions. The weighted average expected return for the international pension plans is 4.61% for 2023 compared to 3.86% for 2022. Changes in asset allocation and market performance over time, among other factors, cause these estimates to be subject to uncertainty.

For the year ended December 31, 2022, the Company recognized consolidated defined benefit pre-tax pension and postretirement service cost expense of \$426 million and a benefit of \$248 million related to all non-service pension and postretirement net benefit costs (after settlements, curtailments, special termination benefits and other) for a total consolidated defined benefit pre-tax pension and postretirement expense of \$178 million, down from \$206 million in 2021.

In 2023, defined benefit pension and postretirement service cost expense is anticipated to total approximately \$270 million while non-service pension and postretirement net benefit costs is anticipated to be a benefit of approximately \$125 million, for a total consolidated defined benefit pre-tax pension and postretirement expense of approximately \$145 million, a decrease of approximately \$30 million compared to 2022.

Assessments of Goodwill:

The Company makes certain estimates and judgments in impairment assessments of goodwill. As of December 31, 2022, 3M goodwill totaled approximately \$12.8 billion. Goodwill is tested for impairment annually in the fourth quarter of each year and is tested between annual tests if an event occurs or circumstances change that would indicate the carrying amount may be impaired. If future non-cash asset impairment charges are taken, 3M would expect that only a portion of the goodwill would be impaired.

Impairment testing for goodwill is done at a reporting unit level, with all goodwill assigned to a reporting unit. Reporting units are one level below the business segment level, but are required to be combined when reporting units within the same segment have similar economic characteristics. At 3M, reporting units correspond to a division. 3M did not combine any of its reporting units for impairment testing. An impairment loss would be recognized when the carrying amount of the reporting unit's net assets exceeds the estimated fair value of the reporting unit, and the loss would equal that difference. The estimated fair value of a reporting unit is determined based on a market approach using comparable company information such as EBITDA (earnings before interest, taxes, depreciation and amortization) multiples. 3M also performs a discounted cash flow analysis for certain reporting units where the market approach indicates additional review is warranted. A discounted cash flow analysis involves key assumptions including projected sales, EBITDA margins, capital expenditures, and discount rates. Changes in reporting unit earnings, comparable company information, and expected future cash flows, as well as underlying market and overall economic conditions, among other factors, make these estimates subject to uncertainty.

Based on the annual test in the fourth quarter of 2022 completed as of October 1, 2022, no goodwill impairment was indicated for any of the reporting units. As of October 1, 2022, 3M had 21 primary reporting units, with ten reporting units accounting for approximately 94 percent of the goodwill. These ten reporting units were comprised of the following divisions: Advanced Materials, Display Materials and Systems, Electronics Materials Solutions, Health Information Systems, Industrial Adhesives and Tapes, Medical Solutions, Oral Care, Personal Safety, Separation and Purification Sciences, and Transportation Safety.

3M is a highly integrated enterprise, where businesses share technology and leverage common fundamental strengths and capabilities, thus many of 3M's businesses could not easily be sold on a stand-alone basis. 3M's focus on research and development has resulted in a portion of 3M's value being comprised of internally developed businesses.

Following the annual impairment test, as a result of 3M's December 2022 announced commitment to a plan to exit per- and polyfluoroalkyl substance (PFAS) manufacturing as described in Notes 4 and 15, 3M tested the Advanced Materials and Electronics Materials Solutions reporting units (within the Transportation and Electronics business) for impairment resulting in a goodwill impairment charge related to the Advanced Materials reporting unit.

3M will continue to monitor its reporting units and asset groups in 2023 for any triggering events or other indicators of impairment.

Assessments of Long-Lived Assets:

The Company makes certain estimates and judgments in impairment assessments of long-lived assets. As discussed in Note 1, long-lived assets are reviewed for impairment when events or changes in circumstances indicate that the carrying amount of an asset (asset group) may not be recoverable. An impairment loss is recognized when the carrying amount exceeds the estimated undiscounted future cash flows expected to result from the use of the asset group and its eventual disposition. The amount of the impairment is based on the excess of the asset group's carrying value over its fair value. As discussed in Notes 4 and 15, in December 2022, as a result of 3M's commitment to a plan to exit per- and polyfluoroalkyl substance (PFAS) manufacturing, 3M recorded a charge related to impairment of long-lived assets. Underlying fair values were determined primarily using discounted cash flow models. Key assumptions included projected sales, EBITDA margins, capital expenditures, and discount rates. Changes in underlying market and overall economic conditions, including changes in competitive conditions and customer preferences; operational execution of activities associated with these asset groupings; and items mentioned in Item 1A—Risk Factors with respect to 3M's exit of PFAS manufacturing, among other factors, make these estimates subject to uncertainty.

Uncertainty in Income Tax Positions:

The extent of 3M's operations involves dealing with uncertainties and judgments in the application of complex tax regulations in a multitude of jurisdictions. The final taxes paid are dependent upon many factors, including negotiations with taxing authorities in various jurisdictions and resolution of disputes arising from federal, state, and international tax audits. The Company recognizes potential liabilities and records tax liabilities for anticipated tax audit issues in the United States and other tax jurisdictions based on its estimate of whether, and the extent to which, additional taxes will be due. The Company follows guidance provided by ASC 740, *Income Taxes*, a subset of which relates to uncertainty in income taxes, to record these liabilities (refer to Note 10 for additional information). The Company adjusts these reserves in light of changing facts and circumstances; however, due to the complexity of some of these uncertainties, the ultimate resolution may result in a payment that is materially different from the Company's current estimate of the tax liabilities. If the Company's estimate of tax liabilities proves to be less than the ultimate assessment, an additional charge to expense would result. If payment of these amounts ultimately proves to be less than the recorded amounts, the reversal of the liabilities would result in tax benefits being recognized in the period when the Company determines the liabilities are no longer necessary.

NEW ACCOUNTING PRONOUNCEMENTS

Information regarding new accounting pronouncements is included in Note 1 to the Consolidated Financial Statements.

FINANCIAL CONDITION AND LIQUIDITY

The strength and stability of 3M's business model and strong free cash flow capability, together with proven capital markets access, provide financial flexibility to deploy capital in accordance with the Company's stated priorities and meet needs associated with contractual commitments and other obligations. Investing in 3M's business to drive organic growth and deliver strong returns on invested capital remains the first priority for capital deployment. This includes research and development, capital expenditures, and commercialization capability. The Company also continues to actively manage its portfolio through acquisitions and divestitures to maximize value for shareholders. 3M expects to continue returning cash to shareholders through dividends and share repurchases. To fund cash needs in the United States, the Company relies on ongoing cash flow from U.S. operations, access to capital markets and repatriation of the earnings of its foreign affiliates that are not considered to be permanently reinvested. For those international earnings still considered to be reinvested indefinitely, the Company currently has no plans or intentions to repatriate these funds for U.S. operations. See Note 10 for further information on earnings considered to be reinvested indefinitely.

3M maintains a strong liquidity profile. The Company's primary short-term liquidity needs are met through cash on hand and U.S. commercial paper issuances. 3M believes it will have continuous access to the commercial paper market. 3M's commercial paper program permits the Company to have a maximum of \$5 billion outstanding with a maximum maturity of 397 days from date of issuance. The Company had no commercial paper outstanding at December 31, 2022 and December 31, 2021.

Total debt:

The strength of 3M's credit profile and significant ongoing cash flows provide 3M proven access to capital markets. Additionally, the Company's debt maturity profile is staggered to help ensure refinancing needs in any given year are reasonable in proportion to the total portfolio. As of December 2022, 3M has a credit rating of A1, stable outlook from Moody's Investors Service, and a credit rating of A+, CreditWatch negative from S&P Global Ratings.

The Company's total debt was lower at December 31, 2022 when compared to December 31, 2021. Decreases in debt were largely due to the repayments of 500 million euros and \$600 million aggregate principal amounts of fixed-rate medium-term notes in February 2022 and June 2022, respectively. For discussion of repayments of and proceeds from debt refer to the following "Cash Flows from Financing Activities" section.

In July 2017, the United Kingdom's Financial Conduct Authority announced that it would no longer require banks to submit rates for the London InterBank Offered Rate ("LIBOR") after 2021. In November 2020, the ICE Benchmark Administration (IBA), LIBOR's administrator, proposed extending the publication of USD LIBOR through June 2023. Subsequently, in March of 2021, IBA ceased publication of certain LIBOR rates after December 31, 2021. USD LIBOR rates that did not cease on December 31, 2021 will continue to be published through June 30, 2023. The Company has reviewed its debt securities, bank facilities, derivative instruments, and commercial contracts that may utilize LIBOR as the reference rate. Contracts will be modified to apply a new reference rate where applicable.

Effective February 10, 2020, the Company updated its "well-known seasoned issuer" (WKSI) shelf registration statement, which registers an indeterminate amount of debt or equity securities for future issuance and sale. This replaced 3M's previous shelf registration dated February 24, 2017. In May 2016, in connection with the WKSI shelf, 3M entered into an amended and restated distribution agreement relating to the future issuance and sale (from time to time) of the Company's medium-term notes program (Series F), up to the aggregate principal amount of \$18 billion, which was an increase from the previous aggregate principal amount up to \$9 billion of the same Series. As of December 31, 2022, the total amount of debt issued as part of the medium-term notes program (Series F), inclusive of debt issued in February 2019 and prior years is approximately \$17.6 billion (utilizing the foreign exchange rates applicable at the time of issuance for the euro denominated debt). Information with respect to long-term debt issuances and maturities for the periods presented is included in Note 12.

As disclosed in Note 12, 3M had debt financing facilities providing commitments for term loans and potential bridge financing aggregating \$1.0 billion related to the Food Safety Division split-off transaction and combination with Neogen (discussed in Note 3). The debt commitments also included a \$150 million revolving credit facility for the Food Safety business. Coincident with completion of the September 2022 split-off, the Food Safety business term loan borrowings funded the cash payment to 3M discussed in Note 3. The bridge financing component of these facilities was terminated early and not utilized. Obligations under the commitments (including the \$150 million revolving credit facility) transferred with the Food Safety business and became those of Neogen.

Cash, cash equivalents and marketable securities:

At December 31, 2022, 3M had \$3.9 billion of cash, cash equivalents and marketable securities, of which approximately \$2.7 billion was held by the Company's foreign subsidiaries and approximately \$1.2 billion was held in the United States. These balances are invested in bank instruments and other high-quality fixed income securities. At December 31, 2021, 3M had \$4.8 billion of cash, cash equivalents and marketable securities, of which approximately \$3.1 billion was held by the Company's foreign subsidiaries and \$1.7 billion was held by the United States. The decrease from December 31, 2021 primarily resulted from cash flow from operations and Food Safety transaction-related cash consideration and earlier borrowings (see Note 3) offset by ongoing dividend payments, purchases of treasury stock, capital expenditures, and the fixed-rate medium-term note maturities in 2022.

Net Debt (non-GAAP measure):

Net debt is not defined under U.S. GAAP and may not be computed the same as similarly titled measures used by other companies. The Company defines net debt as total debt less the total of cash, cash equivalents and current and long-term marketable securities. 3M believes net debt is meaningful to investors as 3M considers net debt and its components to be important indicators of liquidity and financial position. The following table provides net debt as of December 31, 2022 and 2021.

(Millions)	December 31,		Change
	2022	2021	
Total debt	\$ 15,939	\$ 17,363	\$ (1,424)
Less: Cash, cash equivalents and marketable securities	3,916	4,792	(876)
Net debt (non-GAAP measure)	\$ 12,023	\$ 12,571	\$ (548)

Refer to the preceding "Total Debt" and "Cash, Cash Equivalents and Marketable Securities" sections for additional details.

Balance Sheet:

3M's strong balance sheet and liquidity provide the Company with significant flexibility to fund its numerous opportunities going forward. The Company will continue to invest in its operations to drive growth, including continual review of acquisition opportunities.

The Company uses working capital measures that place emphasis and focus on certain working capital assets, such as accounts receivable and inventory activity.

Working capital (non-GAAP measure):

(Millions)	December 31,		Change
	2022	2021	
Current assets	\$ 14,688	\$ 15,403	\$ (715)
Less: Current liabilities	9,523	9,035	488
Working capital (non-GAAP measure)	\$ 5,165	\$ 6,368	\$ (1,203)

Various assets and liabilities, including cash and short-term debt, can fluctuate significantly from month to month depending on short-term liquidity needs. Working capital is not defined under U.S. generally accepted accounting principles and may not be computed the same as similarly titled measures used by other companies. The Company defines working capital as current assets minus current liabilities. 3M believes working capital is meaningful to investors as a measure of operational efficiency and short-term financial health.

Working capital decreased \$1.2 billion compared with December 31, 2021. Balance changes in current assets decreased working capital by \$0.7 billion, driven largely by decreases in cash and cash equivalents. Balance changes in current liabilities decreased working capital by \$0.5 billion, primarily due to increases in short-term borrowings and current-portion of long-term debt offset by decreases in accrued payroll.

Inventory increased \$387 million from December 31, 2021, primarily as a result of increased underlying operating activity partially offset by foreign currency translation impacts. Current portion of long-term debt increased as upcoming debt maturities now considered current were partially offset by the bond maturities in 2022, while accounts payable also increased as a result of increased sequential operating activity partially offset by foreign currency translation impacts.

Cash Flows:

Cash flows from operating, investing and financing activities are provided in the tables that follow. Individual amounts in the Consolidated Statement of Cash Flows exclude the effects of acquisitions, divestitures and exchange rate impacts on cash and cash equivalents, which are presented separately in the cash flows. Thus, the amounts presented in the following operating, investing and financing activities tables reflect changes in balances from period to period adjusted for these effects.

Cash Flows from Operating Activities:

Year ended December 31, (Millions)	2022	2021
Net income including noncontrolling interest	\$ 5,791	\$ 5,929
Depreciation and amortization	1,831	1,915
Long-lived and indefinite-lived asset impairment expense	618	—
Goodwill impairment expense	271	—
Company pension and postretirement contributions	(158)	(180)
Company pension and postretirement expense	178	206
Stock-based compensation expense	263	274
Gain on business divestitures	(2,724)	—
Income taxes (deferred and accrued income taxes)	(710)	(410)
Accounts receivable	(105)	(122)
Inventories	(629)	(903)
Accounts payable	111	518
Other — net	854	227
Net cash provided by (used in) operating activities	\$ 5,591	\$ 7,454

Cash flows from operating activities can fluctuate significantly from period to period, as working capital movements, tax timing differences and other items can significantly impact cash flows.

In 2022, cash flows provided by operating activities decreased \$1,863 million compared to the same period last year, with this decrease primarily due to lower net income and the cash impact from capitalization of R&D for U.S. tax purposes. The combination of accounts receivable, inventories and accounts payable decreased operating cash flow by \$623 million in 2022, compared to an operating cash flow decrease of \$507 million in 2021. Additional discussion on working capital changes is provided earlier in the “Financial Condition and Liquidity” section. The 2022 second quarter pre-tax charge of approximately \$1.2 billion related to steps toward resolving Combat Arms Earplugs litigation (discussed in Note 16) largely impacted the 2022 net income component above, with offsets in the other-net and deferred tax elements. The 2022 non-cash impairment expenses added back to net income in arriving at net cash provided by operating activities above primarily relate to 3M's commitment to a plan to exit per- and polyfluoroalkyl substance (PFAS) manufacturing as described in Note 15.

Cash Flows from Investing Activities:

Year ended December 31, (Millions)	2022	2021
Purchases of property, plant and equipment (PP&E)	\$ (1,749)	\$ (1,603)
Proceeds from sale of PP&E and other assets	200	51
Purchases and proceeds from maturities and sale of marketable securities and investments, net	11	204
Proceeds from sale of businesses, net of cash sold	13	—
Cash payment from Food Safety business split-off, net of divested cash	478	—
Other — net	1	31
Net cash provided by (used in) investing activities	\$ (1,046)	\$ (1,317)

Investments in property, plant and equipment enable growth across many diverse markets, helping to meet product demand and increasing manufacturing efficiency. The Company expects 2023 capital spending to be approximately \$1.5 billion to \$1.8 billion as 3M continues to invest in growth, productivity and sustainability.

3M records capital-related government grants earned as reductions to the cost of property, plant and equipment; and associated unpaid liabilities and grant proceeds receivable are considered non-cash changes in such balances for purposes of preparation of statement of cash flows.

3M invests in renewal and maintenance programs, which pertain to cost reduction, cycle time, maintaining and renewing current capacity, eliminating pollution, and compliance. Costs related to maintenance, ordinary repairs, and certain other items are expensed. 3M also invests in growth, which adds to capacity, driven by new products, both through expansion of current facilities and new facilities. Finally, 3M also invests in other initiatives, such as information technology (IT), laboratory facilities, and a continued focus on investments in sustainability.

Refer to Note 3 for information on acquisitions and divestitures (including the cash payment from the Food Safety business split-off). The Company is actively considering additional acquisitions, investments and strategic alliances, and from time to time may also divest certain businesses.

Purchases of marketable securities and investments and proceeds from maturities and sale of marketable securities and investments are primarily attributable to certificates of deposit/time deposits, commercial paper, and other securities, which are classified as available-for-sale. Refer to Note 11 for more details about 3M's diversified marketable securities portfolio. Purchases of investments include additional survivor benefit insurance, plus investments in equity securities.

Cash Flows from Financing Activities:

Year ended December 31, (Millions)	2022	2021
Change in short-term debt — net	\$ 340	\$ (2)
Repayment of debt (maturities greater than 90 days)	(1,179)	(1,144)
Proceeds from debt (maturities greater than 90 days)	1	1
Total cash change in debt	(838)	(1,145)
Purchases of treasury stock	(1,464)	(2,199)
Proceeds from issuances of treasury stock pursuant to stock option and benefit plans	381	639
Dividends paid to shareholders	(3,369)	(3,420)
Other — net	(60)	(20)
Net cash provided by (used in) financing activities	\$ (5,350)	\$ (6,145)

2022 Debt Activity:

Total debt was approximately \$15.9 billion at December 31, 2022 and \$17.4 billion at December 31, 2021. Decreases in debt were largely due to the repayments of 500 million euros and \$600 million aggregate principal amounts of fixed-rate medium-term notes in February 2022 and June 2022, respectively. The Company had no commercial paper outstanding at December 31, 2022 and 2021. In conjunction with the Food Safety Division split-off transaction and combination with Neogen (discussed in Note 3), the associated non-cash debt-for-debt exchange in the third quarter of 2022 reduced then-outstanding 3M commercial paper indebtedness of \$350 million (borrowed earlier in the year) which became new term-debt obligations of Neogen. Net commercial paper issuances in addition to repayments and borrowings by international subsidiaries are largely reflected in "Change in short-term debt – net" in the preceding table. 3M's primary short-term liquidity needs are met through cash on hand and U.S. commercial paper issuances. Refer to Note 12 for more detail regarding debt.

2021 Debt Activity:

Decreases in debt were largely due to the March 2021 early redemption of \$450 million in debt maturing in 2022 via make-whole call offers and the November 2021 repayment of 600 million euros aggregate principal amount of Eurobonds that matured. The Company had no commercial paper outstanding at December 31, 2021 and December 31, 2020. Net commercial paper issuances in addition to repayments and borrowings by international subsidiaries are largely reflected in "Change in short-term debt – net" in the preceding table.

Repurchases of Common Stock:

Repurchases of common stock are made to support the Company's stock-based employee compensation plans and for other corporate purposes. In 2022, the Company purchased \$1,464 million of its own stock. For more information, refer to the table titled "Issuer Purchases of Equity Securities" in Part II, Item 5. The Company does not utilize derivative instruments linked to the Company's stock.

Dividends Paid to Shareholders:

3M has paid dividends since 1916. In February 2023, 3M's Board of Directors declared a first-quarter 2023 dividend of \$1.50 per share, an increase of 1 percent. This is equivalent to an annual dividend of \$6.00 per share and marked the 65th consecutive year of dividend increases.

Other cash flows from financing activities may include various other items, such as cash paid associated with certain derivative instruments, distributions to or sales of noncontrolling interests, changes in overdraft balances, and principal payments for finance leases.

Free Cash Flow (non-GAAP measure):

Free cash flow and free cash flow conversion are not defined under U.S. generally accepted accounting principles (GAAP). Therefore, they should not be considered a substitute for income or cash flow data prepared in accordance with U.S. GAAP and may not be comparable to similarly titled measures used by other companies. The Company defines free cash flow as net cash provided by operating activities less purchases of property, plant and equipment. It should not be inferred that the entire free cash flow amount is available for discretionary expenditures. The Company defines free cash flow conversion as free cash flow divided by net income attributable to 3M. The Company believes free cash flow and free cash flow conversion are meaningful to investors as they are useful measures of performance and the Company uses these measures as an indication of the strength of the company and its ability to generate cash. Free cash flow and free cash flow conversion vary across quarters throughout the year. Below find a recap of free cash flow and free cash flow conversion.

Refer to the preceding "Cash Flows from Operating Activities" and "Cash Flows from Investing Activities" sections for discussion of items that impacted the operating cash flow and purchases of PP&E components of the calculation of free cash flow. Refer to the preceding "Results of Operations" section for discussion of items that impacted the net income attributable to 3M component of the calculation of free cash flow conversion.

Year ended December 31, (Millions)	2022	2021
Major GAAP Cash Flow Categories		
Net cash provided by (used in) operating activities	\$ 5,591	\$ 7,454
Net cash provided by (used in) investing activities	(1,046)	(1,317)
Net cash provided by (used in) financing activities	(5,350)	(6,145)
Free Cash Flow (non-GAAP measure)		
Net cash provided by (used in) operating activities	\$ 5,591	\$ 7,454
Purchases of property, plant and equipment	(1,749)	(1,603)
Free cash flow	3,842	5,851
Net income attributable to 3M	\$ 5,777	\$ 5,921
Free cash flow conversion	66 %	99 %

Material Cash Requirements from Known Contractual and Other Obligations:

3M's material cash requirements from known contractual and other obligations primarily relate to following, for which information on both a short-term and long-term basis is provided in the indicated notes to the consolidated financial statements:

- Tax obligations—Refer to Note 10.
- Debt—Refer to Note 12. Future cash payments for interest on long-term debt is approximately \$6 billion.
- Commitments and contingencies—Refer to Note 16.
- Operating and finance leases—Refer to Note 17.

3M purchases the majority of its materials and services as needed, with no unconditional commitments. In limited circumstances, in the normal course of business, 3M enters into unconditional purchase obligations with various vendors that may take the form of, for example, take or pay contracts in which 3M guarantees payment to ensure availability to 3M of certain materials or services or to ensure ongoing efforts on capital projects. The Company expects to receive underlying materials or services for these purchase obligations. To the extent the limited amount of these purchase obligations fluctuates, it largely trends with normal-course changes in regular operating activities. Additionally, contractual capital commitments represent a small part of the Company's expected capital spending.

FINANCIAL INSTRUMENTS

The Company enters into foreign exchange forward contracts, options and swaps to hedge against the effect of exchange rate fluctuations on cash flows denominated in foreign currencies and to offset, in part, the impacts of changes in value of various non-functional currency denominated items including certain intercompany financing balances. The Company manages interest rate risks using a mix of fixed and floating rate debt. To help manage borrowing costs, the Company may enter into interest rate swaps. Under these arrangements, the Company agrees to exchange, at specified intervals, the difference between fixed and floating interest amounts calculated by reference to an agreed-upon notional principal amount. The Company manages commodity price risks through negotiated supply contracts and price protection agreements.

Refer to Item 7A, “Quantitative and Qualitative Disclosures About Market Risk”, for further discussion of foreign exchange rates risk, interest rates risk, commodity prices risk and value at risk analysis.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

In the context of Item 7A, 3M is exposed to market risk due to the risk of loss arising from adverse changes in foreign currency exchange rates, interest rates and commodity prices. Changes in those factors could impact the Company’s results of operations and financial condition. Senior management provides oversight for risk management and derivative activities, determines certain of the Company’s financial risk policies and objectives, and provides guidelines for derivative instrument utilization. Senior management also establishes certain associated procedures relative to control and valuation, risk analysis, counterparty credit approval, and ongoing monitoring and reporting.

The Company is exposed to credit loss in the event of nonperformance by counterparties in interest rate swaps, currency swaps, and forward and option contracts. However, the Company’s risk is limited to the fair value of the instruments. The Company actively monitors its exposure to credit risk through the use of credit approvals and credit limits, and by selecting major international banks and financial institutions as counterparties. The Company does not anticipate nonperformance by any of these counterparties.

Foreign Exchange Rates Risk:

Foreign currency exchange rates and fluctuations in those rates may affect the Company’s net investment in foreign subsidiaries and may cause fluctuations in cash flows related to foreign denominated transactions. 3M is also exposed to the translation of foreign currency earnings to the U.S. dollar. The Company enters into foreign exchange forward and option contracts to hedge against the effect of exchange rate fluctuations on cash flows denominated in foreign currencies. These transactions are designated as cash flow hedges. 3M may de-designate these cash flow hedge relationships in advance of the occurrence of the forecasted transaction. The maximum length of time over which 3M hedges its exposure to the variability in future cash flows of the forecasted transactions is 36 months. In addition, 3M enters into foreign currency contracts that are not designated in hedging relationships to offset, in part, the impacts of changes in value of various non-functional currency denominated items including certain intercompany financing balances. As circumstances warrant, the Company also uses foreign currency forward contracts and foreign currency denominated debt as hedging instruments to hedge portions of the Company’s net investments in foreign operations. The dollar equivalent gross notional amount of the Company’s foreign exchange forward and option contracts designated as either cash flow hedges or net investment hedges was \$3.2 billion at December 31, 2022. The dollar equivalent gross notional amount of the Company’s foreign exchange forward and option contracts not designated as hedging instruments was \$2.8 billion at December 31, 2022. In addition, as of December 31, 2022, the Company had €2.4 billion in principal amount of foreign currency denominated debt designated as non-derivative hedging instruments in certain net investment hedges as discussed in Note 14 in the “Net Investment Hedges” section.

Interest Rates Risk:

The Company may be impacted by interest rate volatility with respect to existing debt and future debt issuances. 3M manages interest rate risk and expense using a mix of fixed and floating rate debt. In addition, the Company may enter into interest rate swaps that are designated and qualify as fair value hedges. Under these arrangements, the Company agrees to exchange, at specified intervals, the difference between fixed and floating interest amounts calculated by reference to an agreed-upon notional principal amount. The dollar equivalent (based on inception date foreign currency exchange rates) gross notional amount of the Company’s interest rate swaps at December 31, 2022 was \$800 million. Additional details about 3M’s long-term debt can be found in Note 12, including references to information regarding derivatives and/or hedging instruments, further discussed in Note 14, associated with the Company’s long-term debt.

Commodity Prices Risk:

The Company manages commodity price risks through negotiated supply contracts and price protection agreements.

Value At Risk:

The value at risk analysis is performed annually to assess the Company's sensitivity to changes in currency rates, interest rates, and commodity prices. A Monte Carlo simulation technique was used to test the impact on after-tax earnings related to debt instruments, interest rate derivatives and underlying foreign exchange and commodity exposures outstanding at December 31, 2022. The model (third-party bank dataset) used a 95 percent confidence level over a 12-month time horizon. This model does not purport to represent what actually will be experienced by the Company. The following table summarizes the possible adverse and positive impacts to after-tax earnings related to these exposures.

(Millions)	Adverse impact on after-tax earnings		Positive impact on after-tax earnings	
	2022	2021	2022	2021
Foreign exchange rates	\$ (315)	\$ (140)	\$ 314	\$ 147
Interest rates	(18)	(2)	18	2
Commodity prices	(5)	(21)	7	14

An analysis of the global exposures related to purchased components and materials is performed at each year-end. A one percent price change would result in a pre-tax cost or savings of approximately \$85 million per year. The global energy exposure is such that a ten percent price change would result in a pre-tax cost or savings of approximately \$45 million per year. Global energy exposure includes energy costs used in 3M production and other facilities, primarily electricity and natural gas.

Item 8. Financial Statements and Supplementary Data.

Report of Independent Registered Public Accounting Firm (PCAOB ID 238)

Consolidated Financial Statements

Index to Financial Statements

A complete summary of Form 10-K content, including the index to financial statements, is found at the beginning of this document.

Management's Responsibility for Financial Reporting

Management is responsible for the integrity and objectivity of the financial information included in this report. The financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America. Where necessary, the financial statements reflect estimates based on management's judgment.

Management has established and maintains a system of internal control over financial reporting for the Company and its subsidiaries. This system and its established accounting procedures and related controls are designed to provide reasonable assurance that assets are safeguarded, that the books and records properly reflect all transactions, that policies and procedures are implemented by qualified personnel, and that published financial statements are properly prepared and fairly presented. The Company's system of internal control over financial reporting is supported by widely communicated written policies, including business conduct policies, which are designed to require all employees to maintain high ethical standards in the conduct of Company affairs. Internal auditors continually review the accounting and control system.

3M Company

Management's Report on Internal Control Over Financial Reporting

Management is responsible for establishing and maintaining an adequate system of internal control over financial reporting. Management conducted an assessment of the Company's internal control over financial reporting based on the framework established by the Committee of Sponsoring Organizations of the Treadway Commission in *Internal Control — Integrated Framework (2013)*. Based on the assessment, management concluded that, as of December 31, 2022, the Company's internal control over financial reporting is effective.

The Company's internal control over financial reporting as of December 31, 2022 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which is included herein, which expresses an unqualified opinion on the effectiveness of the Company's internal control over financial reporting as of December 31, 2022.

3M Company

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of 3M Company

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheet of 3M Company and its subsidiaries (the “Company”) as of December 31, 2022 and 2021, and the related consolidated statements of income, of comprehensive income (loss), of changes in equity and of cash flows for each of the three years in the period ended December 31, 2022, including the related notes (collectively referred to as the “consolidated financial statements”). We also have audited the Company's internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

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, 2022 and 2021, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2022 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control - Integrated Framework (2013) issued by the COSO.

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 Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express opinions on the Company's consolidated financial statements and 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 (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) 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 (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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

Critical Audit Matters

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

Legal Proceedings

As described in Note 16 to the consolidated financial statements, management records liabilities for legal proceedings in those instances where it can reasonably estimate the amount of the loss and when the loss is probable. Where the reasonable estimate of the probable loss is a range, management records as an accrual in its financial statements the most likely estimate of the loss, or the low end of the range if there is no one best estimate. Management either discloses the amount of a possible loss or range of loss in excess of established accruals if estimable, or states that such an estimate cannot be made. Management discloses significant legal proceedings even where liability is not probable or the amount of the liability is not estimable, or both, if management believes there is at least a reasonable possibility that a loss may be incurred.

The principal considerations for our determination that performing procedures relating to legal proceedings is a critical audit matter are the significant judgment by management when assessing the likelihood of a loss being incurred and when estimating the loss or range of loss for each claim, which in turn led to significant auditor judgment, subjectivity, and effort in performing procedures and evaluating management's assessment of the liabilities and disclosures associated with legal proceedings.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's evaluation of the liability related to legal proceedings, including controls over determining the likelihood of a loss and whether the amount of loss can be reasonably estimated, as well as financial statement disclosures. These procedures also included, among others, obtaining and evaluating the letters of audit inquiry with internal and external legal counsel, obtaining and evaluating contracts and agreements, evaluating the reasonableness of management's assessment regarding whether an unfavorable outcome is reasonably possible or probable and reasonably estimable, and evaluating the sufficiency of the Company's disclosures related to legal proceedings.

Tax-free Determination of the Split-Off of the Food Safety Division

As described in Note 3 to the consolidated financial statements, the Company completed the split-off of the Food Safety Division business in a transaction that involved a Reverse Morris Trust structure. Management has determined that the Food Safety Division split-off involving the Reverse Morris Trust structure and certain internal business separation transactions (the split-off and certain internal business separation transactions referred to together as the "Transactions") qualify as tax-free for U.S. federal income tax purposes. In making these determinations, management applied U.S. federal tax law to relevant facts and circumstances and obtained a favorable private letter ruling from the Internal Revenue Service, third party tax opinions, and other external tax advice related to the concluded tax treatment. The applicable facts and circumstances that existed at the time of the Transactions may be reviewed as part of an audit by the Internal Revenue Service. If the completed Transactions were later determined to fail to qualify for tax-free treatment for U.S. federal income tax purposes, the Company could be subject to significant liabilities, and there could be material adverse impacts on the Company's business, financial condition, results of operations and cash flows in future reporting periods.

The principal considerations for our determination that performing procedures relating to the tax-free determination of the Transactions is a critical audit matter are (i) the significant judgment by management in applying relevant tax laws and regulations in determining the Transactions qualify as tax-free, and (ii) the significant impact to the financial statements if these tax-free determinations were determined to be inappropriate by the relevant taxing authorities. This in turn led to significant auditor judgment, subjectivity, and effort in performing procedures and evaluating audit evidence relating to the tax-free determination of the Transactions. In addition, the audit effort involved the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's determination of the tax-free treatment of the Transactions. These procedures also included, among others, the involvement of professionals with specialized skill and knowledge to assist in evaluating the information, including the private letter ruling from the Internal Revenue Service, third party tax opinions, U.S. federal tax law, other external tax advice, certain representations from management, and other relevant evidence used by management, as well as the application of relevant U.S. federal tax law to support management's determination that the Transactions qualify as tax-free.

Property, Plant and Equipment and Goodwill Impairment Assessments for the Advanced Materials Division

As described in Notes 1, 4, and 15 to the consolidated financial statements, the Company's consolidated property, plant and equipment balance was \$9.2 billion and goodwill balance was \$12.8 billion as of December 31, 2022, and the Advanced Materials Division makes up a portion of these balances. Management tests property, plant and equipment for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset (asset group) may not be recoverable. An impairment loss is recognized when the carrying amount of an asset exceeds the estimated undiscounted future cash flows expected to result from the use of the asset and its eventual disposition. The amount of the impairment loss recorded is calculated by the excess of the asset's carrying value over its fair value. Management also tests goodwill for impairment annually in the fourth quarter of each year, and tests for impairment between annual tests if an event occurs or circumstances change that would indicate the carrying amount may be impaired. The impairment loss is measured as the amount by which the carrying value of the reporting unit's net assets exceeds its estimated fair value, not to exceed the carrying value of the reporting unit's goodwill. In December 2022, the Company committed to a plan to exit per- and polyfluoroalkyl substance (PFAS) manufacturing by the end of 2025. As a result, the Company recorded a pre-tax charge of \$0.8 billion in the fourth quarter of 2022, related to the impairment of long-lived assets (\$0.5 billion - primarily associated with property, plant and equipment) and impairment of goodwill (\$0.3 billion) for the Advanced Materials Division. Underlying fair values were determined primarily using discounted cash flow models based on assumptions of projected sales, EBITDA margins, capital expenditures, discount rate and other applicable items.

The principal considerations for our determination that performing procedures relating to the property, plant and equipment and goodwill impairment assessments for the Advanced Materials Division is a critical audit matter are (i) the significant judgment by management when developing the fair value estimates of the Advanced Materials Division asset group and reporting unit, which in turn led to significant auditor judgment, subjectivity, and effort in performing procedures and evaluating audit evidence relating to the appropriateness of management's discounted cash flow models and reasonableness of management's significant assumptions related to projected sales, EBITDA margins, capital expenditures, and discount rate and (ii) the audit effort involved the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's property, plant and equipment and goodwill impairment assessments for the Advanced Materials Division, including controls over management's identification of events or changes in circumstances that indicate an impairment of an asset group or reporting unit has occurred and controls over the determination of the fair value estimates of the Advanced Materials Division asset group and reporting unit. These procedures also included, among others, testing management's process for determining the fair value estimates of the Advanced Materials Division asset group and reporting unit, evaluating the appropriateness of the discounted cash flow models, and evaluating the reasonableness of management's significant assumptions related to projected sales, EBITDA margins, capital expenditures, and discount rate. Evaluating management's assumptions related to projected sales, EBITDA margins, and capital expenditures involved evaluating whether the assumptions used were reasonable considering the current and past performance of the Advanced Materials Division, external market and industry data, evidence obtained in other areas of the audit and the Company's objectives and strategies. Professionals with specialized skill and knowledge were used to assist in evaluating the appropriateness of the discounted cash flow models and evaluating the reasonableness of the discount rate.

/s/ PricewaterhouseCoopers LLP

Minneapolis, Minnesota

February 8, 2023

We have served as the Company's auditor since 1975.

3M Company and Subsidiaries
Consolidated Statement of Income
Years ended December 31

(Millions, except per share amounts)	2022	2021	2020
Net sales	\$ 34,229	\$ 35,355	\$ 32,184
Operating expenses			
Cost of sales	19,232	18,795	16,605
Selling, general and administrative expenses	9,049	7,197	6,929
Research, development and related expenses	1,862	1,994	1,878
Gain on business divestitures	(2,724)	—	(389)
Goodwill impairment expense	271	—	—
Total operating expenses	27,690	27,986	25,023
Operating income	6,539	7,369	7,161
Other expense (income), net	147	165	366
Income before income taxes	6,392	7,204	6,795
Provision for income taxes	612	1,285	1,337
Income of consolidated group	5,780	5,919	5,458
Income (loss) from unconsolidated subsidiaries, net of taxes	11	10	(5)
Net income including noncontrolling interest	5,791	5,929	5,453
Less: Net income (loss) attributable to noncontrolling interest	14	8	4
Net income attributable to 3M	\$ 5,777	\$ 5,921	\$ 5,449
Weighted average 3M common shares outstanding — basic	566.0	579.0	577.6
Earnings per share attributable to 3M common shareholders — basic	\$ 10.21	\$ 10.23	\$ 9.43
Weighted average 3M common shares outstanding — diluted	567.6	585.3	582.2
Earnings per share attributable to 3M common shareholders — diluted	\$ 10.18	\$ 10.12	\$ 9.36

The accompanying Notes to Consolidated Financial Statements are an integral part of this statement.

3M Company and Subsidiaries
Consolidated Statement of Comprehensive Income (Loss)
Years ended December 31

(Millions)	2022	2021	2020
Net income including noncontrolling interest	\$ 5,791	\$ 5,929	\$ 5,453
Other comprehensive income (loss), net of tax:			
Cumulative translation adjustment	(893)	(494)	447
Defined benefit pension and postretirement plans adjustment	915	1,345	106
Cash flow hedging instruments	47	119	(142)
Total other comprehensive income (loss), net of tax	69	970	411
Comprehensive income (loss) including noncontrolling interest	5,860	6,899	5,864
Comprehensive (income) loss attributable to noncontrolling interest	(6)	(7)	(2)
Comprehensive income (loss) attributable to 3M	\$ 5,854	\$ 6,892	\$ 5,862

The accompanying Notes to Consolidated Financial Statements are an integral part of this statement.

3M Company and Subsidiaries
Consolidated Balance Sheet
At December 31

(Dollars in millions, except per share amount)	2022	2021
Assets		
Current assets		
Cash and cash equivalents	\$ 3,655	\$ 4,564
Marketable securities — current	238	201
Accounts receivable — net of allowances of \$174 and \$189	4,532	4,660
Inventories		
Finished goods	2,497	2,196
Work in process	1,606	1,577
Raw materials and supplies	1,269	1,212
Total inventories	5,372	4,985
Prepays	435	654
Other current assets	456	339
Total current assets	14,688	15,403
Property, plant and equipment	25,998	27,213
Less: Accumulated depreciation	(16,820)	(17,784)
Property, plant and equipment — net	9,178	9,429
Operating lease right of use assets	829	858
Goodwill	12,790	13,486
Intangible assets — net	4,699	5,288
Other assets	4,271	2,608
Total assets	\$ 46,455	\$ 47,072
Liabilities		
Current liabilities		
Short-term borrowings and current portion of long-term debt	\$ 1,938	\$ 1,307
Accounts payable	3,183	2,994
Accrued payroll	692	1,020
Accrued income taxes	259	260
Operating lease liabilities — current	261	263
Other current liabilities	3,190	3,191
Total current liabilities	9,523	9,035
Long-term debt	14,001	16,056
Pension and postretirement benefits	1,966	2,870
Operating lease liabilities	580	591
Other liabilities	5,615	3,403
Total liabilities	31,685	31,955
Commitments and contingencies (Note 16)		
Equity		
3M Company shareholders' equity:		
Common stock par value, \$.01 par value; 944,033,056 shares issued	9	9
Shares outstanding - December 31, 2022: 549,245,105		
Shares outstanding - December 31, 2021: 571,845,478		
Additional paid-in capital	6,691	6,429
Retained earnings	47,950	45,821
Treasury stock, at cost:	(33,255)	(30,463)
Accumulated other comprehensive income (loss)	(6,673)	(6,750)
Total 3M Company shareholders' equity	14,722	15,046
Noncontrolling interest	48	71
Total equity	14,770	15,117
Total liabilities and equity	\$ 46,455	\$ 47,072

The accompanying Notes to Consolidated Financial Statements are an integral part of this statement.

3M Company and Subsidiaries
Consolidated Statement of Changes in Equity
Years ended December 31

(Dollars in millions, except per share amounts)	3M Company Shareholders					
	Total	Common Stock and Additional Paid-in Capital	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Income (Loss)	Non-controlling Interest
Balance at December 31, 2019	\$10,126	\$ 5,916	\$42,130	\$(29,849)	\$ (8,134)	\$ 63
Net income	5,453		5,449			4
Other comprehensive income (loss), net of tax:						
Cumulative translation adjustment	447				449	(2)
Defined benefit pension and post-retirement plans adjustment	106				106	
Cash flow hedging instruments - unrealized gain (loss)	(142)				(142)	
Total other comprehensive income (loss), net of tax	411					
Dividends declared (\$5.88 per share, Note 8)	(3,388)		(3,388)			
Purchase of non-controlling interest	(1)					(1)
Stock-based compensation	255	255				
Reacquired stock	(358)			(358)		
Issuances pursuant to stock options and benefit plans	433		(370)	803		
Balance at December 31, 2020	12,931	6,171	43,821	(29,404)	(7,721)	64
Net income	5,929		5,921			8
Other comprehensive income (loss), net of tax:						
Cumulative translation adjustment	(494)				(493)	(1)
Defined benefit pension and post-retirement plans adjustment	1,345				1,345	
Cash flow hedging instruments - unrealized gain (loss)	119				119	
Total other comprehensive income (loss), net of tax	970					
Dividends declared (\$5.92 per share, Note 8)	(3,420)		(3,420)			
Stock-based compensation	267	267				
Reacquired stock	(2,199)			(2,199)		
Issuances pursuant to stock options and benefit plans	639		(501)	1,140		
Balance at December 31, 2021	15,117	6,438	45,821	(30,463)	(6,750)	71
Net income	5,791		5,777			14
Other comprehensive income (loss), net of tax:						
Cumulative translation adjustment	(893)				(885)	(8)
Defined benefit pension and post-retirement plans adjustment	915				915	
Cash flow hedging instruments - unrealized gain (loss)	47				47	
Total other comprehensive income (loss), net of tax	69					
Dividends declared (\$5.96 per share, Note 8)	(3,369)		(3,369)			
Stock-based compensation	262	262				
Reacquired stock	(1,464)			(1,464)		
Dividend to noncontrolling interest	(29)					(29)
Split-off of Food Safety business	(1,988)			(1,988)		
Issuances pursuant to stock options and benefit plans	381		(279)	660		
Balance at December 31, 2022	\$14,770	\$ 6,700	\$47,950	\$(33,255)	\$ (6,673)	\$ 48

Supplemental share information	2022	2021	2020
Treasury stock			
Beginning balance	372,187,578	366,283,418	368,848,221
Reacquired stock	10,865,635	11,834,681	2,286,109
Split-off of Food Safety business	15,989,536	—	—
Issuances pursuant to stock options and benefit plans	(4,254,798)	(5,930,521)	(4,850,912)
Ending balance	394,787,951	372,187,578	366,283,418

The accompanying Notes to Consolidated Financial Statements are an integral part of this statement.

3M Company and Subsidiaries
Consolidated Statement of Cash Flows
Years ended December 31

(Millions)	2022	2021	2020
Cash Flows from Operating Activities			
Net income including noncontrolling interest	\$ 5,791	\$ 5,929	\$ 5,453
Adjustments to reconcile net income including noncontrolling interest to net cash provided by operating activities			
Depreciation and amortization	1,831	1,915	1,911
Long-lived and indefinite-lived asset impairment expense	618	—	6
Goodwill impairment expense	271	—	—
Company pension and postretirement contributions	(158)	(180)	(156)
Company pension and postretirement expense	178	206	322
Stock-based compensation expense	263	274	262
Gain on business divestitures	(2,724)	—	(389)
Deferred income taxes	(663)	(166)	(165)
Changes in assets and liabilities			
Accounts receivable	(105)	(122)	165
Inventories	(629)	(903)	(91)
Accounts payable	111	518	252
Accrued income taxes (current and long-term)	(47)	(244)	132
Other — net	854	227	411
Net cash provided by (used in) operating activities	5,591	7,454	8,113
Cash Flows from Investing Activities			
Purchases of property, plant and equipment (PP&E)	(1,749)	(1,603)	(1,501)
Proceeds from sale of PP&E and other assets	200	51	128
Acquisitions, net of cash acquired	—	—	(25)
Purchases of marketable securities and investments	(1,250)	(2,202)	(1,579)
Proceeds from maturities and sale of marketable securities and investments	1,261	2,406	1,811
Proceeds from sale of businesses, net of cash sold	13	—	576
Cash payment from Food Safety business split-off, net of divested cash	478	—	—
Other — net	1	31	10
Net cash provided by (used in) investing activities	(1,046)	(1,317)	(580)
Cash Flows from Financing Activities			
Change in short-term debt — net	340	(2)	(143)
Repayment of debt (maturities greater than 90 days)	(1,179)	(1,144)	(3,482)
Proceeds from debt (maturities greater than 90 days)	1	1	1,750
Purchases of treasury stock	(1,464)	(2,199)	(368)
Proceeds from issuance of treasury stock pursuant to stock option and benefit plans	381	639	429
Dividends paid to shareholders	(3,369)	(3,420)	(3,388)
Other — net	(60)	(20)	(98)
Net cash provided by (used in) financing activities	(5,350)	(6,145)	(5,300)
Effect of exchange rate changes on cash and cash equivalents	(104)	(62)	48
Net increase (decrease) in cash and cash equivalents	(909)	(70)	2,281
Cash and cash equivalents at beginning of year	4,564	4,634	2,353
Cash and cash equivalents at end of period	\$ 3,655	\$ 4,564	\$ 4,634

The accompanying Notes to Consolidated Financial Statements are an integral part of this statement.

3M Company and Subsidiaries

Notes to Consolidated Financial Statements

NOTE 1. Significant Accounting Policies

Consolidation: 3M is a diversified global manufacturer, technology innovator and marketer of a wide variety of products. All applicable subsidiaries are consolidated. All intercompany transactions are eliminated. As used herein, the term “3M” or “Company” refers to 3M Company and subsidiaries unless the context indicates otherwise.

3M deconsolidated the Aearo Entities in the third quarter of 2022. See additional information in Note 16.

Basis of presentation: Certain amounts in the prior years’ consolidated financial statements have been reclassified to conform to the current year presentation.

Effective in the first quarter of 2022, 3M made changes in the measure of segment operating performance used by 3M’s chief operating decision maker—impacting 3M’s disclosed measure of segment profit/loss (business segment operating income). See additional information in Note 19. 3M’s disclosed disaggregated revenue was also updated as a result of the changes in segment reporting. See additional information in Note 2. Information provided herein reflects the impact of these changes for all periods presented.

Foreign currency translation: Local currencies generally are considered the functional currencies outside the United States. Exceptions include 3M’s subsidiaries in Argentina and, beginning in the second quarter of 2022, in Turkey, the economy of which also became highly inflationary. The operating income and balances of underlying net monetary assets denominated in Turkish lira are not material to 3M. The financial statements of these subsidiaries are remeasured as if their functional currency is that of their parent. Assets and liabilities for operations in local-currency environments are translated at month-end exchange rates of the period reported. Income and expense items are translated at average monthly currency exchange rates in effect during the period. Cumulative translation adjustments are recorded as a component of accumulated other comprehensive income (loss) in shareholders’ equity.

Use of estimates: The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. The Company considered the coronavirus (COVID-19) related impacts on its estimates, as appropriate, within its consolidated financial statements and there may be changes to those estimates in future periods. 3M believes that the accounting estimates are appropriate after giving consideration to the increased uncertainties surrounding the severity and duration of the COVID-19 pandemic. Such estimates and assumptions are subject to inherent uncertainties which may result in actual amounts differing from these estimates.

Cash and cash equivalents: Cash and cash equivalents consist of cash and temporary investments with maturities of three months or less when acquired.

Marketable securities: Marketable securities include available-for-sale debt securities and are recorded at fair value. Cost of securities sold use the first in, first out (FIFO) method. The classification of marketable securities as current or non-current is based on the availability for use in current operations. 3M reviews impairments associated with its marketable securities in accordance with the measurement guidance provided by ASC 320, Investments-Debt Securities and ASC 326-30, Available-for-Sale Debt Securities, when determining whether a decline in fair value below the amortized cost basis has resulted from a credit loss or other factors. An impairment relating to credit losses is recorded through an allowance for credit losses. The allowance is limited by the amount that the fair value is less than the amortized cost basis. A change in the allowance for credit losses is recorded into earnings in the period of the change. Any impairment that has not been recorded through an allowance for credit losses is recorded through accumulated other comprehensive income as a component of shareholders’ equity. The factors considered in determining whether a credit loss exists can include the extent to which fair value is less than the amortized cost basis, changes in the credit quality of the underlying loan obligors, credit ratings actions, as well as other factors. When a credit loss exists, the Company compares the present value of cash flows expected to be collected from the debt security with the amortized cost basis of the security to determine what allowance amount, if any, should be recorded. Amounts are reclassified out of accumulated other comprehensive income and into earnings upon sale or a change in the portions of impairment related to credit losses and not related to credit losses.

Investments: All equity securities that do not result in consolidation and are not accounted for under the equity method are measured at fair value with changes therein reflected in net income. 3M utilizes the measurement alternative for equity investments that do not have readily determinable fair values and measures these investments at cost less impairment plus or minus observable price changes in orderly transactions. The balance of these securities is disclosed in Note 7.

Other assets: Other assets include deferred income taxes, product and other insurance receivables, the cash surrender value of life insurance policies, medical equipment in rental arrangements utilized primarily by hospitals and other medical clinics, prepaid pension and postretirement and other long-term assets. Investments in life insurance policies are reported at the amount that could be realized under contract at the balance sheet date, with any changes in cash surrender value or contract value during the period accounted for as an adjustment of premiums paid. Cash outflows and inflows associated with life insurance activity are included in “Purchases of marketable securities and investments” and “Proceeds from maturities and sale of marketable securities and investments,” respectively.

Inventories: Inventories are stated at the lower of cost or net realizable value (NRV), which is defined as estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal and transportation. Cost is generally determined on a first-in, first-out basis.

Property, plant and equipment: Property, plant and equipment, including capitalized interest and internal direct engineering costs, are recorded at cost. Depreciation of property, plant and equipment generally is computed using the straight-line method based on the estimated useful lives of the assets. The estimated useful lives of buildings and improvements primarily range from ten to forty years, with the majority in the range of twenty to forty years. The estimated useful lives of machinery and equipment primarily range from three to fifteen years, with the majority in the range of five to ten years. Fully depreciated assets other than capitalized internally developed software are retained in property, plant and equipment and accumulated depreciation accounts until disposal. Upon disposal, assets and related accumulated depreciation are removed from the accounts and the net amount, less proceeds from disposal, is charged or credited to operations. Property, plant and equipment amounts are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset (asset group) may not be recoverable. An impairment loss is recognized when the carrying amount of an asset exceeds the estimated undiscounted future cash flows expected to result from the use of the asset and its eventual disposition. The amount of the impairment loss recorded is calculated by the excess of the asset’s carrying value over its fair value. Fair value is generally determined using a discounted cash flow analysis. 3M records capital-related government grants earned as reductions to the cost of property, plant and equipment; and associated unpaid liabilities and grant proceeds receivable are considered non-cash changes in such balances for purposes of preparation of statement of cash flows.

Conditional asset retirement obligations: A liability is initially recorded at fair value for an asset retirement obligation associated with the retirement of tangible long-lived assets in the period in which it is incurred if a reasonable estimate of fair value can be made. Conditional asset retirement obligations exist for certain long-term assets of the Company. The obligation is initially measured at fair value using expected present value techniques. Over time the liabilities are accreted for the change in their present value and the initial capitalized costs are depreciated over the remaining useful lives of the related assets. The asset retirement obligation liability was \$177 million and \$176 millions at December 31, 2022 and 2021, respectively.

Goodwill: Goodwill is the excess of cost of an acquired entity over the amounts assigned to assets acquired and liabilities assumed in a business combination. Goodwill is not amortized. Goodwill is tested for impairment annually in the fourth quarter of each year, and is tested for impairment between annual tests if an event occurs or circumstances change that would indicate the carrying amount may be impaired. Impairment testing for goodwill is done at a reporting unit level, with all goodwill assigned to a reporting unit. Reporting units are one level below the business segment level, but are required to be combined when reporting units within the same segment have similar economic characteristics. 3M did not combine any of its reporting units for impairment testing. The impairment loss is measured as the amount by which the carrying value of the reporting unit’s net assets exceeds its estimated fair value, not to exceed the carrying value of the reporting unit’s goodwill. The estimated fair value of a reporting unit is determined based on a market approach using comparable company information such as EBITDA (earnings before interest, taxes, depreciation and amortization) multiples or, in some cases, based on a discounted cash flow analysis. Companies have the option to first assess qualitative factors to determine whether the fair value of a reporting unit is not “more likely than not” less than its carrying amount, which is commonly referred to as “Step 0”. 3M has chosen not to apply Step 0 for its annual goodwill assessments.

Intangible assets: Intangible asset types include customer related, patents, other technology-based, tradenames and other intangible assets acquired from an independent party. Intangible assets with a definite life are amortized over a period ranging from six to twenty years on a systematic and rational basis (generally straight line) that is representative of the asset’s use. The estimated useful lives vary by category, with customer-related largely between twelve to nineteen years, patents largely between eight to thirteen years, other technology-based largely between six to ten years, definite lived tradenames largely between eleven and twenty years, and other intangibles largely ten years. Intangible assets are removed from their respective gross asset and accumulated amortization accounts when they are no longer in use. Refer to Note 4 for additional details on the gross amount and accumulated amortization of the Company’s intangible assets. Costs related to internally developed intangible assets, such as patents, are expensed as incurred, within “Research, development and related expenses.”

Intangible assets with a definite life are tested for impairment whenever events or circumstances indicate that the carrying amount of an asset (asset group) may not be recoverable. An impairment loss is recognized when the carrying amount exceeds the estimated undiscounted cash flows from the asset's or asset group's ongoing use and eventual disposition. If an impairment is identified, the amount of the impairment loss recorded is calculated by the excess of the asset's carrying value over its fair value. Fair value is generally determined using a discounted cash flow analysis.

Intangible assets with an indefinite life, namely certain tradenames, are not amortized. Indefinite-lived intangible assets are tested for impairment annually in the third quarter of each year, and are tested for impairment between annual tests if an event occurs or circumstances change that would indicate that the carrying amount may be impaired. An impairment loss would be recognized when the fair value is less than the carrying value of the indefinite-lived intangible asset.

Restructuring actions: Restructuring actions generally include significant actions involving employee-related severance charges, contract termination costs, and impairment or accelerated depreciation/amortization of assets associated with such actions. Employee-related severance charges are largely based upon distributed employment policies and substantive severance plans. These charges are reflected in the quarter when the actions are probable and the amounts are estimable, which typically is when management approves the associated actions. Severance amounts for which affected employees in certain circumstances are required to render service in order to receive benefits at their termination dates were measured at the date such benefits were communicated to the applicable employees and recognized as expense over the employees' remaining service periods. Contract termination and other charges primarily reflect costs to terminate a contract before the end of its term (measured at fair value at the time the Company provided notice to the counterparty) or costs that will continue to be incurred under the contract for its remaining term without economic benefit to the Company.

Revenue (sales) recognition: The Company sells a wide range of products to a diversified base of customers around the world and has no material concentration of credit risk or significant payment terms extended to customers. The vast majority of 3M's customer arrangements contain a single performance obligation to transfer manufactured goods as the promise to transfer the individual goods is not separately identifiable from other promises in the contracts and, therefore, not distinct. However, to a limited extent 3M also enters into customer arrangements that involve intellectual property out-licensing, multiple performance obligations (such as equipment, installation and service), software with coterminous post-contract support, services and non-standard terms and conditions.

The Company recognizes revenue in light of the guidance of Accounting Standards Codification (ASC) 606, *Revenue from Contracts with Customers*. Revenue is recognized when control of goods has transferred to customers. For the majority of the Company's customer arrangements, control transfers to customers at a point-in-time when goods/services have been delivered as that is generally when legal title, physical possession and risks and rewards of goods/services transfer to the customer. In limited arrangements, control transfers over time as the customer simultaneously receives and consumes the benefits as 3M completes the performance obligation(s).

Revenue is recognized at the transaction price which the Company expects to be entitled. When determining the transaction price, 3M estimates variable consideration applying the portfolio approach practical expedient under ASC 606. The main sources of variable consideration for 3M are customer rebates, trade promotion funds, and cash discounts. These sales incentives are recorded as a reduction to revenue at the time of the initial sale using the most-likely amount estimation method. The most-likely amount method is based on the single most likely outcome from a range of possible consideration outcomes. The range of possible consideration outcomes are primarily derived from the following inputs: sales terms, historical experience, trend analysis, and projected market conditions in the various markets served. Because 3M serves numerous markets, the sales incentive programs offered vary across businesses, but the most common incentive relates to amounts paid or credited to customers for achieving defined volume levels or growth objectives. There are no material instances where variable consideration is constrained and not recorded at the initial time of sale. Free goods are accounted for as an expense and recorded in cost of sales. Product returns are recorded as a reduction to revenue based on anticipated sales returns that occur in the normal course of business. 3M primarily has assurance-type warranties that do not result in separate performance obligations. Sales, use, value-added, and other excise taxes are not recognized in revenue. The Company has elected to present revenue net of sales taxes and other similar taxes.

For contracts with multiple performance obligations, the Company allocates the contract's transaction price to each performance obligation using 3M's best estimate of the standalone selling price of each distinct good or service in the contract.

The Company did not recognize any material revenue in the current reporting period for performance obligations that were fully satisfied in previous periods.

The Company does not have material unfulfilled performance obligation balances for contracts with an original length greater than one year in any years presented. Additionally, the Company does not have material costs related to obtaining a contract with amortization periods greater than one year for any year presented.

3M applies ASC 606 utilizing the following allowable exemptions or practical expedients:

- Exemption to not disclose the unfulfilled performance obligation balance for contracts with an original length of one year or less.
- Practical expedient relative to costs of obtaining a contract by expensing sales commissions when incurred because the amortization period would have been one year or less.
- Portfolio approach practical expedient relative to estimation of variable consideration.
- “Right to invoice” practical expedient based on 3M’s right to invoice the customer at an amount that reasonably represents the value to the customer of 3M’s performance completed to date.
- Election to present revenue net of sales taxes and other similar taxes.
- Sales-based royalty exemption permitting future intellectual property out-licensing royalty payments to be excluded from the otherwise required remaining performance obligations disclosure

The Company recognizes revenue from the rental of durable medical devices in accordance with the guidance of ASC 842, *Leases*. The Company recognizes rental revenue based on the length of time a device is used by the patient/organization, (i) at the contracted rental rate for contracted customers and (ii) generally, retail price for non-contracted customers. The leases are short-term in nature, generally providing for daily or monthly pricing, and are all classified as operating leases.

Accounts receivable and allowances: Trade accounts receivable are recorded at the invoiced amount and do not bear interest. The Company maintains allowances for bad debts, cash discounts, and various other items. The allowances for bad debts and cash discounts are based on the best estimate of the amount of expected credit losses in existing accounts receivable and anticipated cash discounts. The Company determines the allowances based on historical write-off experience, current expectations of future credit losses informed by industry and regional economic data, and historical cash discounts. The Company reviews the allowances monthly. The allowances for bad debts as well as the provision for credit losses, write-off activity and recoveries for the periods presented are not material. The Company does not have any significant off-balance-sheet credit exposure related to its customers. The Company has long-term customer receivables that do not have significant credit risk, and the origination dates of which are typically not older than five years. These long-term receivables are subject to an allowance methodology similar to other receivables.

Advertising and merchandising: These costs are charged to operations in the period incurred, and totaled \$323 million, \$327 million and \$278 million in 2022, 2021 and 2020, respectively.

Research, development and related expenses: These costs are charged to operations in the period incurred and are shown on a separate line of the Consolidated Statement of Income. Research, development and related expenses totaled \$1.9 billion, \$2.0 billion and \$1.9 billion in 2022, 2021 and 2020, respectively. Research and development expenses, covering basic scientific research and the application of scientific advances in the development of new and improved products and their uses, totaled \$1.1 billion, \$1.2 billion and \$1.1 billion in 2022, 2021 and 2020, respectively. Related expenses primarily include technical support; internally developed patent costs, which include costs and fees incurred to prepare, file, secure and maintain patents; amortization of externally acquired patents and externally acquired in-process research and development; and gains/losses associated with certain corporate approved investments in R&D-related ventures.

Internal-use software: The Company capitalizes direct costs of services used in the development of, and external software acquired for use as, internal-use software. Amounts capitalized are amortized over a period of three to seven years, generally on a straight-line basis, unless another systematic and rational basis is more representative of the software’s use. Amounts are reported as a component of either machinery and equipment or finance leases within property, plant and equipment. Fully depreciated internal-use software assets are removed from property, plant and equipment and accumulated depreciation accounts.

Environmental: Environmental expenditures relating to existing conditions caused by past operations that do not contribute to current or future revenues are expensed. Reserves for liabilities related to anticipated remediation costs are recorded on an undiscounted basis when they are probable and reasonably estimable, generally no later than the completion of feasibility studies, the Company’s commitment to a plan of action, or approval by regulatory agencies. Environmental expenditures for capital projects that contribute to current or future operations generally are capitalized and depreciated over their estimated useful lives.

Income taxes: The provision for income taxes is determined using the asset and liability approach. Under this approach, deferred income taxes represent the expected future tax consequences of temporary differences between the carrying amounts and tax basis of assets and liabilities. The Company records a valuation allowance to reduce its deferred tax assets when uncertainty regarding their realizability exists. As of December 31, 2022 and December 31, 2021, the Company had valuation allowances of \$115 million and \$142 million on its deferred tax assets, respectively. The Company recognizes and measures its uncertain tax positions based on the rules under ASC 740, *Income Taxes*.

Earnings per share: The difference in the weighted average 3M shares outstanding for calculating basic and diluted earnings per share attributable to 3M common shareholders is the result of the dilution associated with the Company's stock-based compensation plans. Certain options outstanding under these stock-based compensation plans during the years 2022, 2021 and 2020 were not included in the computation of diluted earnings per share attributable to 3M common shareholders because they would have had an anti-dilutive effect (30.3 million average options for 2022, 7.8 million average options for 2021, and 18.1 million average options for 2020). The computations for basic and diluted earnings per share follow:

Earnings Per Share Computations

(Amounts in millions, except per share amounts)	2022	2021	2020
Numerator:			
Net income attributable to 3M	\$ 5,777	\$ 5,921	\$ 5,449
Denominator:			
Denominator for weighted average 3M common shares outstanding – basic	566.0	579.0	577.6
Dilution associated with the Company's stock-based compensation plans	1.6	6.3	4.6
Denominator for weighted average 3M common shares outstanding – diluted	567.6	585.3	582.2
Earnings per share attributable to 3M common shareholders – basic	\$ 10.21	\$ 10.23	\$ 9.43
Earnings per share attributable to 3M common shareholders – diluted	\$ 10.18	\$ 10.12	\$ 9.36

Stock-based compensation: The Company recognizes compensation expense for its stock-based compensation programs, which include stock options, restricted stock, restricted stock units (RSUs), performance shares, and the General Employees' Stock Purchase Plan (GESPP). Under applicable accounting standards, the fair value of share-based compensation is determined at the grant date and the recognition of the related expense is recorded over the period in which the share-based compensation vests. However, with respect to income taxes, the related deduction from taxes payable is based on the award's intrinsic value at the time of exercise (for an option) or on the fair value upon vesting of the award (for RSUs), which can be either greater (creating an excess tax benefit) or less (creating a tax deficiency) than the deferred tax benefit recognized as compensation cost is recognized in the financial statements. These excess tax benefits/deficiencies are recognized as income tax benefit/expense in the statement of income and, within the statement of cash flows, are classified in operating activities in the same manner as other cash flows related to income taxes. The extent of excess tax benefits/deficiencies is subject to variation in 3M stock price and timing/extent of RSU vestings and employee stock option exercises.

Comprehensive income: Total comprehensive income and the components of accumulated other comprehensive income (loss) are presented in the Consolidated Statement of Comprehensive Income and the Consolidated Statement of Changes in Equity. Accumulated other comprehensive income (loss) is composed of foreign currency translation effects (including hedges of net investments in international companies), defined benefit pension and postretirement plan adjustments, unrealized gains and losses on available-for-sale debt securities, and unrealized gains and losses on cash flow hedging instruments. The Company uses the portfolio approach for releasing income tax effects from accumulated other comprehensive income.

Derivatives and hedging activities: All derivative instruments within the scope of ASC 815, *Derivatives and Hedging*, are recorded on the balance sheet at fair value. The Company uses interest rate swaps, currency swaps, and foreign currency forward and option contracts to manage risks generally associated with foreign exchange rate and interest rate volatility. All hedging instruments that qualify for hedge accounting are designated and effective as hedges, in accordance with U.S. generally accepted accounting principles. If the underlying hedged transaction ceases to exist, all changes in fair value of the related derivatives that have not been settled are recognized in current earnings. Instruments that do not qualify for hedge accounting are marked to market with changes recognized in current earnings. Cash flows from derivative instruments are classified in the statement of cash flows in the same category as the cash flows from the items subject to designated hedge or undesignated (economic) hedge relationships. The Company does not hold or issue derivative financial instruments for trading purposes and is not a party to leveraged derivatives.

Credit risk: The Company is exposed to credit loss in the event of nonperformance by counterparties in interest rate swaps, currency swaps, and forward and option contracts. However, the Company's risk is limited to the fair value of the instruments. The Company actively monitors its exposure to credit risk through the use of credit approvals and credit limits, and by selecting major international banks and financial institutions as counterparties. 3M enters into master netting arrangements with counterparties when possible to mitigate credit risk in derivative transactions. A master netting arrangement may allow each counterparty to net settle amounts owed between a 3M entity and the counterparty as a result of multiple, separate derivative transactions. The Company does not anticipate nonperformance by any of these counterparties. 3M has elected to present the fair value of derivative assets and liabilities within the Company's consolidated balance sheet on a gross basis even when derivative transactions are subject to master netting arrangements and may otherwise qualify for net presentation.

Fair value measurements: 3M follows ASC 820, *Fair Value Measurements and Disclosures*, with respect to assets and liabilities that are measured at fair value on a recurring basis and nonrecurring basis. Under the standard, fair value is defined as the exit price, or the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants as of the measurement date. The standard also establishes a hierarchy for inputs used in measuring fair value that maximizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that the most observable inputs be used when available. Observable inputs are inputs market participants would use in valuing the asset or liability developed based on market data obtained from sources independent of the Company. Unobservable inputs are inputs that reflect the Company's assumptions about the factors market participants would use in valuing the asset or liability developed based upon the best information available in the circumstances. The hierarchy is broken down into three levels. Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities. Level 2 inputs include quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, and inputs (other than quoted prices) that are observable for the asset or liability, either directly or indirectly. Level 3 inputs are unobservable inputs for the asset or liability. Categorization within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement.

Acquisitions: The Company accounts for business acquisitions in accordance with ASC 805, *Business Combinations*. This standard requires the acquiring entity in a business combination to recognize all (and only) the assets acquired and liabilities assumed in the transaction and establishes the acquisition-date fair value as the measurement objective for all assets acquired and liabilities assumed in a business combination. Certain provisions of this standard prescribe, among other things, the determination of acquisition-date fair value of consideration paid in a business combination (including contingent consideration) and the exclusion of transaction and acquisition-related restructuring costs from acquisition accounting. In addition to business combinations, 3M periodically acquires certain tangible and/or intangible assets and purchases interests in certain enterprises that do not otherwise qualify for accounting as business combinations. These transactions are largely reflected as additional asset purchase and investment activity.

Leases: 3M determines if an arrangement is a lease upon inception. A contract is or contains a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. The right to control the use of an asset includes the right to obtain substantially all of the economic benefits of the underlying asset and the right to direct how and for what purpose the asset is used. 3M determines certain service agreements that contain the right to use an underlying asset are not leases because 3M does not control how and for what purpose the identified asset is used. Examples of such agreements include master supply agreements, product processing agreements, warehouse and distribution services agreements, power purchase agreements, and transportation purchase agreements.

Operating lease right-of-use assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. The discount rate used to calculate present value is 3M's incremental borrowing rate or, if available, the rate implicit in the lease. 3M determines the incremental borrowing rate for leases using a portfolio approach based primarily on the lease term and the economic environment of the applicable country or region.

As a lessee, the Company leases distribution centers, office space, land, and equipment. Certain 3M lease agreements include rental payments adjusted annually based on changes in an inflation index. 3M's leases do not contain material residual value guarantees or material restrictive covenants. Lease expense is recognized on a straight-line basis over the lease term.

Certain leases include one or more options to renew, with terms that can extend the lease term up to five years. 3M includes options to renew the lease as part of the right of use lease asset and liability when it is reasonably certain the Company will exercise the option. In addition, certain leases contain fair value purchase and termination options with an associated penalty. In general, 3M is not reasonably certain to exercise such options.

For the measurement and classification of its lease agreements, 3M groups lease and non-lease components into a single lease component for all underlying asset classes. Variable lease payments primarily include payments for non-lease components, such as maintenance costs, payments for leased assets used beyond their noncancellable lease term as adjusted for contractual options to terminate or renew, additional payments related to a subsequent adjustment in an inflation index, and payments for non-components such as sales tax. Certain 3M leases contain immaterial variable lease payments based on number of units produced.

Related Party Activity:

Other than the amounts due by and between the Aearo Entities and related entities (as described in Note 16), 3M does not have any material related party activity.

New Accounting Pronouncements

The table below provides summaries of applicable new accounting pronouncements issued, but not yet adopted by 3M:

Standards Issued and Not Yet Adopted			
Standard	Relevant Description	Effective Date for 3M	Impact and Other Matters
ASU No. 2021-08, <i>Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers</i>	Issued in October 2021. Requires acquiring entities to apply ASC 606 to recognize and measure contract assets and liabilities acquired through a business combination.	January 1, 2023	This guidance is applicable to all business combinations occurring after the effective date.
ASU No. 2022-04, <i>Liabilities - Supplier Finance Programs (Subtopic 405-50): Disclosure of Supplier Finance Obligations</i>	Issued in September 2022. Requires a buyer in a supplier finance program to disclose the key terms of the program, amount of outstanding obligations, and a rollforward of obligations confirmed and subsequently paid.	January 1, 2023, except rollforward disclosure which is not effective until the year-end December 31, 2024	As this ASU relates to disclosures only, there will be no impact to 3M's consolidated results of operations and financial condition.

NOTE 2. Revenue

Contract Balances:

Deferred revenue primarily relates to revenue that is recognized over time for one-year software license contracts. Refer to Note 7 for deferred revenue balances as of December 31, 2022 and 2021. Approximately \$500 million of the December 31, 2021 balance was recognized as revenue during the year ended December 31, 2022, while approximately \$470 million of the December 31, 2020 balance was recognized as revenue during the year ended December 31, 2021.

Operating Lease Revenue:

Net sales includes rental revenue from durable medical devices as part of operating lease arrangements (reported within the Medical Solutions Division), which was \$577 million, \$582 million, and \$586 million for the years ended December 31, 2022, 2021, and 2020 respectively.

Disaggregated revenue information:

The Company views the following disaggregated disclosures as useful to understanding the composition of revenue recognized during the respective reporting periods:

Net Sales (Millions)	Year ended December 31,		
	2022	2021	2020
Abrasives	\$ 1,343	\$ 1,296	\$ 1,077
Automotive Aftermarket	1,209	1,164	1,028
Closure and Masking Systems	1,046	1,033	993
Electrical Markets	1,304	1,229	1,093
Industrial Adhesives and Tapes	2,331	2,353	2,000
Personal Safety	3,916	4,470	4,408
Roofing Granules	455	428	389
Other Safety and Industrial	—	8	(16)
Total Safety and Industrial Business Segment	11,604	11,981	10,972
Advanced Materials	1,205	1,200	1,029
Automotive and Aerospace	1,754	1,756	1,522
Commercial Solutions	1,751	1,717	1,486
Electronics	3,359	3,673	3,497
Transportation Safety	833	907	880
Other Transportation and Electronics	—	9	(8)
Total Transportation and Electronics Business Segment	8,902	9,262	8,406
Drug Delivery	—	—	146
Food Safety	244	368	337
Health Information Systems	1,259	1,220	1,140
Medical Solutions	4,581	4,632	4,288
Oral Care	1,353	1,420	1,071
Separation and Purification Sciences	960	956	848
Other Health Care	24	1	2
Total Health Care Business Group	8,421	8,597	7,832
Consumer Health and Safety	569	588	540
Home Care	1,046	1,074	1,043
Home Improvement	2,392	2,548	2,260
Stationery and Office	1,291	1,306	1,132
Other Consumer	—	(3)	1
Total Consumer Business Group	5,298	5,513	4,976
Corporate and Unallocated	4	2	(2)
Total Company	\$ 34,229	\$ 35,355	\$ 32,184

Net Sales (Millions)	Year ended December 31,		
	2022	2021	2020
Americas	\$ 18,400	\$ 18,097	\$ 16,525
Asia Pacific	9,901	10,600	9,569
Europe, Middle East and Africa	5,928	6,660	6,109
Other Unallocated	—	(2)	(19)
Worldwide	\$ 34,229	\$ 35,355	\$ 32,184

Americas included United States net sales to customers of \$15.0 billion, \$15.0 billion and \$13.9 billion in 2022, 2021 and 2020, respectively. Asia Pacific included China/Hong Kong net sales to customers of \$3.8 billion, \$4.0 billion and \$3.5 billion in 2022, 2021 and 2020, respectively.

NOTE 3. Acquisitions and Divestitures

Acquisitions:

3M makes acquisitions of certain businesses from time to time that are aligned with its strategic intent with respect to, among other factors, growth markets and adjacent product lines or technologies. Goodwill resulting from business combinations is largely attributable to the existing workforce of the acquired businesses and synergies expected to arise after 3M's acquisition of these businesses.

2022 acquisitions:

There were no acquisitions that closed during the year ended December 31, 2022.

2021 acquisitions:

There were no acquisitions that closed during the year ended December 31, 2021.

2020 acquisitions:

There were no acquisitions that closed during the year ended December 31, 2020.

Divestitures:

3M may divest certain businesses from time to time based upon review of the Company's portfolio considering, among other items, factors relative to the extent of strategic and technological alignment and optimization of capital deployment, in addition to considering if selling the businesses results in the greatest value creation for the Company and for shareholders. As discussed in Note 19 (Business Segments), gains/losses on business divestitures are reflected in Corporate and Unallocated.

2022 divestitures and previously announced divestitures:

In March 2022, 3M completed the sale of its floor products business in Western Europe, formerly part of the Consumer business, for immaterial proceeds that approximated the business's book value.

In July 2022, 3M announced its intention to spin off the Health Care business as a separate public company. 3M expects to initially retain an ownership position of 19.9% in the business, which 3M intends to monetize over time. The Company expects to complete the transaction, which is intended to be tax-free for U.S. federal income tax purposes, by year-end 2023. The transaction is subject to customary conditions, including final approval from the 3M Board of Directors, regulatory approvals and rulings, and satisfactory completion of financing, among other items. Because the intended transaction is a spin-off, the Health Care business is not classified as held for sale.

In September 2022, 3M completed the split-off and combination of its Food Safety Division business (formerly part of the Health Care business segment) with Neogen Corporation in a transaction that involved a Reverse Morris Trust structure intended to make the split-off tax-efficient to 3M and 3M's shareholders for U.S. federal income tax purposes. As a result of the transaction, 3M reflected a pre-tax gain of \$2.7 billion based on aggregate consideration of \$2.8 billion. Under the terms of the underlying agreements, aggregate consideration included 3M shares exchanged and \$1.0 billion (\$828 million after closing and other adjustments) funded from debt that became obligations of Neogen. The cash and non-cash consideration components are further described below.

- \$2.0 billion representing the value of 16 million 3M common shares accepted by 3M that reduced shares outstanding through a fully-subscribed exchange offer. The exchange ultimately resulted in subscribed 3M shareholders owning 50.1% of the common shares of Neogen.
- \$828 million in cash and non-cash components funded from debt that became obligations of Neogen.
 - \$478 million, net of divested cash, as a cash payment to 3M funded from Food Safety business borrowings coincident with the transaction that became obligations of Neogen. This amount is reflected in the investing section on the consolidated statement of cash flows. The amount was subject to closing and other adjustments and included cash paid to 3M for direct sales of certain net assets of the Food Safety business to Neogen.
 - \$350 million as part of a non-cash debt-for-debt exchange that reduced then-outstanding 3M commercial paper indebtedness and became new term-debt obligations of Neogen.

3M determined that the split-off involving the Reverse Morris Trust structure and certain internal business separation transactions qualify as tax-free for U.S. federal income tax purposes. In making these determinations, 3M applied U.S. federal tax law to relevant facts and circumstances and obtained a favorable private letter ruling from the Internal Revenue Service, third party tax opinions, and other external tax advice related to the concluded tax treatment. The applicable facts and circumstances that existed at the time of the Reverse Morris Trust split-off transactions may be reviewed as part of an audit by the Internal Revenue Service. If the completed transactions were later determined to fail to qualify for tax-free treatment for U.S. federal income tax purposes, the Company could be subject to significant liabilities, and there could be material adverse impacts on the Company's business, financial condition, results of operations and cash flows in future reporting periods.

Net sales information relative to the Food Safety Division is included in Note 2. Neogen and 3M entered into certain limited-term agreements related to post-divestiture transition supply, manufacturing and services and into certain longer-term commercial supply and distributor arrangements.

2021 divestitures:

There were no divestitures that closed during the year ended December 31, 2021.

2020 divestitures:

In January 2020, 3M completed the sale of its advanced ballistic-protection business, formerly part of the Transportation and Electronics business, to Avon Rubber p.l.c for \$86 million in cash and recognized certain contingent consideration from the outcome of pending tenders. Further contingent consideration of less than \$25 million may be recognized depending on outcomes in the future. The business, with annual sales of approximately \$85 million, consists of ballistic helmets, body armor, flat armor and related helmet-attachment products serving government and law enforcement. 3M reflected immaterial impacts in the third quarter of 2019 as a result of measuring this disposal group at the lower of its carrying amount or fair value less cost to sell and in the first quarter 2020 related to completion of the divestiture and recognition of contingent consideration.

In May 2020, 3M completed the sale of substantially all of its Drug Delivery Division business, formerly part of the Health Care business, to an affiliate of Altaris Capital Partners, LLC for \$617 million in consideration including \$487 million of cash, approximately \$70 million in the form of an interest-bearing security, and approximately \$60 million in the form of a 17 percent noncontrolling interest in the new company, Kindeva Drug Delivery (Kindeva). Non-cash consideration was valued at time of initial recognition on an income-based approach using relevant estimated future cash flows and applicable market interest rates while considering impacts of restrictions related to transferability. The divested business had annual sales of approximately \$380 million. 3M retained its transdermal drug delivery components business. 3M reflected a pre-tax gain of \$387 million as a result of the divestiture. The Company reflected its ownership interest in Kindeva using the equity method of accounting incorporating the recording of 3M's share of earnings/losses on a lag-basis based on availability of Kindeva financial statements. As a result, income/loss from this unconsolidated subsidiary began to be reflected in 3M's financial statements in the third quarter of 2020. Kindeva and 3M entered into certain limited-term agreements related to post-divestiture transition and supply services. In the fourth quarter of 2022, 3M sold its remaining ownership interest in Kindeva resulting in an immaterial gain.

In the third quarter of 2020, 3M completed the sale of a small dermatology products business, formerly part of the Health Care business, for immaterial proceeds that approximated the business's book value.

Operating income and held-for-sale amounts:

With respect to the businesses above, operating income information of the Health Care business segment, inclusive of the Food Safety Division and Drug Delivery Division, is included in Note 19. Further, with the respect to these businesses, there were immaterial amounts of assets and liabilities associated with disposal groups classified as held-for-sale as of December 31, 2021 and no such amounts as of December 31, 2022. Information related to other held-for-sale disposal groups is included in Note 15.

NOTE 4. Goodwill and Intangible Assets

Goodwill

There was no goodwill recorded from acquisitions during 2022 and 2021. The amounts in the “Translation and other” column in the following table primarily relate to changes in foreign currency exchange rates.

The goodwill balance by business segment follows:

(Millions)	Safety and Industrial	Transportation and Electronics	Health Care	Consumer	Total Company
Balance as of December 31, 2020	\$ 4,687	\$ 1,858	\$ 6,992	\$ 265	\$ 13,802
Translation and other	(65)	(33)	(206)	(12)	(316)
Balance as of December 31, 2021	\$ 4,622	\$ 1,825	\$ 6,786	\$ 253	\$ 13,486
Divestiture activity	—	—	(16)	—	(16)
Goodwill impairment	—	(271)	—	—	(271)
Translation and other	(113)	(53)	(255)	12	(409)
Balance as of December 31, 2022	\$ 4,509	\$ 1,501	\$ 6,515	\$ 265	\$ 12,790

Accounting standards require that goodwill be tested for impairment annually and between annual tests in certain circumstances such as a change in reporting units or the testing of recoverability of a significant asset group within a reporting unit. At 3M, reporting units correspond to a division.

As described in Note 19, effective in the first quarter of 2022, the Company changed its business segment reporting. For any product changes that resulted in reporting unit changes, the Company applied the relative fair value method to determine the impact on goodwill of the associated reporting units, the results of which were immaterial. Goodwill balances reported above reflect these business segment reporting changes in the earliest period presented. The Company also completed its annual goodwill impairment test in the fourth quarter of 2022 for all reporting units and determined that no impairment existed. Additionally, in December 2022, as a result of 3M's commitment to a plan to exit per- and polyfluoroalkyl substance (PFAS) manufacturing as described in Note 15, 3M recorded a goodwill impairment charge of \$0.3 billion related to the Advanced Materials reporting unit (within the Transportation and Electronics business) resulting in no remaining goodwill for that reporting unit. This also represents the Company's accumulated goodwill impairment losses as of December 31, 2022.

Acquired Intangible Assets

The carrying amount and accumulated amortization of acquired finite-lived intangible assets, in addition to the balance of non-amortizable intangible assets follow:

(Millions)	December 31,	
	2022	2021
Customer related intangible assets	\$ 4,062	\$ 4,216
Patents	426	513
Other technology-based intangible assets	2,081	2,111
Definite-lived tradenames	1,166	1,171
Other amortizable intangible assets	84	105
Total gross carrying amount	7,819	8,116
Accumulated amortization — customer related	(1,747)	(1,616)
Accumulated amortization — patents	(421)	(500)
Accumulated amortization — other technology-based	(1,000)	(839)
Accumulated amortization — definite-lived tradenames	(509)	(447)
Accumulated amortization — other	(60)	(79)
Total accumulated amortization	(3,737)	(3,481)
Total finite-lived intangible assets — net	4,082	4,635
Non-amortizable intangible assets (primarily tradenames)	617	653
Total intangible assets — net	\$ 4,699	\$ 5,288

Certain tradenames acquired by 3M are not amortized because they have been in existence for over 60 years, have a history of leading-market share positions, have been and are intended to be continuously renewed, and the associated products of which are expected to generate cash flows for 3M for an indefinite period of time.

As discussed in Note 15, in December 2022, as a result of 3M's commitment to a plan to exit per- and polyfluoroalkyl substance (PFAS) manufacturing, 3M recorded a charge in the fourth quarter of 2022 related to impairment of long-lived assets and an immaterial charge related to impairment of indefinite-lived assets.

Amortization expense follows:

(Millions)	Year ended December 31,		
	2022	2021	2020
Amortization expense	\$ 498	\$ 529	\$ 537

Expected amortization expense for acquired amortizable intangible assets recorded as of December 31, 2022 follows:

(Millions)	2023	2024	2025	2026	2027	After 2027
Amortization expense	\$ 479	\$ 451	\$ 421	\$ 415	\$ 390	\$ 1,926

The preceding expected amortization expense is an estimate. Actual amounts of amortization expense may differ from estimated amounts due to additional intangible asset acquisitions, changes in foreign currency exchange rates, impairment of intangible assets, accelerated amortization of intangible assets and other events. 3M expenses the costs incurred to renew or extend the term of intangible assets.

NOTE 5. Restructuring Actions

2020 through 2022 Restructuring Action

Operational/Marketing Capability Restructuring:

In late 2020, 3M announced it would undertake certain actions beginning in the fourth quarter of 2020 to further enhance its operations and marketing capabilities to take advantage of certain global market trends while de-prioritizing investments in slower-growth end markets, resulting in a pre-tax charge of \$137 million. In 2021, management approved and committed to undertake additional actions under this initiative resulting in a 2021 pre-tax charge of \$124 million. In the first quarter of 2022, management approved and committed to undertake the remaining actions under this initiative resulting in a pre-tax charge of \$18 million. This initiative, beginning in 2020 and ending with committed first quarter 2022 actions, impacted approximately 3,100 positions worldwide with a pre-tax charge of approximately \$280 million over that period. The related restructuring charges for periods presented were recorded in the income statement as follows:

(Millions)	2022	2021	2020
Cost of sales	\$ —	\$ 19	\$ 51
Selling, general and administrative expenses	12	88	79
Research, development and related expenses	6	17	7
Total operating income impact	\$ 18	\$ 124	\$ 137

The business segment operating income impact of these restructuring charges is summarized as follows:

(Millions)	2022		2021		2020		Total
	Employee-Related	Asset-Related and Other	Employee-Related	Asset-Related and Other	Employee Related	Asset-Related and Other	
Safety and Industrial	\$ 2	\$ 30	\$ 36	\$ 7	\$ 43		\$ 43
Transportation and Electronics	4	24	16	12	28		28
Health Care	2	21	23	3	26		26
Consumer	2	7	10	1	11		11
Corporate and Unallocated	8	42	16	13	29		29
Total Operating Expense	\$ 18	\$ 124	\$ 101	\$ 36	\$ 137		\$ 137

Restructuring actions, including cash and non-cash impacts, follow:

(Millions)	Employee-Related	Asset-Related and Other	Total
Expense incurred in the fourth quarter of 2020	\$ 101	\$ 36	\$ 137
Non-cash changes	—	(36)	(36)
Accrued restructuring action balances as of December 31, 2020	101	—	101
Incremental expense incurred in 2021	124	—	124
Cash payments	(127)	—	(127)
Adjustments	(11)	—	(11)
Accrued restructuring action balance as of December 31, 2021	87	—	87
Incremental expense incurred in the first quarter of 2022	18	—	18
Cash payments	(84)	—	(84)
Adjustments	(9)	—	(9)
Accrued restructuring action balances as of June 30, 2022	\$ 12	\$ —	\$ 12

Remaining activities related to this restructuring were largely completed in the third quarter of 2022.

2022 Restructuring Actions:

Divestiture-Related Restructuring

During the third quarter of 2022, following the Food Safety Division split-off transaction and combination with Neogen completed in September 2022 (see Note 3) management approved and committed to undertake certain restructuring actions addressing corporate functional costs across 3M in relation to the magnitude of amounts previously allocated to the divested business.

These actions affected approximately 850 positions worldwide and resulted in a third quarter 2022 pre-tax charge of \$41 million, within Corporate and Unallocated. The divestiture-related restructuring actions were recorded in the income statement as follows:

(Millions)	2022
Cost of sales	\$ 3
Selling, general and administrative expenses	36
Research, development and related expenses	2
Total operating income impact	\$ 41

Divestiture-related restructuring actions, including cash impacts, follow:

(Millions)	Employee-Related
Expense incurred in the third quarter of 2022	41
Cash payments	(31)
Accrued restructuring action balances as of December 31, 2022	\$ 10

Remaining activities related to this divestiture-related restructuring are expected to be largely completed through the first half of 2023.

2020 Restructuring Actions:

Divestiture-Related Restructuring

During the second quarter of 2020, following the divestiture of substantially all of the drug delivery business (see Note 3) management approved and committed to undertake certain restructuring actions addressing corporate functional costs and manufacturing footprint across 3M in relation to the magnitude of amounts previously allocated/burdened to the divested business. These actions affected approximately 1,300 positions worldwide and resulted in a second quarter 2020 pre-tax charge of \$55 million, within Corporate and Unallocated. The divestiture-related restructuring actions were recorded in the income statement as follows:

(Millions)	2020	
Cost of sales	\$	42
Selling, general and administrative expenses		12
Research, development and related expenses		1
Total operating income impact	\$	55

Divestiture-related restructuring actions, including cash and non-cash impacts, follow:

(Millions)	Employee-Related	Asset-Related and Other	Total
Expense incurred in the second quarter of 2020	\$ 32	\$ 23	\$ 55
Non-cash changes	—	(14)	(14)
Cash payments	(14)	—	(14)
Adjustments	(3)	—	(3)
Accrued restructuring action balance as of December 31, 2020	15	9	24
Cash Payments	(5)	—	(5)
Adjustments	(1)	—	(1)
Accrued restructuring action balance as of June 30, 2021	\$ 9	\$ 9	\$ 18

Remaining activities related to this divestiture-related restructuring were largely completed in the third quarter of 2021.

Other Restructuring

Additionally, in the second quarter of 2020, management approved and committed to undertake certain restructuring actions addressing structural enterprise costs and operations in certain end markets as a result of the COVID-19 pandemic and related economic impacts. These actions affected approximately 400 positions worldwide and resulted in a second quarter 2020 pre-tax charge of \$58 million. The restructuring charges were recorded in the income statement as follows:

(Millions)	2020	
Cost of sales	\$	13
Selling, general and administrative expenses		37
Research, development and related expenses		8
Total operating income impact	\$	58

The business segment operating income impact of these restructuring charges is summarized as follows:

(Millions)	2020		
	Employee-Related	Asset-Related and Other	Total
Safety and Industrial	\$ 7	\$ —	\$ 7
Transportation and Electronics	11	—	11
Health Care	12	—	12
Consumer	5	—	5
Corporate and Unallocated	—	23	23
Total Operating Expense	\$ 35	\$ 23	\$ 58

Restructuring actions, including cash and non-cash impacts, follow:

(Millions)	Employee-Related	Asset-Related	Total
Expense incurred in the second quarter of 2020	\$ 35	\$ 23	\$ 58
Non-cash changes	—	(23)	(23)
Cash payments	(2)	—	(2)
Adjustments	(9)	—	(9)
Accrued restructuring action balances as of December 31, 2020	24	—	24
Cash Payments	(4)	—	(4)
Adjustments	(9)	—	(9)
Accrued restructuring action balances as of March 31, 2021	\$ 11	\$ —	\$ 11

Remaining activities related to this restructuring were largely completed in the second quarter of 2021.

NOTE 6. Supplemental Income Statement Information

Other expense (income), net consists of the following:

(Millions)	2022	2021	2020
Interest expense	\$ 462	\$ 488	\$ 529
Interest income	(67)	(26)	(29)
Pension and postretirement net periodic benefit cost (benefit)	(248)	(297)	(134)
Total	\$ 147	\$ 165	\$ 366

Interest expense includes an early debt extinguishment pre-tax charge of approximately \$11 million and \$10 million in 2021 and 2020, respectively.

Pension and postretirement net periodic benefit costs described in the table above include all components of defined benefit plan net periodic benefit costs except service cost, which is reported in various operating expense lines. Refer to Note 13 for additional details on the components of pension and postretirement net periodic benefit costs.

NOTE 7. Supplemental Balance Sheet Information

Additional supplemental balance sheet information is provided in the table that follows.

(Millions)	2022	2021
Other current assets		
Derivative assets-current	\$ 162	\$ 78
Insurance related (receivables, prepaid expenses and other)	103	110
Other	191	151
Total other current assets	\$ 456	\$ 339
Property, plant and equipment - at cost		
Land	\$ 255	\$ 312
Buildings and leasehold improvements	7,560	8,086
Machinery and equipment	16,455	17,305
Construction in progress	1,728	1,510
Gross property, plant and equipment	25,998	27,213
Accumulated depreciation	(16,820)	(17,784)
Property, plant and equipment - net	\$ 9,178	\$ 9,429
Other assets		
Deferred income taxes	\$ 959	\$ 581
Prepaid pension and post retirement	1,225	943
Insurance related receivables and other	73	51
Cash surrender value of life insurance policies	265	261
Equity method investments	81	129
Equity and other investments	886	133
Other	782	510
Total other assets	\$ 4,271	\$ 2,608
Other current liabilities		
Accrued rebates	\$ 751	\$ 731
Deferred revenue	538	529
Derivative liabilities	31	23
Employee benefits and withholdings	247	219
Contingent liability claims and other	534	487
Property, sales-related and other taxes	224	326
Pension and postretirement benefits	77	78
Other	788	798
Total other current liabilities	\$ 3,190	\$ 3,191
Other liabilities		
Long term income taxes payable	\$ 1,051	\$ 1,324
Employee benefits	386	400
Contingent liability claims and other	2,179	872
Finance lease obligations	75	93
Deferred income taxes	559	458
Other	1,365	256
Total other liabilities	\$ 5,615	\$ 3,403

Certain items in the table above include balances as of December 31, 2022 associated with the deconsolidated Aearo Entities as discussed further in Note 16. These include:

- \$0.7 billion asset balance in "equity and other investments" (within other assets).
- \$0.3 billion in "other" (within other assets).
- \$1.2 billion accrued liability largely reflected within "contingent liability claims and other" (within other liabilities).
- \$0.9 billion in "other" (within other liabilities).

NOTE 8. Supplemental Equity and Comprehensive Income Information

Common stock (\$.01 par value per share) of 3 billion shares is authorized, with 944,033,056 shares issued as of December 31, 2022, 2021 and 2020. Preferred stock, without par value, of 10 million shares is authorized but unissued.

Cash dividends declared and paid totaled \$1.49, \$1.48, and \$1.47 per share for each quarter in 2022, 2021 and 2020, respectively, which resulted in total year declared and paid dividends of \$5.96, \$5.92, and \$5.88 per share, respectively.

Dividend to noncontrolling interest in 2022 of \$29 million related to dividend paid by 3M India Limited, of which 3M's effective ownership is 75 percent.

Changes in Accumulated Other Comprehensive Income (Loss) Attributable to 3M by Component

(Millions)	Cumulative Translation Adjustment	Defined Benefit Pension and Postretirement Plans Adjustment	Cash Flow Hedging Instruments, Unrealized Gain (Loss)	Total Accumulated Other Comprehensive Income (Loss)
Balance at December 31, 2019, net of tax:	\$ (1,899)	\$ (6,204)	\$ (31)	\$ (8,134)
Other comprehensive income (loss), before tax:				
Amounts before reclassifications	387	(582)	(113)	(308)
Amounts reclassified out	—	619	(71)	548
Total other comprehensive income (loss), before tax	387	37	(184)	240
Tax effect	62	69	42	173
Total other comprehensive income (loss), net of tax	449	106	(142)	413
Balance at December 31, 2020, net of tax:	(1,450)	(6,098)	(173)	(7,721)
Other comprehensive income (loss), before tax:				
Amounts before reclassifications	(428)	1,223	108	903
Amounts reclassified out	—	658	47	705
Total other comprehensive income (loss), before tax	(428)	1,881	155	1,608
Tax effect	(65)	(536)	(36)	(637)
Total other comprehensive income (loss), net of tax	(493)	1,345	119	971
Balance at December 31, 2021, net of tax:	\$ (1,943)	\$ (4,753)	\$ (54)	\$ (6,750)
Other comprehensive income (loss), before tax:				
Amounts before reclassifications	(850)	866	159	175
Amounts reclassified out	—	458	(98)	360
Total other comprehensive income (loss), before tax	(850)	1,324	61	535
Tax effect	(35)	(409)	(14)	(458)
Total other comprehensive income (loss), net of tax	(885)	915	47	77
Balance at December 31, 2022, net of tax:	\$ (2,828)	\$ (3,838)	\$ (7)	\$ (6,673)

Income taxes are not provided for foreign translation relating to permanent investments in international subsidiaries, but tax effects within cumulative translation do include impacts from items such as net investment hedge transactions. Reclassification adjustments are made to avoid double counting in comprehensive income items that are subsequently recorded as part of net income.

Reclassifications out of Accumulated Other Comprehensive Income Attributable to 3M

Details about Accumulated Other Comprehensive Income Components	Amount Reclassified from Accumulated Other Comprehensive Income			Location on Income Statement
	Year ended December 31,			
	2022	2021	2020	
(Millions)				
Defined benefit pension and postretirement plans adjustments				
Gains (losses) associated with defined benefit pension and postretirement plans amortization				
Transition asset	\$ (2)	\$ (2)	\$ (2)	Other (expense) income, net
Prior service benefit	55	60	62	Other (expense) income, net
Net actuarial loss	(493)	(689)	(659)	Other (expense) income, net
Curtailments/Settlements	(18)	(27)	(20)	Other (expense) income, net
Total before tax	(458)	(658)	(619)	
Tax effect	108	160	148	Provision for income taxes
Net of tax	(350)	(498)	(471)	
Cash flow hedging instruments gains (losses)				
Foreign currency forward/option contracts	107	(38)	80	Cost of sales
Interest rate contracts	(9)	(9)	(9)	Interest expense
Total before tax	98	(47)	71	
Tax effect	(23)	11	(17)	Provision for income taxes
Net of tax	75	(36)	54	
Total reclassifications for the period, net of tax	\$ (275)	\$ (534)	\$ (417)	

NOTE 9. Supplemental Cash Flow Information

(Millions)	2022	2021	2020
Cash income tax payments, net of refunds	\$ 1,320	\$ 1,695	\$ 1,351
Cash interest payments	440	472	524

Cash interest payments include interest paid on debt and finance lease balances. Cash interest payments exclude the cash paid for early debt extinguishment costs. Additional details are described in Note 12.

Individual amounts in the Consolidated Statement of Cash Flows exclude the impacts of acquisitions, divestitures and exchange rate impacts, which are presented separately.

NOTE 10. Income Taxes**Income Before Income Taxes**

(Millions)	2022	2021	2020
United States	\$ 3,861	\$ 3,716	\$ 3,795
International	2,531	3,488	3,000
Total	\$ 6,392	\$ 7,204	\$ 6,795

Provision for Income Taxes

(Millions)	2022	2021	2020
Currently payable			
Federal	\$ 606	\$ 756	\$ 720
State	76	104	123
International	621	597	632
Deferred			
Federal	(612)	(219)	(44)
State	(76)	(25)	(17)
International	(2)	72	(77)
Total	\$ 612	\$ 1,285	\$ 1,337

Components of Deferred Tax Assets and Liabilities

(Millions)	2022	2021
Deferred tax assets:		
Accruals not currently deductible		
Employee benefit costs	\$ 232	\$ 237
Product and other claims	610	257
Miscellaneous accruals	117	157
Pension costs	7	351
Stock-based compensation	259	249
Advanced payments	173	286
Net operating/capital loss/state tax credit carryforwards	120	120
Foreign tax credits	112	115
Research and experimentation capitalization	418	—
Lease liabilities	210	219
Product and other insurance receivables	—	48
Inventory	95	68
Other	—	31
Gross deferred tax assets	2,353	2,138
Valuation allowance	(115)	(142)
Total deferred tax assets	2,238	1,996
Deferred tax liabilities:		
Product and other insurance receivables	(3)	—
Accelerated depreciation	(586)	(665)
Intangible assets	(901)	(985)
Currency translation	(69)	—
Right-of-use asset	(210)	(222)
Other	(69)	—
Total deferred tax liabilities	(1,838)	(1,872)
Net deferred tax assets	\$ 400	\$ 124

The net deferred tax assets are included as components of Other Assets and Other Liabilities within the Consolidated Balance Sheet. See Note 7 “Supplemental Balance Sheet Information” for further details.

As of December 31, 2022, the Company had tax effected operating losses, capital losses, and tax credit carryovers for federal (approximately \$112 million), state (approximately \$79 million), and international (approximately \$40 million), with all amounts before limitation impacts and valuation allowances. Federal tax attribute carryovers will expire after one to ten years, the state after one to eleven years, and the international after one year to an indefinite carryover period. As of December 31, 2022, the Company has provided \$115 million of valuation allowance against certain of these deferred tax assets based on management’s determination that it is more-likely-than-not that the tax benefits related to these assets will not be realized.

Reconciliation of Effective Income Tax Rate

	2022	2021	2020
Statutory U.S. tax rate	21.0 %	21.0 %	21.0 %
Food Safety divestiture	(8.4)	—	—
State income taxes - net of federal benefit	—	0.9	1.2
International income taxes - net	(0.4)	(1.2)	(1.2)
Global Intangible Low Taxed Income (GILTI)	0.7	0.7	0.8
Foreign Derived Intangible Income (FDII)	(2.3)	(3.1)	(1.8)
U.S. research and development credit	(1.0)	(0.7)	(1.0)
Reserves for tax contingencies	—	0.6	0.5
Employee share-based payments	(0.2)	(0.6)	(0.5)
All other - net	0.2	0.2	0.7
Effective worldwide tax rate	9.6 %	17.8 %	19.7 %

The effective tax rate for 2022, 2021, and 2020 were 9.6 percent, 17.8 percent, and 19.7 percent, respectively. These reflect a decrease of 8.2 percentage points from 2021 to 2022 and a decrease of 1.9 percentage points from 2020 to 2021. The primary factor that decreased the effective tax rate for 2022 was the tax efficient structure associated with the gain on the split-off of the Food Safety business. The primary factors that decreased the effective tax rate for 2021 in comparison to 2020 were geographical income mix and favorable adjustments in 2021 related to impacts of U.S. international tax provisions.

The 2017 Tax Cuts and Jobs Act (TCJA) involved a transition tax that is payable over eight years beginning in 2018. As of December 31, 2022 and December 31, 2021, 3M reflected \$380 million and \$508 million, respectively, in long term income taxes payable. As of December 31, 2022 and December 31, 2021, 3M reflected \$126 million and \$68 million, respectively, payable within one year associated with the transition tax.

The IRS has completed its field examination of the Company's U.S. federal income tax returns through 2018, but the years 2005 through 2017 have not closed as the Company is in the process of resolving issues identified during those examinations. In addition to the U.S. federal examination, there is also audit activity in several U.S. state and foreign jurisdictions where the Company is subject to ongoing tax examinations and governmental assessments, which could be impacted by evolving political environments in those jurisdictions. As of December 31, 2022, no taxing authority proposed significant adjustments to the Company's tax positions for which the Company is not adequately reserved.

It is reasonably possible that the amount of unrecognized tax benefits could significantly change within the next 12 months. The Company has ongoing federal, state and international income tax audits in various jurisdictions and evaluates uncertain tax positions that may be challenged by local tax authorities and not fully sustained. These uncertain tax positions are reviewed on an ongoing basis and adjusted in light of facts and circumstances including progression of tax audits, developments in case law and closing statutes of limitation. At this time, the Company is not able to estimate the range by which these potential events could impact 3M's unrecognized tax benefits within the next 12 months.

The Company recognizes the amount of tax benefit that has a greater than 50 percent likelihood of being ultimately realized upon settlement. A reconciliation of the beginning and ending amount of gross unrecognized tax benefits (UTB) is as follows:

Federal, State and Foreign Tax

(Millions)	2022	2021	2020
Gross UTB Balance at January 1	\$ 1,071	\$ 1,113	\$ 1,167
Additions based on tax positions related to the current year	115	91	74
Additions for tax positions of prior years	36	22	106
Additions related to recent acquisitions	—	—	—
Reductions for tax positions of prior years	(138)	(60)	(173)
Settlements	(118)	(57)	(8)
Reductions due to lapse of applicable statute of limitations	(39)	(38)	(53)
Gross UTB Balance at December 31	\$ 927	\$ 1,071	\$ 1,113
Net UTB that would impact the effective tax rate at December 31	\$ 965	\$ 1,112	\$ 1,145

The total amount of UTB, if recognized, would affect the effective tax rate by \$965 million as of December 31, 2022, \$1,112 million as of December 31, 2021, and \$1,145 million as of December 31, 2020. The ending net UTB results from adjusting the gross balance for deferred items, interest and penalties, and deductible taxes. The net UTB is included as components of Other Assets, Accrued Income Taxes, and Other Liabilities within the Consolidated Balance Sheet.

The Company recognizes interest and penalties accrued related to unrecognized tax benefits in tax expense. The Company recognized in the consolidated statement of income on a gross basis approximately \$1 million of expense, \$14 million of expense, and \$21 million of expense in 2022, 2021, and 2020, respectively. The amount of interest and penalties recognized may be an expense or benefit due to new or remeasured unrecognized tax benefit accruals. At December 31, 2022, and December 31, 2021, accrued interest and penalties in the consolidated balance sheet on a gross basis were \$116 million and \$140 million, respectively. Included in these interest and penalty amounts are interest and penalties related to tax positions for which the ultimate deductibility is highly certain but for which there is uncertainty about the timing of such deductibility.

As a result of certain employment commitments and capital investments made by 3M, income from certain foreign operations in the following countries is subject to reduced tax rates or, in some cases, is exempt from tax for years through the following: China (2022), Switzerland (2026), Brazil (2029) and Singapore (2032). The income tax benefits attributable to the tax status of these subsidiaries are estimated to be \$170 million (30 cents per diluted share) in 2022, \$204 million (36 cents per diluted share) in 2021, and \$163 million (28 cents per diluted share) in 2020.

As of December 31, 2022, the Company has approximately \$16.0 billion of undistributed earnings in its foreign subsidiaries. Approximately \$8.0 billion of these earnings are no longer considered permanently reinvested. The incremental tax cost to repatriate these earnings to the US is immaterial. The Company has not provided deferred taxes on approximately \$8.0 billion of undistributed earnings from non-U.S. subsidiaries as of December 31, 2022 which are indefinitely reinvested in operations. Because of the multiple avenues by which to repatriate the earnings to minimize tax cost, and because a large portion of these earnings are not liquid, it is not practical to determine the income tax liability that would be payable if such earnings were not reinvested indefinitely.

NOTE 11. Marketable Securities

The Company invests in asset-backed securities, certificates of deposit/time deposits, commercial paper, and other securities. The following is a summary of amounts recorded on the Consolidated Balance Sheet for marketable securities (current and non-current).

(Millions)	2022	2021
Commercial paper	\$ 213	\$ 109
Certificates of deposit/time deposits	21	14
U.S. treasury securities	—	75
U.S. municipal securities	4	3
Current marketable securities	238	201
U.S. municipal securities	23	27
Non-current marketable securities	23	27
Total marketable securities	\$ 261	\$ 228

At December 31, 2022 and 2021, gross unrealized, gross realized, and net realized gains and/or losses (pre-tax) were not material.

The balances at December 31, 2022 for marketable securities by contractual maturity are shown below. Actual maturities may differ from contractual maturities because the issuers of the securities may have the right to prepay obligations without prepayment penalties.

(Millions)	2022
Due in one year or less	\$ 238
Due after one year through five years	15
Due after five years through ten years	8
Total marketable securities	\$ 261

NOTE 12. Long-Term Debt and Short-Term Borrowings

The following debt tables reflect effective interest rates, which include the impact of interest rate swaps, as of December 31, 2022. If the debt was issued on a combined basis, the debt has been separated to show the impact of the fixed versus floating effective interest rates. Carrying value includes the impact of debt issuance costs and fair value hedging activity. Long-term debt and short-term borrowings as of December 31 consisted of the following:

Long-Term Debt

(Millions) Description / 2022 Principal Amount	Currency/ Fixed vs. Floating	Effective Interest Rate	Final Maturity Date	Carrying Value	
				2022	2021
Medium-term note (repaid in 2022)	EUR Fixed	— %	2022	—	567
Medium-term note (repaid in 2022)	USD Fixed	— %	2022	—	599
Registered note (\$500 million)	USD Fixed	1.86 %	2023	500	499
Medium-term note (\$650 million)	USD Fixed	2.26 %	2023	650	649
Medium-term note (€600 million)	EUR Fixed	1.14 %	2023	639	679
Medium-term note (\$300 million)	USD Fixed	3.30 %	2024	300	299
Medium-term note (\$500 million)	USD Fixed	2.98 %	2024	501	501
Medium-term note (\$300 million)	USD Floating	4.81 %	2024	300	300
Registered note (\$750 million)	USD Fixed	2.12 %	2025	747	746
Registered note (\$500 million)	USD Fixed	2.67 %	2025	499	498
Medium-term note (\$550 million)	USD Fixed	3.04 %	2025	549	548
Medium-term note (\$650 million)	USD Fixed	2.37 %	2026	646	645
Medium-term note (€750 million)	EUR Fixed	1.65 %	2026	792	842
Floating rate note (\$19 million)	USD Floating	4.37 %	2027	18	19
Medium-term note (\$850 million)	USD Fixed	2.95 %	2027	845	844
30-year debenture (\$220 million)	USD Fixed	6.44 %	2028	223	224
Floating rate note (\$150 million)	USD Floating	6.49 %	2028	129	147
Floating rate note (\$150 million)	USD Floating	6.44 %	2028	129	147
Floating rate note (\$250 million)	USD Floating	6.69 %	2028	211	240
Floating rate note (\$150 million)	USD Floating	6.64 %	2028	127	144
Floating rate note (\$100 million)	USD Floating	6.73 %	2028	84	96
Medium-term note (\$600 million)	USD Fixed	3.62 %	2028	598	598
Medium-term note (\$800 million)	USD Fixed	3.38 %	2029	797	797
Registered note (\$1 billion)	USD Fixed	2.50 %	2029	989	988
Registered note (\$600 million)	USD Fixed	3.09 %	2030	596	596
Medium-term note (€500 million)	EUR Fixed	1.90 %	2030	526	560
Medium-term note (€500 million)	EUR Fixed	1.54 %	2031	530	563
30-year bond (\$555 million)	USD Fixed	5.73 %	2037	552	551
Floating rate note (\$52 million)	USD Floating	4.16 %	2040	52	52
Floating rate note (\$96 million)	USD Floating	4.16 %	2041	96	96
Medium-term note (\$325 million)	USD Fixed	4.05 %	2044	315	315
Floating rate note (\$54 million)	USD Floating	4.16 %	2044	53	53
Medium-term note (\$500 million)	USD Fixed	3.37 %	2046	478	477
Medium-term note (\$500 million)	USD Fixed	3.68 %	2047	492	492
Medium-term note (\$650 million)	USD Fixed	4.07 %	2048	638	638
Medium-term note (\$500 million)	USD Fixed	3.78 %	2048	504	505
Registered note (\$500 million)	USD Fixed	3.37 %	2049	486	485
Registered note (\$350 million)	USD Fixed	3.72 %	2050	346	346
Other borrowings	Various	0.09 %	2023-2029	2	2
Total long-term debt				15,939	17,347
Less: current portion of long-term debt				1,938	1,291
Long-term debt (excluding current portion)				\$ 14,001	\$ 16,056

Post-Swap Borrowing (Long-Term Debt, Including Current Portion)

(Millions)	2022		2021	
	Carrying Value	Effective Interest Rate	Carrying Value	Effective Interest Rate
Fixed-rate debt	\$ 14,738	2.93 %	\$ 16,053	2.80 %
Floating-rate debt	1,201	5.70 %	1,294	1.43 %
Total long-term debt, including current portion	\$ 15,939		\$ 17,347	

Short-Term Borrowings and Current Portion of Long-Term Debt

(Millions)	Effective Interest Rate	Carrying Value	
		2022	2021
Current portion of long-term debt	1.93 %	\$ 1,938	\$ 1,291
Other borrowings	— %	—	16
Total short-term borrowings and current portion of long-term debt		\$ 1,938	\$ 1,307

Other short-term borrowings primarily consisted of bank borrowings by international subsidiaries.

Future Maturities of Long-term Debt

Maturities of long-term debt in the table below reflect the impact of put provisions associated with certain debt instruments and are net of the unamortized debt issue costs such that total maturities equal the carrying value of long-term debt as of December 31, 2022. The maturities of long-term debt for the periods subsequent to December 31, 2022 are as follows (in millions):

2023	2024	2025	2026	2027	After 2027	Total
\$ 1,938	\$ 1,100	\$ 1,865	\$ 1,438	\$ 845	\$ 8,753	\$ 15,939

As a result of put provisions associated with certain debt instruments, long-term debt payments due in 2023 include floating rate notes totaling \$149 million (classified as current portion of long-term debt).

Credit Facilities

3M has an amended and restated \$3.0 billion five year revolving credit facility expiring in November 2024. The revolving credit agreement includes a provision under which 3M may request an increase of up to \$1.0 billion (at lender's discretion), bringing the total facility up to \$4.0 billion. In addition, 3M entered into a \$1.25 billion 364-day credit facility, which was renewed in November 2022 with an expiration date of November 2023. The 364-day credit agreement includes a provision under which 3M may convert any advances outstanding on the maturity date into term loans having a maturity date one year later. These credit facilities were undrawn at December 31, 2022. Under both the \$3.0 billion and \$1.25 billion credit agreements, the Company is required to maintain its EBITDA to Interest Ratio as of the end of each fiscal quarter at not less than 3.0 to 1. This is calculated (as defined in the agreement) as the ratio of consolidated total EBITDA for the four consecutive quarters then ended to total interest expense on all funded debt for the same period. At December 31, 2022, this ratio was approximately 19 to 1. Debt covenants do not restrict the payment of dividends.

In December 2021 and June 2022, 3M entered into debt financing facilities providing commitments for term loans and potential bridge financing aggregating \$1.0 billion related to the Food Safety Division split-off transaction and combination with Neogen (discussed in Note 3). The debt commitments also included a \$150 million revolving credit facility for the Food Safety business. Coincident with completion of the September 2022 split-off, the Food Safety business term loan borrowings funded the cash payment to 3M discussed in Note 3. The bridge financing component of these facilities was terminated early and not utilized. Obligations under the commitments (including the \$150 million revolving credit facility) transferred with the Food Safety business and became those of Neogen.

Other Credit Facilities

The Company also had an additional \$318 million in stand-alone letters of credit and bank guarantees issued and outstanding at December 31, 2022. These instruments are utilized in connection with normal business activities.

Long-Term Debt Issuances and Fixed-to-Floating Interest Rate Swaps

The principal amounts, interest rates and maturity dates of individual long-term debt issuances can be found in the long-term debt table found at the beginning of this note.

During the second and third quarters of 2021, 3M entered into interest rate swaps with an aggregate notional amount of \$800 million. These swaps converted \$500 million and \$300 million of 3M's \$1 billion and \$650 million principal amount of fixed rate notes due 2049 and 2050, respectively, into floating rate debt for the portion of their terms through mid-2028 with an interest rate based on a three-month LIBOR index.

In March 2020, 3M issued \$1.75 billion aggregate principal amount of fixed rate registered notes. These were comprised of \$500 million of 5-year notes due 2025 with a coupon rate of 2.65%, \$600 million of 10-year notes due 2030 with a coupon rate of 3.05%, and \$650 million of 30-year notes due 2050 with a coupon rate of 3.70%.

Long-Term Debt Maturities and Extinguishments

In February 2022, 3M repaid 500 million euros aggregate principal amount of fixed-rate medium-term notes that matured. In June 2022, 3M repaid \$600 million aggregate principal amount of fixed-rate medium-term notes that matured.

In November 2021, 3M repaid 600 million euros aggregate principal amount of Eurobonds that matured.

In March 2021, 3M, via a make-whole-call offer, redeemed \$450 million principal amount of 2.75% notes due 2022. The Company recorded an early debt extinguishment pre-tax charge of approximately \$11 million within interest expense. This charge reflected the differential between the carrying value and the amount paid to reacquire the notes and related expenses.

In December 2020, 3M, via make-whole-call offers, repaid \$1 billion aggregate principal amount of its outstanding notes. This included \$400 million aggregate principal amount of 3.00% notes and \$600 million aggregate principal amount of 1.625% notes, both of which were due to mature in 2021. The Company recorded an early debt extinguishment pre-tax charge of approximately \$10 million within interest expense. This charge reflected the differential between the carrying value and the amount paid to reacquire the notes and related expenses.

In May 2020, 3M repaid \$650 million euros aggregate principal amount of floating-rate medium-term notes that matured. In August 2020, 3M repaid \$500 million aggregate principal amount of floating-rate medium-term notes that matured.

Floating Rate Notes

At various times, 3M has issued floating rate notes containing put provisions. 3M would be required to repurchase these securities at various prices ranging from 99 percent to 100 percent of par value according to the reduction schedules for each security. In December 2004, 3M issued a forty-year \$60 million floating rate note, with a rate based on a floating LIBOR index (noting contracts will be modified to apply a new reference rate where applicable). Under the terms of this floating rate note due in 2044, holders have an annual put feature at 100 percent of par value from 2014 and every anniversary thereafter until final maturity. Under the terms of the floating rate notes due in 2027, 2040 and 2041, holders have put options that commence ten years from the date of issuance and each third anniversary thereafter until final maturity at prices ranging from 99 percent to 100 percent of par value. For the periods presented, 3M was required to repurchase an immaterial amount of principal on the aforementioned floating rate notes.

NOTE 13. Pension and Postretirement Benefit Plans

3M has company-sponsored retirement plans covering substantially all U.S. employees and many employees outside the United States. In total, 3M has over 75 defined benefit plans in 28 countries. Pension benefits associated with these plans generally are based on each participant's years of service, compensation, and age at retirement or termination. The primary U.S. defined-benefit pension plan was closed to new participants effective January 1, 2009. The Company also provides certain postretirement health care and life insurance benefits for its U.S. employees who reach retirement age while employed by the Company and were employed by the Company prior to January 1, 2016. Most international employees and retirees are covered by government health care programs. The cost of company-provided postretirement health care plans for international employees is not material and is combined with U.S. amounts in the tables that follow.

The Company has made deposits for its defined benefit plans with independent trustees. Trust funds and deposits with insurance companies are maintained to provide pension benefits to plan participants and their beneficiaries. There are no plan assets in the non-qualified plan due to its nature. For its U.S. postretirement health care and life insurance benefit plans, the Company has set aside amounts at least equal to annual benefit payments with an independent trustee.

The Company also sponsors employee savings plans under Section 401(k) of the Internal Revenue Code. These plans are offered to substantially all regular U.S. employees. For eligible employees hired prior to January 1, 2009, employee 401(k) contributions of up to 5% of eligible compensation matched in cash at rates of 45% or 60%, depending on the plan in which the employee participates. Employees hired on or after January 1, 2009, receive a cash match of 100% for employee 401(k) contributions of up to 5% of eligible compensation and receive an employer retirement income account cash contribution of 3% of the participant's total eligible compensation. All contributions are invested in a number of investment funds pursuant to the employees' elections. Employer contributions to the U.S. defined contribution plans were \$241 million, \$231 million and \$201 million for 2022, 2021 and 2020, respectively. 3M subsidiaries in various international countries also participate in defined contribution plans. Employer contributions to the international defined contribution plans were \$108 million, \$117 million and \$103 million for 2022, 2021 and 2020, respectively.

In the second quarter of 2020, as a result of the divestiture of the drug delivery business, the Company recognized a curtailment in its United Kingdom Pension Plan. The resulting re-measurement of the pension plan funded status reduced long-term prepaid pension and post retirement assets (located within "other assets" of the Company's balance sheet) by approximately \$80 million, which was offset within accumulated other comprehensive income (located within the equity section of the Company's balance sheet). The expense impact of this re-measurement was immaterial for the second quarter of 2020 and subsequent periods.

The following tables include a reconciliation of the beginning and ending balances of the benefit obligation and the fair value of plan assets as well as a summary of the related amounts recognized in the Company's consolidated balance sheet as of December 31 of the respective years. 3M also has certain non-qualified unfunded pension and postretirement benefit plans, inclusive of plans related to supplement/excess benefits for employees impacted by particular relocations and other matters, that individually and in the aggregate are not significant and which are not included in the tables that follow. The obligations for these plans are included within other liabilities in the Company's consolidated balance sheet and aggregated to less than \$51 million as of December 31, 2022 and 2021.

(Millions)	Qualified and Non-Pension Benefits					
	United States		International		Postretirement Benefits	
	2022	2021	2022	2021	2022	2021
Change in benefit obligation						
Benefit obligation at beginning of year	\$ 18,104	\$ 19,376	\$ 7,942	\$ 8,770	\$ 2,281	\$ 2,397
Acquisitions/Transfers	—	—	—	—	—	—
Service cost	256	286	128	164	42	53
Interest cost	417	360	125	98	52	43
Participant contributions	—	—	7	10	—	—
Foreign exchange rate changes	—	—	(567)	(325)	1	(4)
Plan amendments	—	—	8	1	—	—
Actuarial (gain) loss	(3,777)	(588)	(2,240)	(433)	(458)	(89)
Benefit payments	(1,495)	(1,330)	(266)	(298)	(115)	(113)
Settlements, curtailments, special termination benefits and other	—	—	(65)	(45)	(6)	(6)
Benefit obligation at end of year	\$ 13,505	\$ 18,104	\$ 5,072	\$ 7,942	\$ 1,797	\$ 2,281
Change in plan assets						
Fair value of plan assets at beginning of year	16,953	17,127	8,016	8,194	1,353	1,376
Acquisitions/Transfers	—	—	—	—	—	—
Actual return on plan assets	(2,875)	1,079	(1,286)	321	(218)	93
Company contributions	65	77	90	100	3	3
Participant contributions	—	—	7	10	—	—
Foreign exchange rate changes	—	—	(602)	(265)	—	—
Benefit payments	(1,495)	(1,330)	(266)	(298)	(115)	(113)
Settlements, curtailments, special termination benefits and other	—	—	(68)	(46)	(6)	(6)
Fair value of plan assets at end of year	\$ 12,648	\$ 16,953	\$ 5,891	\$ 8,016	\$ 1,017	\$ 1,353
Funded status at end of year	\$ (857)	\$ (1,151)	\$ 819	\$ 74	\$ (780)	\$ (928)

Amounts recognized in the Consolidated Balance Sheet as of December 31, (Millions)	Qualified and Non-qualified Pension Benefits					
	United States		International		Postretirement Benefits	
	2022	2021	2022	2021	2022	2021
Non-current assets	\$ —	\$ —	\$ 1,225	\$ 943	\$ —	\$ —
Accrued benefit cost						
Current liabilities	(52)	(59)	(14)	(14)	(11)	(5)
Non-current liabilities	(805)	(1,092)	(392)	(855)	(769)	(923)
Ending balance	\$ (857)	\$ (1,151)	\$ 819	\$ 74	\$ (780)	\$ (928)

Amounts recognized in accumulated other comprehensive income as of December 31, (Millions)	Qualified and Non-qualified Pension Benefits					
	United States		International		Postretirement Benefits	
	2022	2021	2022	2021	2022	2021
Net transition obligation (asset)	\$ —	\$ —	\$ 4	\$ 6	\$ —	\$ —
Net actuarial loss (gain)	4,616	4,991	157	960	332	538
Prior service cost (credit)	(56)	(80)	10	3	(166)	(197)
Ending balance	\$ 4,560	\$ 4,911	\$ 171	\$ 969	\$ 166	\$ 341

The balance of amounts recognized for international plans in accumulated other comprehensive income as of December 31 in the preceding table are presented based on the foreign currency exchange rate on that date.

The pension accumulated benefit obligation represents the actuarial present value of benefits based on employee service and compensation as of the measurement date and does not include an assumption about future compensation levels. The following table summarizes the total accumulated benefit obligations, the accumulated benefit obligations and fair value of plan assets for defined benefit pension plans with accumulated benefit obligations in excess of plan assets, and the projected benefit obligation and fair value of plan assets for defined benefit pension plans with projected benefit obligation in excess of plan assets as of December 31:

(Millions)	Qualified and Non-qualified Pension Plans			
	United States		International	
	2022	2021	2022	2021
Accumulated benefit obligation	\$ 12,967	\$ 17,305	\$ 4,814	\$ 7,484
Plans with accumulated benefit obligation in excess of plan assets				
Accumulated benefit obligation	\$ 402	\$ 514	\$ 775	\$ 2,843
Fair value of plan assets	—	—	427	2,194
Plans with projected benefit obligation in excess of plan assets				
Projected benefit obligation	\$ 13,505	\$ 18,104	\$ 851	\$ 3,204
Fair value of plan assets	12,648	16,953	442	2,335

Components of net periodic cost and other amounts recognized in other comprehensive income

The service cost component of defined benefit net periodic benefit cost is recorded in cost of sales, selling, general and administrative expenses, and research, development and related expenses. As discussed in Note 6, the other components of net periodic benefit cost are reflected in other expense (income), net. Components of net periodic benefit cost and other supplemental information for the years ended December 31 follow:

(Millions)	Qualified and Non-qualified Pension Benefits								
	United States			International			Postretirement Benefits		
	2022	2021	2020	2022	2021	2020	2022	2021	2020
Net periodic benefit cost (benefit)									
Operating expense									
Service cost	\$ 256	\$ 286	\$ 261	\$ 128	\$ 164	\$ 152	\$ 42	\$ 53	\$ 43
Non-operating expense									
Interest cost	417	360	499	125	98	117	52	43	62
Expected return on plan assets	(963)	(1,055)	(1,046)	(271)	(326)	(306)	(72)	(78)	(80)
Amortization of transition asset	—	—	—	2	2	2	—	—	—
Amortization of prior service benefit	(24)	(24)	(24)	—	(3)	(5)	(31)	(33)	(33)
Amortization of net actuarial loss	424	529	491	29	104	121	40	56	47
Settlements, curtailments, special termination benefits and other	12	24	16	10	3	1	2	3	3
Total non-operating expense (benefit)	(134)	(166)	(64)	(105)	(122)	(70)	(9)	(9)	(1)
Total net periodic benefit cost (benefit)	\$ 122	\$ 120	\$ 197	\$ 23	\$ 42	\$ 82	\$ 33	\$ 44	\$ 42
Other changes in plan assets and benefit obligations recognized in other comprehensive (income) loss									
Amortization of transition asset	\$ —	\$ —	\$ —	\$ (2)	\$ (2)	\$ (2)	\$ —	\$ —	\$ —
Prior service cost (benefit)	—	—	—	8	1	—	—	—	—
Amortization of prior service benefit	24	24	24	—	3	5	31	33	33
Net actuarial (gain) loss	61	(614)	760	(689)	(434)	(358)	(166)	(104)	108
Amortization of net actuarial loss	(424)	(529)	(491)	(29)	(104)	(121)	(40)	(56)	(47)
Foreign currency	—	—	—	(82)	(71)	79	2	(1)	(7)
Settlements, curtailments, special termination benefits and other	(12)	(23)	(16)	(4)	(1)	(1)	(2)	(3)	(3)
Total recognized in other comprehensive (income) loss	\$ (351)	\$ (1,142)	\$ 277	\$ (798)	\$ (608)	\$ (398)	\$ (175)	\$ (131)	\$ 84
Total recognized in net periodic benefit cost (benefit) and other comprehensive (income) loss	\$ (229)	\$ (1,022)	\$ 474	\$ (775)	\$ (566)	\$ (316)	\$ (142)	\$ (87)	\$ 126

Weighted-average assumptions used to determine benefit obligations as of December 31

	Qualified and Non-qualified Pension Benefits								
	United States			International			Postretirement Benefits		
	2022	2021	2020	2022	2021	2020	2022	2021	2020
Discount rate	5.18 %	2.89 %	2.55 %	4.39 %	1.80 %	1.38 %	5.25 %	2.88 %	2.50 %
Compensation rate increase	3.37 %	3.21 %	3.21 %	2.86 %	2.86 %	2.88 %	N/A	N/A	N/A

Weighted-average assumptions used to determine net cost for years ended December 31

	Qualified and Non-qualified Pension Benefits								
	United States			International			Postretirement Benefits		
	2022	2021	2020	2022	2021	2020	2022	2021	2020
Discount rate - service cost	3.10 %	2.81 %	3.41 %	1.64 %	1.23 %	1.61 %	3.11 %	3.21 %	3.45 %
Discount rate - interest cost	2.38 %	1.92 %	2.87 %	1.62 %	1.13 %	1.61 %	2.59 %	2.20 %	3.00 %
Expected return on assets	6.00 %	6.50 %	6.75 %	3.86 %	4.36 %	4.70 %	5.77 %	6.15 %	6.32 %
Compensation rate increase	3.21 %	3.21 %	3.21 %	2.86 %	2.88 %	2.88 %	N/A	N/A	N/A

The Company provides eligible retirees in the U.S. postretirement health care benefit plans to a savings account benefits-based plan. The contributions provided by the Company to the health savings accounts increase 3 percent per year for employees who retired prior to January 1, 2016 and increase 1.5% for employees who retire on or after January 1, 2016. Therefore, the Company no longer has material exposure to health care cost inflation.

The Company determines the discount rate used to measure plan liabilities as of the December 31 measurement date for the pension and postretirement benefit plans, which is also the date used for the related annual measurement assumptions. The discount rate reflects the current rate at which the associated liabilities could be effectively settled at the end of the year. The Company sets its rate to reflect the yield of a portfolio of high quality, fixed-income debt instruments that would produce cash flows sufficient in timing and amount to settle projected future benefits. Using this methodology, the Company determined a discount rate of 5.18% for the U.S. pension plans and 5.25% for the postretirement benefit plans as of December 31, 2022, which is an increase of 2.29 percentage points and an increase 2.37 percentage points, respectively, from the rates used as of December 31, 2021. An increase in the discount rate decreases the Projected Benefit Obligation (PBO), the increase in the discount rate as of December 31, 2022 resulted in an approximately \$4.5 billion lower benefit obligation for the U.S. pension and postretirement plans.

The Company measures service cost and interest cost separately using the spot yield curve approach applied to each corresponding obligation. Service costs are determined based on duration-specific spot rates applied to the service cost cash flows. The interest cost calculation is determined by applying duration-specific spot rates to the year-by-year projected benefit payments. The spot yield curve approach does not affect the measurement of the total benefit obligations as the change in service and interest costs offset in the actuarial gains and losses recorded in other comprehensive income.

For the primary U.S. qualified pension plan, the Company's assumption for the expected return on plan assets was 6.00% in 2022. Projected returns are based primarily on broad, publicly traded equity and fixed-income indices and forward-looking estimates of active portfolio and investment management. As of December 31, 2022, the Company's 2023 expected long-term rate of return on U.S. plan assets is 7.50%. The expected return assumption is based on the strategic asset allocation of the plan, long term capital market return expectations and expected performance from active investment management. The 2022 expected long-term rate of return is based on an asset allocation assumption of 10% global equities, 14% private equities, 60% fixed-income securities, and 16% absolute return investments independent of traditional performance benchmarks, along with positive returns from active investment management. The actual net rate of return on plan assets in 2022 was -17.4%. In 2021 the plan earned a rate of return of 6.7% and in 2020 earned a return of 13.6%. The average annual actual return on the plan assets over the past 10 and 25 years has been 5.2% and 7.1%, respectively. Return on assets assumptions for international pension and other post-retirement benefit plans are calculated on a plan-by-plan basis using plan asset allocations and expected long-term rate of return assumptions.

In 2021 the Company updated the mortality improvement scales to the Society of Actuaries Scale MP- 2021. The December 31, 2021 update resulted in an immaterial increase to the U.S. pension PBO and U.S. accumulated postretirement benefit obligations. The Society of Actuaries did not release an update to the Scale MP-2021 in 2022.

During 2022, the Company contributed \$155 million to its U.S. and international pension plans and \$3 million to its postretirement plans. During 2021, the Company contributed \$177 million to its U.S. and international pension plans and \$3 million to its postretirement plans. In 2023, the Company expects to contribute an amount in the range of \$100 million to \$200 million of cash to its U.S. and international retirement plans. The Company does not have a required minimum cash pension contribution obligation for its U.S. plans in 2023. Future contributions will depend on market conditions, interest rates and other factors.

Future Pension and Postretirement Benefit Payments

The following table provides the estimated pension and postretirement benefit payments that are payable from the plans to participants.

(Millions)	Qualified and Non-qualified Pension Benefits		Postretirement Benefits
	United States	International	
2023 Benefit Payments	\$ 1,057	\$ 262	\$ 142
2024 Benefit Payments	1,061	269	145
2025 Benefit Payments	1,065	284	148
2026 Benefit Payments	1,061	295	150
2027 Benefit Payments	1,059	307	154
Next five years	5,155	1,614	726

Plan Asset Management

3M's investment strategy for its pension and postretirement plans is to manage the funds on a going-concern basis. The primary goal of the trust funds is to meet the obligations as required. The secondary goal is to earn the highest rate of return possible, without jeopardizing its primary goal, and without subjecting the Company to an undue amount of contribution risk. Fund returns are used to help finance present and future obligations to the extent possible within actuarially determined funding limits and tax-determined asset limits, thus reducing the potential need for additional contributions from 3M. The investment strategy has used long duration cash bonds and derivative instruments to offset a significant portion of the interest rate sensitivity of U.S. pension liabilities.

Normally, 3M does not buy or sell any of its own securities as a direct investment for its pension and other postretirement benefit funds. However, due to external investment management of the funds, the plans may indirectly buy, sell or hold 3M securities. The aggregate amount of 3M securities are not considered to be material relative to the aggregate fund percentages.

The discussion that follows references the fair value measurements of certain assets in terms of levels 1, 2 and 3. See Note 15 for descriptions of these levels. While the company believes the valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different estimate of fair value at the reporting date.

U.S. Pension Plans and Postretirement Benefit Plan Assets

In order to achieve the investment objectives in the U.S. pension plans and U.S. postretirement benefit plans, the investment policies include a target strategic asset allocation. The investment policies allow some tolerance around the target in recognition that market fluctuations and illiquidity of some investments may cause the allocation to a specific asset class to vary from the target allocation, potentially for long periods of time. Acceptable ranges have been designed to allow for deviation from strategic targets and to allow for the opportunity for tactical over- and under-weights. The portfolios will normally be rebalanced when the quarter-end asset allocation deviates from acceptable ranges. The allocation is reviewed regularly by the named fiduciary of the plans. Approximately 72% of the postretirement benefit plan assets are in a 401(h) account. The 401(h) account assets are in the same trust as the primary U.S. pension plan and invested with the same investment objectives as the primary U.S. pension plan.

The fair values of the assets held by the U.S. pension plans by asset class are as follows:

Asset Class (Millions)	Fair Value Measurements Using Inputs Considered as						Fair Value at December 31,	
	Level 1		Level 2		Level 3		2022	2021
	2022	2021	2022	2021	2022	2021	2022	2021
Equities								
U.S. equities	\$ 501	\$ 1,875	\$ —	\$ —	\$ —	\$ —	\$ 501	\$ 1,875
Non-U.S. equities	370	1,465	—	—	—	—	370	1,465
Index and long/short equity funds*							271	404
Total Equities	871	3,340	—	—	—	—	1,142	3,744
Fixed Income								
U.S. government securities	1,344	1,417	29	716	—	—	1,373	2,133
Non-U.S. government securities	—	—	70	89	—	—	70	89
Preferred and convertible securities	—	—	44	54	—	—	44	54
U.S. corporate bonds	—	11	4,789	4,620	—	—	4,789	4,631
Non-U.S. corporate bonds	—	—	871	883	—	—	871	883
Derivative instruments	10	11	—	6	—	—	10	17
Other*							91	132
Total Fixed Income	1,354	1,439	5,803	6,368	—	—	7,248	7,939
Private Equity								
Growth equity	—	58	—	—	—	—	—	58
Partnership investments*							1,700	2,003
Total Private Equity	—	58	—	—	—	—	1,700	2,061
Absolute Return								
Fixed income and other	1	1	85	166	—	—	86	167
Hedge fund/fund of funds*							1,297	1,943
Partnership investments*							497	617
Total Absolute Return	1	1	85	166	—	—	1,880	2,727
Cash and Cash Equivalents								
Cash and cash equivalents	8	11	22	9	—	—	30	20
Repurchase agreements and derivative margin activity	—	—	(1)	—	—	—	(1)	—
Cash and cash equivalents, valued at net asset value*							789	678
Total Cash and Cash Equivalents	8	11	21	9	—	—	818	698
Total	\$ 2,234	\$ 4,849	\$ 5,909	\$ 6,543	\$ —	\$ —	\$12,788	\$17,169
Other items to reconcile to fair value of plan assets							(140)	(216)
Fair value of plan assets							\$12,648	\$16,953

* In accordance with ASC 820-10, certain investments that are measured at fair value using the net asset value (NAV) per share (or its equivalent) as a practical expedient have not been classified in the fair value hierarchy. The NAV is based on the fair value of the underlying assets owned by the fund, minus its liabilities then divided by the number of units outstanding and is determined by the investment manager or custodian of the fund. The fair value amounts presented in this table are intended to permit reconciliation of the fair value hierarchy to the amounts presented in the fair value of plan assets.

The fair values of the assets held by the postretirement benefit plans by asset class are as follows:

Asset Class (Millions)	Fair Value Measurements Using Inputs Considered as						Fair Value at December 31,	
	Level 1		Level 2		Level 3		2022	2021
	2022	2021	2022	2021	2022	2021	2022	2021
Equities								
U.S. equities	\$ 145	\$ 292	\$ —	\$ —	\$ —	\$ —	\$ 145	\$ 292
Non-U.S. equities	23	80	—	—	—	—	23	80
Index and long/short equity funds*							16	28
Total Equities	168	372	—	—	—	—	184	400
Fixed Income								
U.S. government securities	96	109	73	180	—	—	169	289
Non-U.S. government securities	—	—	5	7	—	—	5	7
U.S. corporate bonds	—	1	322	291	—	—	322	292
Non-U.S. corporate bonds	—	—	61	59	—	—	61	59
Other*							5	7
Total Fixed Income	96	110	461	537	—	—	562	654
Private Equity								
Growth equity	—	3	—	—	—	—	—	3
Partnership investments*							99	107
Total Private Equity	—	3	—	—	—	—	99	110
Absolute Return								
Fixed income and other	—	—	5	9	—	—	5	9
Hedge fund/fund of funds*							76	102
Partnership investments*							29	32
Total Absolute Return	—	—	5	9	—	—	110	143
Cash and Cash Equivalents								
Cash and cash equivalents	21	20	1	—	—	—	22	20
Cash and cash equivalents, valued at net asset value*							46	36
Total Cash and Cash Equivalents	21	20	1	—	—	—	68	56
Total	\$ 285	\$ 505	\$ 467	\$ 546	\$ —	\$ —	\$ 1,023	\$ 1,363
Other items to reconcile to fair value of plan assets							(6)	(10)
Fair value of plan assets							\$ 1,017	\$ 1,353

*In accordance with ASC 820-10, certain investments that are measured at fair value using the NAV per share (or its equivalent) as a practical expedient have not been classified in the fair value hierarchy. The NAV is based on the fair value of the underlying assets owned by the fund, minus its liabilities then divided by the number of units outstanding and is determined by the investment manager or custodian of the fund. The fair value amounts presented in this table are intended to permit reconciliation of the fair value hierarchy to the amounts presented in the fair value of plan assets.

Publicly traded equities are valued at the closing price reported in the active market in which the individual securities are traded.

Fixed income includes derivative instruments such as credit default swaps, interest rate swaps and futures contracts. Corporate debt includes bonds and notes, asset backed securities, collateralized mortgage obligations and private placements. Swaps and derivative instruments are valued by the custodian using closing market swap curves and market derived inputs. U.S. government and government agency bonds and notes are valued at the closing price reported in the active market in which the individual security is traded. Corporate bonds and notes, asset backed securities and collateralized mortgage obligations are valued at either the yields currently available on comparable securities of issuers with similar credit ratings or valued under a discounted cash flow approach that utilizes observable inputs, such as current yields of similar instruments, but includes adjustments for certain risks that may not be observable such as credit and liquidity risks. Private placements are valued by the custodian using recognized pricing services and sources.

The private equity portfolio is a diversified mix of derivative instruments, growth equity and partnership interests. Growth equity investments are valued at the closing price reported in the active market in which the individual securities are traded.

Absolute return consists primarily of partnership interests in hedge funds, hedge fund of funds or other private fund vehicles. Corporate debt instruments are valued at either the yields currently available on comparable securities of issuers with similar credit ratings or valued under a discounted cash flow approach that utilizes observable inputs, such as current yields of similar instruments, but includes adjustments for certain risks that may not be observable such as credit and liquidity risk ratings.

Other items to reconcile to fair value of plan assets include, interest receivables, amounts due for securities sold, amounts payable for securities purchased and interest payable.

There were no level 3 assets in the fair values of the U.S. pension and postretirement plans assets for the periods ended December 31, 2022 and 2021.

International Pension Plans Assets

Outside the U.S., pension plan assets are typically managed by decentralized fiduciary committees. The disclosure below of asset categories is presented in aggregate for over 70 defined benefit plans in over 25 countries; however, there is significant variation in asset allocation policy from country to country. Local regulations, local funding rules, and local financial and tax considerations are part of the funding and investment allocation process in each country. The Company provides standard funding and investment guidance to all international plans with more focused guidance to the larger plans.

Each plan has its own strategic asset allocation. The asset allocations are reviewed periodically and rebalanced when necessary.

The fair values of the assets held by the international pension plans by asset class are as follows:

Asset Class (Millions)	Fair Value Measurements Using Inputs Considered as						Fair Value at December 31,	
	Level 1		Level 2		Level 3		2022	2021
	2022	2021	2022	2021	2022	2021	2022	2021
Equities								
Growth equities	\$ 59	\$ 315	\$ 99	\$ 181	\$ —	\$ —	\$ 158	\$ 496
Value equities	164	328	11	15	—	—	175	343
Core equities	65	107	142	547	2	5	209	659
Equities, valued at net asset value*							1	2
Total Equities	288	750	252	743	2	5	543	1,500
Fixed Income								
Domestic government	73	73	1,060	1,039	3	4	1,136	1,116
Foreign government	29	22	327	458	—	—	356	480
Corporate debt securities	32	32	2,155	2,389	1	10	2,188	2,431
Fixed income securities, valued at net asset value*							623	893
Total Fixed Income	134	127	3,542	3,886	4	14	4,303	4,920
Private Equity								
Real estate	2	2	50	58	2	5	54	65
Real estate, valued at net asset value*							119	163
Partnership investments*							265	226
Total Private Equity	2	2	50	58	2	5	438	454
Absolute Return								
Derivatives	—	—	1	20	—	—	1	20
Insurance	—	—	—	—	438	504	438	504
Other	8	7	—	—	1	6	9	13
Other, valued at net asset value*							—	—
Hedge funds*							259	535
Total Absolute Return	8	7	1	20	439	510	707	1,072
Cash and Cash Equivalents								
Cash and cash equivalents	122	145	51	46	—	—	173	191
Cash and cash equivalents, valued at net asset value*							2	1
Total Cash and Cash Equivalents	122	145	51	46	—	—	175	192
Total	\$ 554	\$ 1,031	\$ 3,896	\$ 4,753	\$ 447	\$ 534	\$ 6,166	\$ 8,138
Other items to reconcile to fair value of plan assets							(275)	(122)
Fair value of plan assets							\$ 5,891	\$ 8,016

*In accordance with ASC 820-10, certain investments that are measured at fair value using the NAV per share (or its equivalent) as a practical expedient have not been classified in the fair value hierarchy. The NAV is based on the fair value of the underlying assets owned by the fund, minus its liabilities then divided by the number of units outstanding and is determined by the investment manager or custodian of the fund. The fair value amounts presented in this table are intended to permit reconciliation of the fair value hierarchy to the amounts presented in the fair value of plan assets.

Equities consist primarily of mandates in public equity securities managed to various public equity indices. Publicly traded equities are valued at the closing price reported in the active market in which the individual securities are traded.

Fixed Income investments include domestic and foreign government, and corporate, (including mortgage backed and other debt) securities. Governments, corporate bonds and notes and mortgage backed securities are valued at the closing price reported if traded on an active market or at yields currently available on comparable securities of issuers with similar credit ratings or valued under a discounted cash flow approach that utilizes observable inputs, such as current yields of similar instruments, but includes adjustments for certain risks that may not be observable such as credit and liquidity risks.

Private equity funds consist of partnership interests in a variety of funds. Real estate consists of property funds and REITS (Real Estate Investment Trusts). REITS are valued at the closing price reported in the active market in which it is traded.

Absolute return consists of private partnership interests in hedge funds, insurance contracts, derivative instruments, hedge fund of funds, and other alternative investments. Insurance consists of insurance contracts, which are valued using cash surrender values which is the amount the plan would receive if the contract was cashed out at year end. Derivative instruments consist of various swaps and bond futures that are used to help manage risks.

Other items to reconcile to fair value of plan assets include the net of interest receivables, amounts due for securities sold, amounts payable for securities purchased and interest payable.

The balances of and changes in the fair values of the international pension plans' level 3 assets consist primarily of insurance contracts under the absolute return asset class. In 2022 the aggregate of net purchases and net unrealized gains and losses decreased this balance by \$24 million and the change in currency exchange rates decreased this balance by \$42 million for a net decrease of \$66 million. In 2021 the aggregate net purchases and net unrealized gains decreased this balance by \$7 million and the change in currency exchange rates decreased the balance by \$44 million for a net decrease to this balance of \$51 million.

NOTE 14. Derivatives

The Company uses interest rate swaps, currency swaps, and forward and option contracts to manage risks generally associated with foreign exchange rate and interest rate fluctuations. The information that follows explains the various types of derivatives and financial instruments used by 3M, how and why 3M uses such instruments, how such instruments are accounted for, and how such instruments impact 3M's financial position and performance.

Additional information with respect to derivatives is included elsewhere as follows:

- Impact on other comprehensive income of nonderivative hedging and derivative instruments is included in Note 8.
- Fair value of derivative instruments is included in Note 15.
- Derivatives and/or hedging instruments associated with the Company's long-term debt are also described in Note 12.

Refer to the section below titled *Statement of Income Location and Impact of Cash Flow and Fair Value Derivative Instruments and Derivatives Not Designated as Hedging Instruments* for details on the location within the consolidated statements of income for amounts of gains and losses related to derivative instruments designated as cash flow or fair value hedges (along with similar information relative to the hedged items) and derivatives not designated as hedging instruments. Additional information relative to cash flow hedges, fair value hedges, net investment hedges and derivatives not designated as hedging instruments is included below as applicable.

Cash Flow Hedges:

For derivative instruments that are designated and qualify as cash flow hedges, the gain or loss on the derivative is reported as a component of other comprehensive income and reclassified into earnings in the same period during which the hedged transaction affects earnings. Gains and losses on the derivative representing hedge components excluded from the assessment of effectiveness are recognized in current earnings.

Cash Flow Hedging - Foreign Currency Forward and Option Contracts: The Company enters into foreign exchange forward and option contracts to hedge against the effect of exchange rate fluctuations on cash flows denominated in foreign currencies. These transactions are designated as cash flow hedges. The settlement or extension of these derivatives will result in reclassifications (from accumulated other comprehensive income) to earnings in the period during which the hedged transactions affect earnings. 3M may de-designate these cash flow hedge relationships in advance of the occurrence of the forecasted transaction. The portion of gains or losses on the derivative instrument previously included in accumulated other comprehensive income for de-designated hedges remains in accumulated other comprehensive income until the forecasted transaction occurs or becomes probable of not occurring. Changes in the value of derivative instruments after de-designation are recorded in earnings and are included in the Derivatives Not Designated as Hedging Instruments section below. The maximum length of time over which 3M hedges its exposure to the variability in future cash flows of the forecasted transactions is 36 months.

Cash Flow Hedging — Interest Rate Contracts: The Company may use forward starting interest rate contracts and treasury rate lock contracts to hedge exposure to variability in cash flows from interest payments on forecasted debt issuances.

In March 2020, the Company entered into treasury rate lock contracts with a notional amount of \$500 million that were terminated concurrently with the March 2020 issuance of registered notes as discussed in Note 12. The termination resulted in an immaterial net loss within accumulated other comprehensive income that will be amortized for the respective lives of the debt.

In periods prior to 2020, the 3M entered into other forward starting interest rate swaps designated as hedges against interest rate volatility associated with forecasted issuances of fixed rate debt. These included swaps terminated in 2019 concurrent with associated debt issuances. These 2019 terminations resulted in a net loss of \$143 million within accumulated other comprehensive income that is being amortized over the respective lives of the debt.

The amortization of gains and losses on forward starting interest rate swaps is included in the tables below as part of the gain/(loss) reclassified from accumulated other comprehensive income into income.

As of December 31, 2022, the Company had a balance of \$7 million associated with the after-tax net unrealized loss associated with cash flow hedging instruments recorded in accumulated other comprehensive income. This includes a remaining balance of \$94 million (after-tax loss) related to the forward starting interest rate swap and treasury rate lock contracts, which will be amortized over the respective lives of the notes. Based on exchange rates as of December 31, 2022, of the total after-tax net unrealized balance as of December 31, 2022, 3M expects to reclassify approximately \$68 million after-tax net unrealized gain over the next 12 months (with the impact offset by earnings/losses from underlying hedged items).

The amount of pretax gain (loss) recognized in other comprehensive income related to derivative instruments designated as cash flow hedges is provided in the following table.

(Millions)	Pretax Gain (Loss) Recognized in Other Comprehensive Income on Derivative		
	2022	2021	2020
Foreign currency forward/option contracts	\$ 159	\$ 108	\$ (111)
Interest rate contracts	—	—	(2)
Total	\$ 159	\$ 108	\$ (113)

Fair Value Hedges:

For derivative instruments that are designated and qualify as fair value hedges, the gain or loss on the derivatives as well as the offsetting loss or gain on the hedged item attributable to the hedged risk are recognized in current earnings.

Fair Value Hedging - Interest Rate Swaps: The Company manages interest expense using a mix of fixed and floating rate debt. To help manage borrowing costs, the Company may enter into interest rate swaps. Under these arrangements, the Company agrees to exchange, at specified intervals, the difference between fixed and floating interest amounts calculated by reference to an agreed-upon notional principal amount. The mark-to-market of these fair value hedges is recorded as gains or losses in interest expense and is offset by the gain or loss of the underlying debt instrument, which also is recorded in interest expense.

In November 2013, 3M issued a Eurobond which was due in 2021 for a face amount of 600 million euros. Upon debt issuance, 3M completed a fixed-to-floating interest rate swap on a notional amount of 300 million euros as a fair value hedge of a portion of the fixed interest rate Eurobond obligation. This interest rate swap matured in conjunction with the repayment of the Eurobond in November 2021.

In August 2015, 3M issued \$1.5 billion aggregate principal amount of medium-term notes. Upon debt issuance, the Company entered into two interest rate swaps as fair value hedges of a portion of the fixed interest rate medium-term note obligation. The first converted a \$450 million three-year fixed rate note that matured in August 2018 at which time the associated interest rate swap also matured, and the second converted \$300 million of a five-year fixed rate note that matured in August 2020 at which time the associated interest rate swap also matured.

In the fourth quarter of 2017, the Company entered into an interest rate swap as a fair value hedge with a notional amount of \$200 million that converted the company's fixed-rate medium-term note that matured in August 2020 at which time the associated interest rate swap also matured.

In September 2018, the Company entered into an interest rate swap with a notional amount of \$200 million that converted a portion of the Company's \$400 million aggregate principal amount of fixed rate medium-term notes due 2021 into a floating rate note with an interest rate based on a three-month LIBOR index as a hedge of its exposure to changes in fair value that are attributable to interest rate risk. The Company terminated this interest rate swap in conjunction with the early debt repayment in December 2020 of \$400 million aggregate principal amount of fixed-rate medium notes further described in Note 12.

During the second and third quarters of 2021, 3M entered into interest rate swaps with an aggregate notional amount of \$800 million. These swaps converted \$500 million and \$300 million of 3M's \$1.0 billion and \$650 million principal amount of fixed rate notes due 2049 and 2050, respectively, into floating rate debt for the portion of their terms through mid-2028 with an interest rate based on a three-month LIBOR index.

3M had a fixed-to-floating interest rate swap that was terminated in 2007 with respect to the Company's 30-year \$220 million principal amount debenture due in 2028. As this debt is still outstanding, its carrying value includes the remaining basis adjustment from this discontinued fair value hedge.

The following amounts were recorded on the consolidated balance sheet related to cumulative basis adjustments for active fair value hedges, as well as remaining amounts for discontinued fair value hedges:

(Millions)	Carrying Value of the Hedged Liabilities		Cumulative Amount of Fair Value Hedging Adjustment Included in the Carrying Value of the Hedged Liabilities	
	2022	2021	2022	2021
Location on the Consolidated Balance Sheet				
Long-term debt	\$ 903	\$ 997	\$ (98)	\$ (4)

Net Investment Hedges:

The Company may use non-derivative (foreign currency denominated debt) and derivative (foreign exchange forward contracts) instruments to hedge portions of the Company's investment in foreign subsidiaries and manage foreign exchange risk. For instruments that are designated and qualify as hedges of net investments in foreign operations and that meet the effectiveness requirements, the net gains or losses attributable to changes in spot exchange rates are recorded in cumulative translation within other comprehensive income. The remainder of the change in value of such instruments is recorded in earnings. Recognition in earnings of amounts previously recorded in cumulative translation is limited to circumstances such as complete or substantially complete liquidation of the net investment in the hedged foreign operation. To the extent foreign currency denominated debt is not designated in or is de-designated from a net investment hedge relationship, changes in value of that portion of foreign currency denominated debt due to exchange rate changes are recorded in earnings through their maturity date.

3M's use of foreign exchange forward contracts designated in hedges of the Company's net investment in foreign subsidiaries can vary by time period depending on when foreign currency denominated debt balances designated in such relationships are de-designated, matured, or are newly issued and designated. Additionally, variation can occur in connection with the extent of the Company's desired foreign exchange risk coverage.

At December 31, 2022, the total notional amount of foreign exchange forward contracts designated in net investment hedges was approximately 150 million euros, along with a principal amount of long-term debt instruments designated in net investment hedges totaling 2.4 billion euros. The maturity dates of these derivative and nonderivative instruments designated in net investment hedges range from 2023 to 2031.

The amount of gain (loss) excluded from effectiveness testing recognized in income relative to instruments designated in net investment hedge relationships is not material. The amount of pretax gain (loss) recognized in other comprehensive income related to derivative and nonderivative instruments designated as net investment hedges are as follows.

(Millions)	Pretax Gain (Loss) Recognized as Cumulative Translation within Other Comprehensive Income		
	2022	2021	2020
Foreign currency denominated debt	\$ 162	\$ 296	\$ (351)
Foreign currency forward contracts	10	8	(1)
Total	\$ 172	\$ 304	\$ (352)

Derivatives Not Designated as Hedging Instruments:

Derivatives not designated as hedging instruments include de-designated foreign currency forward and option contracts that formerly were designated in cash flow hedging relationships (as referenced in the Cash Flow Hedges section above). In addition, 3M enters into foreign currency contracts that are not designated in hedging relationships to offset, in part, the impacts of changes in value of various non-functional currency denominated items including certain intercompany financing balances. These derivative instruments are not designated in hedging relationships; therefore, fair value gains and losses on these contracts are recorded in earnings. The Company does not hold or issue derivative financial instruments for trading purposes.

Statement of Income Location and Impact of Cash Flow and Fair Value Derivative Instruments and Derivatives Not Designated as Hedging Instruments

The location in the consolidated statement of income and pre-tax amounts recognized in income related to derivative instruments designated in cash flow or fair value hedging relationships and for derivatives not designated as hedging instruments are as follows:

(Millions)	Location and Amount of Gain (Loss) Recognized in Income					
	Cost of sales			Other expense (income), net		
	2022	2021	2020	2022	2021	2020
Information regarding cash flow and fair value hedging relationships:						
Total amounts of income and expense line items presented in the consolidated statement of income in which the effects of derivatives are recorded	\$ 19,232	\$ 18,795	\$ 16,605	\$ 147	\$ 165	\$ 366
Gain or (loss) on cash flow hedging relationships:						
Foreign currency forward/option contracts:						
Amount of gain or (loss) reclassified from accumulated other comprehensive income into income	107	(38)	80	—	—	—
Interest rate contracts:						
Amount of gain or (loss) reclassified from accumulated other comprehensive income into income	—	—	—	(9)	(9)	(9)
Gain or (loss) on fair value hedging relationships:						
Interest rate contracts:						
Hedged items	—	—	—	94	16	4
Derivatives designated as hedging instruments	—	—	—	(94)	(16)	(4)
Information regarding derivatives not designated as hedging instruments:						
Gain or (loss) on derivatives not designated as instruments:						
Foreign currency forward/option contracts	(76)	5	2	45	(11)	43

Location, Fair Value, and Gross Notional Amounts of Derivative Instruments

The following tables summarize the fair value of 3M's derivative instruments, excluding nonderivative instruments used as hedging instruments, and their location in the consolidated balance sheet. Notional amounts below are presented at period end foreign exchange rates, except for certain interest rate swaps, which are presented using the inception date's foreign exchange rate.

(Millions)	Gross Notional Amount		Location	Assets		Location	Liabilities	
				Fair Value Amount			Fair Value Amount	
	2022	2021		2022	2021		2022	2021
Derivatives designated as hedging instruments								
Foreign currency forward/ option contracts	\$ 2,368	\$ 1,768	Other current assets	\$ 89	\$ 54	Other current liabilities	\$ 27	\$ 19
Foreign currency forward/ option contracts	835	800	Other assets	55	41	Other liabilities	9	1
Interest rate contracts	800	800	Other assets	—	—	Other liabilities	102	9
Total derivatives designated as hedging instruments				144	95		138	29
Derivatives not designated as hedging instruments								
Foreign currency forward/ option contracts	2,816	3,731	Other current assets	73	24	Other current liabilities	4	4
Total derivatives not designated as hedging instruments				73	24		4	4
Total derivative instruments				\$ 217	\$ 119		\$ 142	\$ 33

Credit Risk and Offsetting of Assets and Liabilities of Derivative Instruments

The Company is exposed to credit loss in the event of nonperformance by counterparties in interest rate swaps, currency swaps, and forward and option contracts. However, the Company's risk is limited to the fair value of the instruments. The Company actively monitors its exposure to credit risk through the use of credit approvals and credit limits, and by selecting major international banks and financial institutions as counterparties. 3M enters into master netting arrangements with counterparties when possible to mitigate credit risk in derivative transactions. A master netting arrangement may allow each counterparty to net settle amounts owed between a 3M entity and the counterparty as a result of multiple, separate derivative transactions. The Company does not anticipate nonperformance by any of these counterparties.

3M has elected to present the fair value of derivative assets and liabilities within the Company's consolidated balance sheet on a gross basis even when derivative transactions are subject to master netting arrangements and may otherwise qualify for net presentation. However, the following tables provide information as if the Company had elected to offset the asset and liability balances of derivative instruments, netted in accordance with various criteria in the event of default or termination as stipulated by the terms of netting arrangements with each of the counterparties. For each counterparty, if netted, the Company would offset the asset and liability balances of all derivatives at the end of the reporting period based on the 3M entity that is a party to the transactions. Derivatives not subject to master netting agreements are not eligible for net presentation.

Offsetting of Financial Assets under Master Netting Agreements with Derivative Counterparties

(Millions)	Gross Amount of Derivative Assets Presented in the Consolidated Balance Sheet		Gross Amounts not Offset in the Consolidated Balance Sheet that are Subject to Master Netting Agreements				Net Amount of Derivative Assets	
			Gross Amount of Eligible Offsetting Recognized Derivative Liabilities		Cash Collateral Received			
	2022	2021	2022	2021	2022	2021	2022	2021
Derivatives subject to master netting agreements	\$ 217	\$ 119	\$ 40	\$ 25	\$ —	\$ —	\$ 177	\$ 94
Derivatives not subject to master netting agreements	—	—					—	—
Total	\$ 217	\$ 119					\$ 177	\$ 94

Offsetting of Financial Liabilities under Master Netting Agreements with Derivative Counterparties

(Millions)	Gross Amount of Derivative Liabilities Presented in the Consolidated Balance Sheet		Gross Amounts not Offset in the Consolidated Balance Sheet that are Subject to Master Netting Agreements				Net Amount of Derivative Liabilities	
			Gross Amount of Eligible Offsetting Recognized Derivative Assets		Cash Collateral Received			
	2022	2021	2022	2021	2022	2021	2022	2021
Derivatives subject to master netting agreements	\$ 142	\$ 33	\$ 40	\$ 25	\$ —	\$ —	\$ 102	\$ 8
Derivatives not subject to master netting agreements	—	—					—	—
Total	\$ 142	\$ 33					\$ 102	\$ 8

Currency Effects

3M estimates that year-on-year foreign currency transaction effects, including hedging impacts, increased pre-tax income by approximately \$127 million in 2022, decreased pre-tax income by approximately \$105 million in 2021, and decreased pre-tax income by approximately \$21 million in 2020. These estimates include transaction gains and losses, including derivative instruments designed to reduce foreign currency exchange rate risks.

NOTE 15. Fair Value Measurements

Assets and Liabilities that are Measured at Fair Value on a Recurring Basis:

For 3M, assets and liabilities that are measured at fair value on a recurring basis primarily relate to available-for-sale marketable securities and certain derivative instruments. The information in the following paragraphs and tables primarily addresses matters relative to these financial assets and liabilities. Separately, there were no material fair value measurements with respect to nonfinancial assets or liabilities that are recognized or disclosed at fair value in the Company's financial statements on a recurring basis for 2022 and 2021.

3M uses various valuation techniques, which are primarily based upon the market and income approaches, with respect to financial assets and liabilities. Following is a description of the valuation methodologies used for the respective financial assets and liabilities measured at fair value.

Available-for-sale marketable securities — except certain U.S. municipal securities:

Marketable securities, except certain U.S. municipal securities, are valued utilizing multiple sources. A weighted average price is used for these securities. Market prices are obtained for these securities from a variety of industry standard data providers, security master files from large financial institutions, and other third-party sources. These multiple prices are used as inputs into a distribution-curve-based algorithm to determine the daily fair value to be used. 3M classifies U.S. treasury securities as level 1, while all other marketable securities (excluding certain U.S. municipal securities) are classified as level 2. Marketable securities are discussed further in Note 11.

Available-for-sale marketable securities —certain U.S. municipal securities only:

3M holds municipal securities with several cities in the United States as of December 31, 2022. Due to the nature of these securities, the valuation method references the carrying value of the corresponding finance lease obligation, and as such, will be classified as level 3 securities separately.

Derivative instruments:

The Company's derivative assets and liabilities within the scope of ASC 815, *Derivatives and Hedging*, are required to be recorded at fair value. The Company's derivatives that are recorded at fair value include foreign currency forward and option contracts, interest rate swaps, and net investment hedges where the hedging instrument is recorded at fair value. Net investment hedges that use foreign currency denominated debt to hedge 3M's net investment are not impacted by the fair value measurement standard under ASC 820, as the debt used as the hedging instrument is marked to a value with respect to changes in spot foreign currency exchange rates and not with respect to other factors that may impact fair value.

3M has determined that foreign currency forwards, currency swaps, foreign currency options, interest rate swaps and cross-currency swaps will be considered level 2 measurements. 3M uses inputs other than quoted prices that are observable for the asset. These inputs include foreign currency exchange rates, volatilities, and interest rates. Derivative positions are primarily valued using standard calculations/models that use as their basis readily observable market parameters. Industry standard data providers are 3M's primary source for forward and spot rate information for both interest rates and currency rates, with resulting valuations periodically validated through third-party or counterparty quotes and a net present value stream of cash flows model.

The following tables provide information by level for assets and liabilities that are measured at fair value on a recurring basis.

Description (Millions)	Fair Value Measurements Using Inputs Considered as							
	Fair Value at		Level 1		Level 2		Level 3	
	2022	2021	2022	2021	2022	2021	2022	2021
Assets:								
Available-for-sale:								
Marketable securities:								
Commercial paper	\$ 213	\$ 109	\$ —	\$ —	\$ 213	\$ 109	\$ —	\$ —
Certificates of deposit/time deposits	21	14	—	—	21	14	—	—
U.S. treasury securities	—	75	—	75	—	—	—	—
U.S. municipal securities	27	30	—	—	—	—	27	30
Derivative instruments — assets:								
Foreign currency forward/option contracts	217	119	—	—	217	119	—	—
Liabilities:								
Derivative instruments — liabilities:								
Foreign currency forward/option contracts	40	24	—	—	40	24	—	—
Interest rate contracts	102	9	—	—	102	9	—	—

The following table provides a reconciliation of the beginning and ending balances of items measured at fair value on a recurring basis in the table above that used significant unobservable inputs (level 3).

Marketable securities — certain U.S. municipal securities only			
(Millions)	2022	2021	2020
Beginning balance	\$ 30	\$ 34	\$ 46
Total gains or losses:			
Included in earnings	—	—	—
Included in other comprehensive income	—	—	—
Purchases and issuances	—	—	10
Sales and settlements	(3)	(4)	(22)
Transfers in and/or out of level 3	—	—	—
Ending balance	\$ 27	\$ 30	\$ 34
Change in unrealized gains or losses for the period included in earnings for securities held at the end of the reporting period	—	—	—

In addition, the plan assets of 3M's pension and postretirement benefit plans are measured at fair value on a recurring basis (at least annually). Refer to Note 13.

Assets and Liabilities that are Measured at Fair Value on a Nonrecurring Basis:

Disclosures are required for certain assets and liabilities that are measured at fair value, but are recognized and disclosed at fair value on a nonrecurring basis in periods subsequent to initial recognition. For 3M, such measurements of fair value relate primarily to indefinite-lived and long-lived asset impairments, goodwill impairments, and adjustment in carrying value of equity securities for which the measurement alternative of cost less impairment plus or minus observable price changes is used. There were no material impairments of assets or adjustments to equity securities using the measurement alternative for 2022 and 2021. In September 2022, management committed to a plan to exit and dispose of net assets in Russia through an intended sale of related subsidiaries. As a result, 3M recorded a pre-tax charge of \$109 million, primarily within selling, general and administrative expense related to recording this held-for-sale disposal group at the lower of its fair value less cost to sell or carrying amount. In determining the carrying amount, the balance of cumulative translation adjustment within accumulated other comprehensive loss that will be eliminated upon sale was included and contributed to the impairment charge. As of December 31, 2022 the amounts of major assets and liabilities of this held-for-sale disposal group primarily included approximately \$50 million within other current liabilities that largely represented a reserve against the balance of cumulative translation adjustment. Additionally, in December 2022, 3M committed to a plan to exit per- and polyfluoroalkyl substance (PFAS) manufacturing by the end of 2025. As a result, 3M recorded a pre-tax charge of \$0.8 billion in the fourth quarter of 2022, related to impairment of long-lived and indefinite-lived assets (\$0.5 billion — primarily associated with property, plant, and equipment) and impairment of goodwill (\$0.3 billion). These charges were reflected within selling, general and administrative expense and goodwill impairment expense, respectively. The plan affects each of the Electronics Materials Solutions Division and Advanced Materials Division asset groupings/reporting units (both part of the Transportation and Electronics business) with impairment resulting for the Advanced Materials Division. Underlying fair values were determined primarily using discounted cash flow models based on assumptions of projected sales, EBITDA margins, capital expenditures, discount rates and other applicable items. Significant unobservable inputs used to estimate the fair values of the asset groupings included discount rates, which were 11% to 12%.

Fair Value of Financial Instruments:

The Company's financial instruments include cash and cash equivalents, marketable securities, accounts receivable, certain investments, accounts payable, borrowings, and derivative contracts. The fair values of cash equivalents, accounts receivable, accounts payable, and short-term borrowings and current portion of long-term debt approximated carrying values because of the short-term nature of these instruments. Available-for-sale marketable securities, in addition to certain derivative instruments, are recorded at fair values as indicated in the preceding disclosures. To estimate fair values (classified as level 2) for its long-term debt, the Company utilized third-party quotes, which are derived all or in part from model prices, external sources, market prices, or the third-party's internal records. Information with respect to the carrying amounts and estimated fair values of these financial instruments follow:

(Millions)	2022		2021	
	Carrying Value	Fair Value	Carrying Value	Fair Value
Long-term debt, excluding current portion	\$ 14,001	\$ 12,484	\$ 16,056	\$ 17,601

The fair values reflected in the sections above consider the terms of the related debt absent the impacts of derivative/hedging activity. The carrying amount of long-term debt referenced above is impacted by certain fixed-to-floating interest rate swaps that are designated as fair value hedges and by the designation of certain fixed rate Eurobond securities issued by the Company as hedging instruments of the Company's net investment in its European subsidiaries.

NOTE 16. Commitments and Contingencies

Warranties/Guarantees:

3M's accrued product warranty liabilities, recorded on the Consolidated Balance Sheet as part of current and long-term liabilities, are estimated at approximately \$48 million at December 31, 2022, and \$48 million at December 31, 2021. Further information on product warranties is not disclosed, as the Company considers the balance immaterial to its consolidated results of operations and financial condition. 3M guarantees of loans with third parties and other guarantee arrangements are not material.

Legal Proceedings:

The Company and some of its subsidiaries are involved in numerous claims and lawsuits, principally in the United States, and regulatory proceedings worldwide. These claims, lawsuits and proceedings include, but are not limited to, products liability (involving products that the Company now or formerly manufactured and sold), intellectual property, commercial, antitrust, federal healthcare program related laws and regulations, such as the False Claims Act and anti-kickback laws, securities, and environmental laws in the United States and other jurisdictions. Unless otherwise stated, the Company is vigorously defending all such litigation and proceedings. From time to time, the Company also receives subpoenas, investigative demands or requests for information from various government agencies in the United States and foreign countries. The Company generally responds in a cooperative, thorough and timely manner. These responses sometimes require time and effort and can result in considerable costs being incurred by the Company. Such requests can also lead to the assertion of claims or the commencement of administrative, civil, or criminal legal proceedings against the Company and others, as well as to settlements. The outcomes of legal proceedings and regulatory matters are often difficult to predict. Any determination that the Company's operations or activities are not, or were not, in compliance with applicable laws or regulations could result in the imposition of fines, civil or criminal penalties, and equitable remedies, including disgorgement, suspension or debarment or injunctive relief.

Process for Disclosure and Recording of Liabilities Related to Legal Proceedings

Many lawsuits and claims involve highly complex issues relating to causation, scientific evidence, and alleged actual damages, all of which are otherwise subject to substantial uncertainties. Assessments of lawsuits and claims can involve a series of complex judgments about future events and can rely heavily on estimates and assumptions. When making determinations about recording liabilities related to legal proceedings, the Company complies with the requirements of ASC 450, *Contingencies*, and related guidance, and records liabilities in those instances where it can reasonably estimate the amount of the loss and when the loss is probable. Where the reasonable estimate of the probable loss is a range, the Company records as an accrual in its financial statements the most likely estimate of the loss, or the low end of the range if there is no one best estimate. The Company either discloses the amount of a possible loss or range of loss in excess of established accruals if estimable, or states that such an estimate cannot be made. The Company discloses significant legal proceedings even where liability is not probable or the amount of the liability is not estimable, or both, if the Company believes there is at least a reasonable possibility that a loss may be incurred.

Because litigation is subject to inherent uncertainties, and unfavorable rulings or developments could occur, there can be no certainty that the Company may not ultimately incur charges in excess of presently recorded liabilities. Many of the matters described are at preliminary stages or seek an indeterminate amount of damages. It is not uncommon for claims to be resolved over many years. A future adverse ruling, settlement, unfavorable development, or increase in accruals for one or more of these matters could result in future charges that could have a material adverse effect on the Company's results of operations or cash flows in the period in which they are recorded. Based on experience and developments, the Company reexamines its estimates of probable liabilities and associated expenses and receivables each period, and whether it is able to estimate a liability previously determined to be not estimable and/or not probable. Where appropriate, the Company makes additions to or adjustments of its estimated liabilities. As a result, the current estimates of the potential impact on the Company's consolidated financial position, results of operations and cash flows for the legal proceedings and claims pending against the Company could change in the future.

Process for Disclosure and Recording of Insurance Receivables Related to Legal Proceedings

The Company estimates insurance receivables based on an analysis of the terms of its numerous policies, including their exclusions, pertinent case law interpreting comparable policies, its experience with similar claims, and assessment of the nature of the claim and remaining coverage, and records an amount it has concluded is recognizable and expects to receive in light of the loss recovery and/or gain contingency models under ASC 450, ASC 610-30, and related guidance. For those insured legal proceedings where the Company has recorded an accrued liability in its financial statements, the Company also records receivables for the amount of insurance that it concludes as recognizable from the Company's insurance program. For those insured matters where the Company has not recorded an accrued liability because the liability is not probable or the amount of the liability is not estimable, or both, but where the Company has incurred an expense in defending itself, the Company records receivables for the amount of insurance that it concludes as recognizable for the expense incurred.

The following sections first describe the significant legal proceedings in which the Company is involved, and then describe the liabilities and associated insurance receivables the Company has accrued relating to its significant legal proceedings.

Respirator Mask/Asbestos Litigation

As of December 31, 2022, the Company is a named defendant, with multiple co-defendants, in numerous lawsuits in various courts that purport to represent approximately 4,028 individual claimants, compared to approximately 3,876 individual claimants with actions pending December 31, 2021.

The vast majority of the lawsuits and claims resolved by and currently pending against the Company allege use of some of the Company's mask and respirator products and seek damages from the Company and other defendants for alleged personal injury from workplace exposures to asbestos, silica, coal mine dust or other occupational dusts found in products manufactured by other defendants or generally in the workplace. A minority of the lawsuits and claims resolved by and currently pending against the Company generally allege personal injury from occupational exposure to asbestos from products previously manufactured by the Company, which are often unspecified, as well as products manufactured by other defendants, or occasionally at Company premises.

The Company's current volume of new and pending matters is substantially lower than it experienced at the peak of filings in 2003. The Company expects that filing of claims by unimpaired claimants in the future will continue to be at much lower levels than in the past. Accordingly, the number of claims alleging more serious injuries, including mesothelioma, other malignancies, and black lung disease, will represent a greater percentage of total claims than in the past. Over the past twenty plus years, the Company has prevailed in fifteen of the sixteen cases tried to a jury (including the lawsuits in 2018 described below). In 2018, 3M received a jury verdict in its favor in two lawsuits – one in California state court in February and the other in Massachusetts state court in December – both involving allegations that 3M respirators were defective and failed to protect the plaintiffs against asbestos fibers. In April 2018, a jury in state court in Kentucky found 3M's 8710 respirators failed to protect two coal miners from coal mine dust and awarded compensatory damages of approximately \$2 million and punitive damages totaling \$63 million. In August 2018, the trial court entered judgment and the Company appealed. In 2019, the Company settled a substantial majority of the then-pending coal mine dust lawsuits in Kentucky and West Virginia for \$340 million, including the jury verdict in April 2018 in the Kentucky case mentioned above and the appeal has been dismissed. In October 2020, 3M defended a respirator case before a jury in King County, Washington, involving a former shipyard worker who alleged 3M's 8710 respirator was defective and that 3M acted negligently in failing to protect him against asbestos fibers. The jury delivered a complete defense verdict in favor of 3M, concluding that the 8710 respirator was not defective in design or warnings and any conduct by 3M was not a cause of plaintiff's mesothelioma. The plaintiff appealed the verdict. In May 2022, the First Division intermediate appellate court in Washington affirmed in part and reversed in part 3M's trial victory, concluding that the trial court misapplied Washington law in instructing the jury about factual causation. The Washington Supreme Court declined to review the matter.

The Company has demonstrated in these past trial proceedings that its respiratory protection products are effective as claimed when used in the intended manner and in the intended circumstances. Consequently, the Company believes that claimants are unable to establish that their medical conditions, even if significant, are attributable to the Company's respiratory protection products. Nonetheless, the Company's litigation experience indicates that claims of persons alleging more serious injuries, including mesothelioma, other malignancies, and black lung disease, are costlier to resolve than the claims of unimpaired persons, and it therefore believes the average cost of resolving pending and future claims on a per-claim basis will continue to be higher than it experienced in prior periods when the vast majority of claims were asserted by medically unimpaired claimants. Since the second half of 2020, the Company has experienced an increase in the number of cases filed that allege injuries from exposures to coal mine dust; that increase represents the substantial majority of the growth in case numbers referred to above.

As previously reported, the State of West Virginia, through its Attorney General, filed a complaint in 2003 against the Company and two other manufacturers of respiratory protection products in the Circuit Court of Lincoln County, West Virginia, and amended its complaint in 2005. The amended complaint seeks substantial, but unspecified, compensatory damages primarily for reimbursement of the costs allegedly incurred by the State for worker's compensation and healthcare benefits provided to all workers with occupational pneumoconiosis and unspecified punitive damages. In October 2019, the court granted the State's motion to sever its unfair trade practices claim, which seeks civil penalties of up to \$5,000 per violation under the state's Consumer Credit Protection Act relating to statements that the State contends were misleading about 3M's respirators. A bench trial for the unfair trade practices claims has been rescheduled for late February 2023. An expert witness retained by the State has recently estimated that 3M sold over five million respirators into the state during the relevant time period, and the State alleges that each respirator sold constitutes a separate violation under the Act. 3M disputes the expert's estimates and the State's position regarding what constitutes a separate violation of the Act. 3M has asserted various additional defenses, including that the Company's marketing did not violate the Act at any time, and that the State's claims are barred under the applicable statute of limitations. No liability has been recorded for any portion of this matter because the Company believes that liability is not probable and reasonably estimable at this time. In addition, the Company is not able to estimate a possible loss or range of loss given the lack of any meaningful discovery responses by the State of West Virginia as to key issues, and the assertions of claims against two other manufacturers where a defendant's share of liability may turn on the law of joint and several liability and by the amount of fault, if any, a factfinder may allocate to each defendant if the case were ultimately tried.

Respirator Mask/Asbestos Liabilities and Insurance Receivables

The Company regularly conducts a comprehensive legal review of its respirator mask/asbestos liabilities. The Company reviews recent and historical claims data, including without limitation, (i) the number of pending claims filed against the Company, (ii) the nature and mix of those claims (i.e., the proportion of claims asserting usage of the Company's mask or respirator products and alleging exposure to each of asbestos, silica, coal or other occupational dusts, and claims pleading use of asbestos-containing products allegedly manufactured by the Company), (iii) the costs to defend and resolve pending claims, and (iv) trends in filing rates and in costs to defend and resolve claims, (collectively, the "Claims Data"). As part of its comprehensive legal review, the Company regularly provides the Claims Data to a third party with expertise in determining the impact of Claims Data on future filing trends and costs. The third party assists the Company in estimating the costs to defend and resolve pending and future claims. The Company uses these estimates to develop its best estimate of probable liability.

Developments may occur that could affect the Company's estimate of its liabilities. These developments include, but are not limited to, significant changes in (i) the key assumptions underlying the Company's accrual, including, the number of future claims, the nature and mix of those claims, the average cost of defending and resolving claims, and in maintaining trial readiness (ii) trial and appellate outcomes, (iii) the law and procedure applicable to these claims, and (iv) the financial viability of other co-defendants and insurers.

As a result of its review of its respirator mask/asbestos liabilities, of pending and expected lawsuits and of the cost of resolving claims of persons who claim more serious injuries, including mesothelioma, other malignancies, and black lung disease, the Company increased its accruals in 2022 for respirator mask/asbestos liabilities by \$31 million. In 2022, the Company made payments for legal defense costs and settlements of \$67 million related to the respirator mask/asbestos litigation. As of December 31, 2022, the Company had an accrual for respirator mask/asbestos liabilities (excluding Aearo accruals) of \$604 million. This accrual represents the Company's best estimate of probable loss and reflects an estimation period for future claims that may be filed against the Company approaching the year 2050. The Company cannot estimate the amount or upper end of the range of amounts by which the liability may exceed the accrual the Company has established because of the (i) inherent difficulty in projecting the number of claims that have not yet been asserted or the time period in which future claims may be asserted, (ii) the complaints nearly always assert claims against multiple defendants where the damages alleged are typically not attributed to individual defendants so that a defendant's share of liability may turn on the law of joint and several liability, which can vary by state, (iii) the multiple factors described above that the Company considers in estimating its liabilities, and (iv) the several possible developments described above that may occur that could affect the Company's estimate of liabilities.

As of December 31, 2022, the Company's receivable for insurance recoveries related to the respirator mask/asbestos litigation was \$4 million. In addition, the Company continues to seek coverage under the policies of certain insolvent and other insurers. Once those claims for coverage are resolved, the Company will have collected substantially all of its remaining insurance coverage for respirator mask/asbestos claims.

Respirator Mask/Asbestos Litigation — Aearo Technologies

On April 1, 2008, a subsidiary of the Company acquired the stock of Aearo Holding Corp., the parent of Aearo Technologies ("Aearo"). Aearo manufactured and sold various products, including personal protection equipment, such as eye, ear, head, face, fall and certain respiratory protection products. Aearo and/or other companies that previously owned and operated Aearo's respirator business (American Optical Corporation, Warner-Lambert LLC, AO Corp. and Cabot Corporation ("Cabot")) are named defendants, with multiple co-defendants, including the Company, in numerous lawsuits in various courts in which plaintiffs allege use of mask and respirator products and seek damages from Aearo and other defendants for alleged personal injury from workplace exposures to asbestos, silica-related, coal mine dust, or other occupational dusts found in products manufactured by other defendants or generally in the workplace. In July 2022, Aearo Technologies and certain of its related entities (collectively, the "Aearo Entities") voluntarily initiated chapter 11 proceedings under the U.S. Bankruptcy Code seeking court supervision to establish a trust, funded by the Company, to efficiently and equitably satisfy all claims determined to be entitled to compensation (including the Aearo respirator mask/asbestos matters). This represents a change in strategy for managing the Combat Arms Version 2 earplugs and Aearo respirator mask/asbestos alleged litigation liabilities. As a result, 3M's accrual relative to the commitments associated with that trust includes Aearo respirator mask/asbestos matters. The U.S. Bankruptcy Court has stayed the Aearo respirator mask/asbestos litigation matters as the chapter 11 proceedings move forward. For additional information, see the discussion within the section "Product Liability Litigation" with respect to Aearo Technologies Dual-Ended Combat Arms Earplugs.

Preceding respirator mask/asbestos — Aearo Technologies matters/information:

Prior to the voluntary chapter 11 proceedings and as previously disclosed, as of December 31, 2021, the Company, through its Aearo subsidiary, had accruals of \$46 million for product liabilities and defense costs related to current and future Aearo-related asbestos, silica-related and coal mine dust claims. Responsibility for legal costs, as well as for settlements and judgments, is shared in an informal arrangement among Aearo, Cabot, American Optical Corporation and a subsidiary of Warner Lambert and their respective insurers (the “Payor Group”). Liability is allocated among the parties based on the number of years each company sold respiratory products under the “AO Safety” brand and/or owned the AO Safety Division of American Optical Corporation and the alleged years of exposure of the individual plaintiff. Aearo’s share of the contingent liability is further limited by an agreement entered into between Aearo and Cabot on July 11, 1995. This agreement provides that, so long as Aearo pays to Cabot a quarterly fee of \$100,000, Cabot will retain responsibility and liability for, and indemnify Aearo against, any product liability claims involving exposure to asbestos, silica, or silica products for respirators sold prior to July 11, 1995. Because of the difficulty in determining how long a particular respirator remains in the stream of commerce after being sold, Aearo and Cabot have applied the agreement to claims arising out of the alleged use of respirators involving exposure to asbestos, silica or silica products prior to January 1, 1997. With these arrangements in place, Aearo’s potential liability is limited to exposures alleged to have arisen from the use of respirators involving exposure to asbestos, silica, or silica products on or after January 1, 1997. To date, Aearo has elected to pay the quarterly fee. Aearo could potentially be exposed to additional claims for some part of the pre-July 11, 1995 period covered by its agreement with Cabot if Aearo elects to discontinue its participation in this arrangement, or if Cabot is no longer able to meet its obligations in these matters.

Developments may occur that could affect the estimate of Aearo’s liabilities. These developments include, but are not limited to: (i) significant changes in the number of future claims, (ii) significant changes in the average cost of resolving claims, (iii) significant changes in the legal costs of defending these claims, (iv) significant changes in the mix and nature of claims received, (v) trial and appellate outcomes, (vi) significant changes in the law and procedure applicable to these claims, (vii) significant changes in the liability allocation among the co-defendants, (viii) the financial viability of members of the Payor Group including exhaustion of available insurance coverage limits, and/or (ix) a determination that the interpretation of the contractual obligations on which Aearo has estimated its share of liability is inaccurate. The Company cannot determine the impact of these potential developments on its current estimate of Aearo’s share of liability for these existing and future claims. If any of the developments described above were to occur, the actual amount of these liabilities for existing and future claims could be significantly larger than the amount accrued. Because of the inherent difficulty in projecting the number of claims that have not yet been asserted, the complexity of allocating responsibility for future claims among the Payor Group, and the several possible developments that may occur that could affect the estimate of Aearo’s liabilities, the Company cannot estimate the amount or range of amounts by which Aearo’s liability may exceed the accrual the Company has established.

Environmental Matters and Litigation

The Company’s operations are subject to environmental laws and regulations including those pertaining to air emissions, wastewater discharges, toxic or hazardous substances, and the handling and disposal of solid and hazardous wastes enforceable by national, state, and local authorities around the world, many for which private parties in the United States and abroad have rights of action. These laws and regulations can form the basis of, under certain circumstances, claims for the investigation and remediation of contamination, for capital investment in pollution control equipment, for restoration of and/or compensation for damages to natural resources, and for personal injury and property damage claims. The Company has incurred, and will continue to incur, costs and capital expenditures in complying with these laws and regulations, defending personal injury and property damage claims, and modifying its business operations in light of its environmental responsibilities. In its effort to satisfy its environmental responsibilities and comply with environmental laws and regulations, the Company has established, and periodically updates, policies relating to environmental standards of performance for its operations worldwide.

Under certain environmental laws, including the United States Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) and similar state laws, the Company may be jointly and severally liable, sometimes with other potentially responsible parties, for the costs of remediation of environmental contamination at current or former facilities and at off-site locations where hazardous substances have been released or disposed of. The Company has identified numerous locations, many of which are in the United States, at which it may have some liability for remediation of contamination. Please refer to the section entitled “*Environmental Liabilities and Insurance Receivables*” that follows for information on the amount of the accrual for such liabilities.

Environmental Matters

As previously reported, the Company has been voluntarily cooperating with ongoing reviews by local, state, federal (primarily the U.S. Environmental Protection Agency (EPA)), and international agencies of possible environmental and health effects of various perfluorinated compounds, including perfluorooctanoate (PFOA), perfluorooctane sulfonate (PFOS), perfluorohexane sulfonate (PFHxS), perfluorobutane sulfonate (PFBS), hexafluoropropylene oxide dimer acid (HFPO-DA) and other per- and polyfluoroalkyl substances (collectively PFAS).

As a result of a phase-out decision in May 2000, the Company no longer manufactures certain PFAS compounds including PFOA, PFOS, PFHxS, and their pre-cursor compounds. The Company ceased manufacturing and using the vast majority of these compounds within approximately two years of the phase-out announcement and ceased all manufacturing and the last significant use of this chemistry by the end of 2008. The Company continues to manufacture a variety of shorter chain length PFAS compounds, including, but not limited to, pre-cursor compounds to perfluorobutane sulfonate (PFBS). These compounds are used as input materials to a variety of products, including engineered fluorinated fluids, fluoropolymers and fluorelastomers, as well as surfactants, additives, and coatings. Through its ongoing life cycle management and its raw material composition identification processes associated with the Company's policies covering the use of all persistent and bio-accumulative materials, the Company continues to review, control or eliminate the presence of certain PFAS in purchased materials, as intended substances in products, or as byproducts in some of 3M's current manufacturing processes, products, and waste streams.

3M announced in December 2022 it will take two actions: exiting all PFAS manufacturing by the end of 2025; and working to discontinue the use of PFAS across its product portfolio by the end of 2025. 3M's decision is based on careful consideration and a thorough evaluation of the evolving external landscape, including multiple factors such as accelerating regulatory trends focused on reducing or eliminating the presence of PFAS in the environment and changing stakeholder expectations.

PFAS Regulatory and Legislative Activity

Regulatory and legislative activities concerning PFAS are accelerating in the United States, Europe and elsewhere, and before certain international bodies. These activities include gathering of exposure and use information, risk assessment activities, consideration of regulatory approaches, and increasingly strict restrictions on various uses of PFAS in products and on PFAS in manufacturing emissions, in some cases moving towards non-detectable limits for certain PFAS compounds. Regulations of PFAS in emissions and in environmental media such as soil and water (including drinking water) are increasingly being set at levels that continue to decrease. Global regulations also appear to be increasingly focused on a broader group of PFAS, and may include those PFAS compounds used in current products. If such activity continues and regulations become final and enforceable, 3M may incur material costs to comply with new regulatory requirements or as a result of litigation or additional enforcement actions. Such regulatory changes may also have an impact on 3M's reputation and may also increase its costs and potential litigation exposure to the extent legal defenses rely on regulatory thresholds, or changes in regulation influence public perception. Given divergent and rapidly evolving regulatory drinking water and other standards, there is currently significant uncertainty about the potential costs to industry and communities associated with remediation and control technologies that may be required.

Europe

In the European Union, where 3M has PFAS manufacturing facilities in countries such as Germany and Belgium, recent regulatory activities have included both preliminary and on-going work on various restrictions of PFAS or certain PFAS compounds under the EU's Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) and the EU's Persistent Organic Pollutants (POPs) Regulation. PFOA, PFOS and PFHxS (and their related compounds) have also been listed in the Stockholm Convention, which has been ratified by more than 180 countries and aims for global elimination of certain listed substances (with narrow exceptions).

In January 2023, the European Chemicals Agency (ECHA) received a proposal for a broad restriction of PFAS as a class under REACH. ECHA has stated it expects to publish the proposal for public consultation in February 2023.

Effective January 2023, the EU Food Contaminants Regulation targeting four PFAS (PFOS, PFOA, PFNA, PFHxS) in foodstuff (eggs and animal derived meat) prohibits the sale in all member states of foods containing levels of these chemicals exceeding the regulatory thresholds. As member states implement the regulation, Dyneon, a 3M subsidiary that operates the Gendorf facility in Germany, in coordination with local authorities and farmers, has proposed a pilot program of food sampling to determine if any remedial action is necessary.

The EU regulates PFAS in drinking water via a Drinking Water Directive, which includes a limit of 0.1 micrograms per liter ($\mu\text{g/l}$) (or 0.1 parts per billion (ppb)) for a sum of 20 PFAS in drinking water. Member States have until January 2023 to implement the Directive in their countries.

Dyneon has a recycling process for a critical emulsifier from which small amounts of PFOA are present after recycling, as an unintended and unavoidable byproduct of certain earlier process steps. With respect to the applicability of the amendment of the EU POPs Regulation with PFOA applicable since 2021, Dyneon proactively consulted with the relevant German competent authority regarding process improvements underway. The implementation of process improvements and analytical work is ongoing.

3M Belgium, a subsidiary of the Company, has been working with the Public Flemish Waste Agency (OVAM) for several years to investigate and remediate historical PFAS contaminations at and near the 3M Belgium facility in Zwijndrecht, Antwerp, Belgium. In connection with a ring road construction project (the Oosterweel Project) in Antwerp that involved extensive soil work, an investigative committee with judicial investigatory powers was formed in June 2021 by the Flemish Parliament to investigate PFAS found in the soil and groundwater near the Zwijndrecht facility. 3M Belgium testified at Flemish parliamentary committee hearings in June and September 2021 on PFAS-related matters. The Flemish Parliament, the Minister of the Environment, and regulatory authorities initiated investigations and demands for information related to the release of PFAS from the Zwijndrecht facility. The Company has cooperated with the authorities in the investigations and information requests and is working with the authorities on an ongoing basis, as they continue to maintain oversight of 3M Belgium's operations at the Zwijndrecht facility, as further discussed below. Separately, as previously disclosed, the Company is aware that certain residents of Zwijndrecht and non-governmental organizations filed a criminal complaint with an Antwerp investigatory judge against 3M Belgium, alleging it had unlawfully abandoned waste in violation of its environmental care obligations. Certain additional parties reportedly joined the complaint. 3M Belgium has not been served with any such complaint.

Safety measures – wastewater discharge. In August 2021, the Flemish Government served 3M Belgium with a safety measure requiring the capture of certain process wastewaters to prevent their entry into the site wastewater treatment plant. While 3M Belgium appealed the Safety Measure due to the belief it lacked adequate legal and factual foundation, 3M Belgium promptly implemented the required actions.

In October 2021, the Province of Antwerp unilaterally adopted lower discharge limits for the nine PFAS compounds specifically identified in the water discharge permit and added a special condition that essentially prohibits discharge of any PFAS chemistry without a specific limit in the permit. 3M Belgium received a new two-year permit in May 2022 which contains strict new limits for 24 different PFAS, effective July 1, 2022. 3M Belgium believes that the recently installed additional control systems will enable it to meet these limits. Subsequently, the environmental enforcement agency has recently informed 3M Belgium that the agency believes that 3M Belgium must apply for discharge limits for certain additional “short-chain” PFAS pursuant to the special condition. Although disagreeing with the agency's position, 3M Belgium is in the process of developing the application to amend the permit to add the additional PFAS. 3M Belgium has insufficient information to predict the limits that will be set forth for additional short-chain PFAS and is therefore unable to assess whether the current or future wastewater treatment system, as currently conceived, will meet future limits imposed. In December 2022, 3M Belgium received an official infraction report from the Flemish Environmental Inspectorate regarding the discharge of certain short chain PFAS compounds in wastewater from the Zwijndrecht facility. 3M Belgium previously identified these compounds and shared the results with the Inspectorate. The compounds at issue do not have specific discharge limits in the applicable wastewater discharge permit, and the infraction report references a special condition in the permit that prohibits detectable discharge of PFAS compounds that do not have a specific discharge limit in the permit. 3M Belgium disagrees with the Inspectorate's interpretation of the special condition and the time period permitted for compliance with it. Moreover, 3M Belgium instituted a capturing process to prevent wastewaters containing short chain PFAS identified in the infraction report from entering the treatment system or its discharge. 3M Belgium notified the Inspectorate that complying with the special condition means ceasing the legally required extraction and treatment of contaminated groundwater. The Inspectorate acknowledged this fact but insisted that 3M Belgium continue to extract and treat groundwater. Groundwater treatment continues and 3M Belgium expects to apply for a modification of the water discharge permit to add parameters for the short chain PFAS. 3M Belgium will continue its efforts to comply with the special condition and to minimize discharge of all PFAS, including the PFAS identified in the infraction report, but an inability to meet discharge limits for short chain PFAS could have a significant adverse impact on 3M Belgium's normal operations and the Company's businesses that receive products and other materials from the facility, some of which may not be available in similar quantities from other 3M facilities, which could in turn impact these businesses' ability to fulfill supply obligations to their customers.

Safety measure – emissions. As previously disclosed, in October 2021, the Flemish environmental enforcement agency issued a new safety measure that prohibits all emissions of all forms of PFAS from the facility unless and until specifically approved on a process-by-process basis. 3M Belgium thereupon commenced an appeal process to the Council of States, seeking, among other things, urgent suspension of the safety measure during the pendency of the appeal process. At the same time, 3M Belgium complied with the safety measure by idling the affected production at the facility. The Council of States declined to grant urgent suspension of the safety measure. 3M Belgium established a regular cadence of meetings with the relevant authorities to review restart of specific PFAS-related production processes. The agency recently clarified that the safety measure applies to release of PFAS into water, and as such, reviews have been expanded as requested.

In October 2022, 3M Belgium received a report from the Flemish inspectorate regarding certain health and safety issues noted during inspections of the Zwijndrecht facility in March 2022, alleging certain related deficiencies, some dating back to 2010. In December 2022, 3M Belgium provided the inspectorate with responses to the allegations, including plans and timelines for compliance where applicable, and plans to continue to inform the inspectorate on corrective actions to be taken.

As of July 2022, the authorities have approved the restart of key production processes and 3M Belgium continues to conduct required monitoring and reporting activities. Belgian government authorities continue to maintain oversight of 3M Belgium's operations and compliance with applicable requirements at the Zwijndrecht facility. In September 2022, the environmental enforcement agency issued an infraction report alleging that 3M Belgium had misconstrued an exemption in the safety measure and thus not fully complied with the safety measure in the operation of certain production lines. Discussions are underway with the environmental enforcement agency and those production lines are now being addressed in accordance with the review and approval provisions of the safety measure. Although the authorities have approved the restart and/or continued operation of key production processes, a negative development in their ongoing oversight review, or inability to fully restart all production processes, could have a significant adverse impact on 3M Belgium's normal operations and the Company's businesses that receive products and other materials from the facility, some of which may not be available in similar quantities from other 3M facilities, which could in turn impact these businesses' ability to fulfill supply obligations to their customers. A previously reported administrative measure by the Flemish Government regarding soil piles has been complied with and 3M Belgium removed the soil piles prior to the deadline.

Notice of default – environmental law compliance. Also in September 2021, the Flemish Region issued a notice of default alleging violations of environmental laws and seeking PFAS-related information, indemnity and a remediation plan for soil and water impacts due to PFAS originating from the Zwijndrecht facility. In September 2021, 3M responded to the notice of default and announced a plan to invest up to 125 million euros in the next three years in actions related to the Zwijndrecht community, including support for local commercial farmers impacted by restrictions on sale of agricultural products, and enhancements to site discharge control technologies. 3M is also committed to payment for ongoing off-site descriptive soil investigation and appropriate soil remediation. In March 2022, the Company announced an investment of 150 million euros to advance remedial actions to address legacy PFAS previously produced at the Zwijndrecht facility. An accredited third-party soil remediation expert has progressed towards a remedial action plan based on a descriptive soil investigation that would help inform 3M Belgium's remedial actions onsite and in certain surrounding areas. 3M Belgium representatives continue to have discussions with the relevant authorities regarding further soil remedial actions in connection with the Flemish Soil Decree, which requires both public authorities and private parties to remediate contaminated soil and groundwater in Flanders. 3M Belgium cannot exclude the possibility of future government executive decisions expanding its remedial obligations under the Soil Decree, including through a proposed executive decision that may be finalized in 2023 following an anticipated advisory opinion from the Belgian administrative court. 3M Belgium submitted a letter to that court identifying several procedural and legal issues with the proposed executive decision. A response is planned to a notice received in January 2023 from the Flemish government regarding the remediation action plans under the Flemish Soil Decree.

In July 2022, 3M Belgium and the Flemish Government announced an agreement in connection with the Zwijndrecht facility. Pursuant to the agreement, 3M Belgium, among other things, committed an aggregate of 571 million euros, which includes the previous commitments described above. In aggregate, the commitment includes enhancements to site discharge control technologies, support for qualifying local farmers, amounts to address certain identified priority remedial actions (which may include supporting additional actions as required under the Flemish Soil Decree), funds to be used by the Flemish Government in its sole discretion in connection with PFAS emissions from the Zwijndrecht facility, and support for the Oosterweel Project in cash and support services. The agreement contains certain provisions ending current litigation and providing certain releases of liability for 3M, while recognizing that the Flemish Government retains its authority to act in the future to protect its citizenry. In connection with these actions, the Company recorded a pre-tax charge of approximately \$500 million in the first half of 2022, with approximately \$355 million in the second quarter of 2022.

Civil litigation - As of December 31, 2022, a total of nine actions against 3M Belgium are pending in Belgian civil courts. The cases include claims by neighboring and other companies for alleged soil and wastewater or rainwater contamination with PFAS; and tort liability claims and environmental injunction procedure by environmental NGOs and several hundred individuals. One of the actions has been rescheduled for judicial hearings in April 2023 and another is scheduled in February 2023; the other actions are in early stages.

The Netherlands government has indicated they are investigating potential claims to recover damages from companies related to alleged PFAS contamination in the Western Scheldt, a river that flows through Belgium and the Netherlands.

United States: Federal Activity

In the United States, the EPA has developed human health effects documents summarizing the available data studies of both PFOA and PFOS. In October 2021, EPA released its “PFAS Strategic Roadmap: EPA's Commitments to Action 2021-2024,” which presents EPA’s approach to PFAS, including investing in research to increase the understanding of PFAS, pursuing a comprehensive approach to proactively control PFAS exposures to humans and the environment, and broadening and accelerating the scope of clean-up of PFAS in the environment.

In June 2022, EPA released new final lifetime health advisory levels for PFBS (2,000 ppt) and HFPO-DA and its salts (“GenX”) (4 ppt), and new interim lifetime health advisory levels for PFOA (.004 ppt) and PFOS (.02 ppt). Lifetime health advisories are intended to provide information about concentrations of drinking water contaminants at which adverse health effects are not expected to occur over the specified exposure duration. The health advisories are non-enforceable and non-regulatory, but if EPA uses the same methodology in setting national primary drinking water standards, discussed further below, or other national or state regulations, 3M could incur additional costs and potential exposures, including in future compliance costs, possible litigation and/or enforcement actions.

In May 2021, the U.S. Agency for Toxic Substances and Disease Registry (ATSDR) within the Department of Health and Human Services finalized a Toxicological Profile for certain PFAS that established minimal risk levels (MRLs) for PFOS, PFOA and several other PFAS. An MRL is an estimate of the daily human exposure to a hazardous substance that is likely to be without appreciable risk of adverse non-cancer health effects over a specified duration of exposure. MRLs establish a screening level and are not intended to define cleanup or action levels for ATSDR or other agencies. Earlier, in April 2021, EPA released a final toxicity assessment for PFBS.

In May 2022, EPA added five PFAS substances – HFPO-DA, PFOS, PFOA perfluorononanoic acid (PFNA), and perfluorohexanesulfonic acid (PFHxS) -- to its list of Regional Screening and Removal Management Levels based on the May 2021 MRLs. EPA had previously added PFBS to both lists in 2014. Regional Screening Levels are used to identify contaminated media that may require further investigation, while Regional Removal Management Levels are used by EPA to support certain actions under CERCLA.

EPA began the process of establishing a national primary drinking water regulation for PFOA and PFOS in November 2021 by referring its proposed approach to developing a Maximum Contaminant Level Goal (MCLG) to the Science Advisory Board (SAB) and soliciting public comment. The Company submitted initial comments in December 2021 and supplemental comments in January and February 2022. In August 2022, the Science Advisory Board published its final report analyzing EPA’s proposed approach to developing a MCLG. EPA submitted the draft MCL and MCLG for PFOA and PFOS to OMB for review in October 2022. EPA is expected to publish a proposed MCLG and national primary drinking water standard in early 2023. In November 2022, EPA published its final Drinking Water Contaminant Candidates List 5 (CCL 5), which includes a broad group of PFAS that are not currently subject to national primary drinking water regulations but which EPA is considering for regulation under the Safe Drinking Water Act (SDWA). In December 2022, EPA issued guidance to states for incorporating PFAS requirements into the Clean Water Act National Pollution Discharge Elimination System (NPDES) permit program, including recommendations to require PFAS monitoring and incorporating limits for PFAS in industrial discharges.

In October 2021, EPA announced it will initiate a rulemaking to designate four PFAS compounds as hazardous constituents under the Resource Conservation and Recovery Act (RCRA). Further, in September 2022, EPA published in the Federal Register its proposal to list PFOA and PFOS, including their salts and structural isomers, as CERCLA hazardous substances. 3M submitted comments on EPA’s proposal in November 2022. If CERCLA or RCRA designations are finalized and become enforceable, 3M may be required to undertake additional investigative or remediation activities where 3M conducts operations or where 3M has disposed of waste. 3M may also face additional litigation from other entities that have liability under these laws for contribution to clean-up costs other entities might have.

EPA has also taken several actions to increase reporting and restrictions regarding PFAS under the Toxic Substances Control Act (TSCA) and the Toxics Release Inventory (TRI), which is a part of the Emergency Planning and Community Right-to-Know Act. EPA has added more than 170 PFAS compounds to the list of substances that must be included in TRI reports as of July 2021. In December 2022, EPA published a proposed rule to adding PFAS subject to reporting under the Emergency Planning and Community Right-to-know Act (EPCRA) to the list of Lower Thresholds for Chemicals of Special Concern (Chemicals of Special Concern), which would require Toxic Release Inventory (TRI) reporting of de minimis uses of those PFAS.

In January 2023, EPA issued a test order under TSCA to manufacturers, including the Company, requiring them to conduct certain health and safety testing related to HFPO, a PFAS, and submit the results to EPA. 3M has submitted its initial response.

In April 2022, EPA released draft Aquatic Life Criteria for PFOA and PFOS. These criteria, once finalized, may be used by states in developing water quality standards for protection of aquatic life under the Clean Water Act. 3M submitted comments on the draft criteria in July 2022.

United States: State Activity

Several state legislatures and state agencies have been evaluating or have taken actions related to cleanup standards, groundwater values or drinking water values for PFOS, PFOA, and other PFAS, and 3M has submitted various responsive comments. In Minnesota, the Minnesota Department of Health in May 2017 stated that Health Based Values (HBVs) “are designed to reduce long-term health risks across the population and are based on multiple safety factors to protect the most vulnerable citizens, which makes them overprotective for most of the residents in our state.” As of 2021, the current HBVs are 35 ppt for PFOA, 15 ppt for PFOS, 47 ppt for PFHxS and 2 ppt for PFBS.

The Minnesota Pollution Control Agency (MPCA) published the final version of its PFAS Monitoring Plan in March 2022. Four 3M facilities - Cottage Grove, Maplewood, Hutchinson, and Woodbury - are among the 137 Minnesota facilities that are preliminarily scoped to be within the Monitoring Plan.

States with finalized drinking water standards for certain PFAS include California, Vermont, New Jersey, New York, New Hampshire, Michigan, Massachusetts, Pennsylvania and Wisconsin.

Some other states have also been evaluating or have taken actions relating to PFOA, PFOS and other PFAS compounds in products such as food packaging, carpets and other products. For example, in June 2022, Colorado enacted a law which restricts the sale of certain consumer products, including carpets and furniture, fabric treatments, food packaging, and children’s products that contain intentionally added PFAS.

In October 2022, California passed legislation prohibiting the manufacture, distribution or sale of textiles and cosmetics containing certain PFAS. Additionally, in 2021 and 2022, California finalized its listing of PFOS (and its salts and transformation and degradation precursors) and PFOA as carcinogens, and PFNA as a reproductive toxicant under its Proposition 65 law. California has also proposed listing PFDA, PFHxS, and PFUNDA as reproductive toxicants under Proposition 65.

In the Summer of 2021, the State of Maine passed its Act To Stop Perfluoroalkyl and Polyfluoroalkyl Substances Pollution, which bans intentionally added PFAS in products effective January 1, 2030 and requires broad reporting of products containing intentionally-added PFAS effective January 1, 2023. In December 2022, 3M submitted to the Maine Department of Environmental Protection a list of products containing intentionally added PFAS that have been sold in the U.S. in the past two years in compliance with the law.

In October 2020, 3M and several other parties filed notices of appeal in the appellate division of the Superior Court of New Jersey to challenge the validity of the New Jersey PFOS and PFOA regulations. In January 2021, the appellate division of the court denied the group’s motion to stay the regulations. The court heard oral argument in November 2022.

In March 2021, 3M filed a lawsuit against the New York State Department of Health, on the grounds that drinking water levels set by the agency for PFOS and PFOA should be vacated because they are arbitrary and did not comply with statutorily required processes. An oral argument on the merits was held in December 2021. In June 2022, the court issued a decision denying and dismissing the Company’s lawsuit on standing grounds. The Company has filed a notice of appeal in July 2022 and decided in January 2023 not to pursue the appeal.

In April 2021, 3M also filed a lawsuit against the Michigan Department of Environment, Great Lakes, and Energy (EGLE) to invalidate the drinking water standards EGLE promulgated under an accelerated timeline. In November 2022, the court granted 3M’s motion for summary judgment on the merits and invalidated EGLE’s rule based on its failure to properly consider relevant costs. The court stayed the effect of its decision pending appeal. EGLE appealed the decision in December 2022.

Between 2018 and 2022, seven states have enacted laws requiring written notification of firefighting personal protective equipment (PPE) that contains PFAS, with most such laws providing for potential civil penalties for non-compliance. In November 2022, the Company identified it likely did not provide required notifications for some of its products, including its Scott Safety Self-Contained Breathing Apparatuses. The Company began providing written notices with those products starting November 2022. In addition, the Company continues to work to determine the extent of any potential non-compliance, has made voluntary self-disclosures to states as applicable, and has expressed its willingness to work with those states to address and resolve any potential non-compliance. The Company cannot predict at this time the ultimate outcome or actions that may be taken by those states.

The Company cannot predict what additional regulatory actions in the United States, Europe and elsewhere arising from the foregoing or other proceedings and activities, if any, may be taken regarding such compounds or the consequences of any such actions to the Company, including to its manufacturing operations and its products. Given divergent and rapidly evolving regulatory standards, there is currently significant uncertainty about the potential costs to industry and communities associated with remediation and control technologies that may be required.

Litigation Related to Historical PFAS Manufacturing Operations in Alabama

As previously reported, 3M has resolved numerous claims relating to alleged PFAS contamination of properties and water supplies by 3M's Decatur, Alabama manufacturing facility. In April 2019, 3M settled a lawsuit brought by the West Morgan-East Lawrence Water & Sewer Authority for \$35 million, which will fund a new water filtration system, with 3M indemnifying the Water Authority from liability resulting from the resolution of certain lawsuits against the Water Authority alleging liability or damages related to 3M PFAS. In October 2021, 3M settled a class action brought by plaintiffs who were supplied drinking water by the Water Authority (the "Lindsey" case) for an immaterial amount. The court issued a final order approving the class settlement and dismissing the action in March 2022. In October 2021, 3M also reached agreements in principle to resolve litigation with the Tennessee Riverkeeper organization, the St. John plaintiff class, plaintiffs in the Stover, Owens, and Chandler matters. A court granted final approval of the St. John class settlement in April 2022, and plaintiffs in the Stover, Owens, and Chandler matters filed dismissals thereafter. In June 2022, the court dismissed the Tennessee Riverkeeper case with prejudice. In November 2021, 3M and the City of Decatur, Decatur Utilities and Morgan County executed a collaborative agreement under which the Company agreed to contribute approximately \$99 million and also to continue to address certain PFAS-related matters in the area. The contribution relates to initiatives to improve the quality of life and overall environment in Decatur, including community redevelopment and recreation projects by the City, County and Decatur Utilities. It also includes addressing certain PFAS matters at the Morgan County landfill and reimbursement of costs previously incurred related to PFAS remediation. 3M will continue to address PFAS at certain other closed municipal sites at which the Company historically disposed waste and continue environmental characterization in the area. This work will complement the Interim Consent Order that 3M entered with ADEM in 2020 and includes sampling of environmental media, such as ground water, regarding the potential presence of PFAS at the 3M Decatur facility and legacy disposal sites, as well as supporting the execution of appropriate remedial actions. In March 2022, 3M reached a settlement agreement with plaintiffs in the Billings matter, resulting in dismissal of the case in August 2022. In August 2022, 3M reached an agreement to settle personal injury claims brought by 37 individual plaintiffs in the King matter. 3M continues to negotiate with individual property owners regarding claims relating to former 3M disposal sites and has resolved several such claims for an immaterial amount.

In September 2020, the City of Guin Water Works and Sewer Board (Guin WWSB) brought a lawsuit against 3M in Alabama state court alleging that PFAS contamination in the Guin water system stems from manufacturing operations at 3M's Guin facility and disposal activity at a nearby landfill. Guin WWSB dismissed its lawsuit without prejudice in order to work with 3M to further investigate the presence of chemicals in the area; and in December 2021, the parties reached a settlement under which 3M agreed to contribute \$30 million that will be used on a new treatment system for Guin's drinking water and a new wastewater treatment facility. In March 2022, a new putative class action was filed in the Northern District of Alabama on behalf of Guin WWSB ratepayers. Defendants include 3M, the Guin landfill, the Guin WWSB, and some waste transporters. The case has been removed to federal court and was transferred to the AFFF MDL in December 2022.

In August 2022, Colbert County, Alabama, which opted out of the St. John settlement, filed a lawsuit against 3M and several co-defendants alleging that discharge from operations in Decatur, Alabama has contaminated the Tennessee River, from which the County withdraws its drinking water. The Company's motion to dismiss was denied in December 2022.

State Attorneys General Litigation related to PFAS

As previously reported, several state attorneys general have filed lawsuits against 3M and other defendants that are now pending in a federal Multi-District Litigation (MDL) court in South Carolina regarding Aqueous Film Forming Foam (AFFF), described further below. The lawsuits generally seek, on a state-wide basis: injunctive relief, investigative and remedial work, compensatory damages, natural resource damages, attorneys' fees, and, where available, punitive damages related to the states' response to PFAS contamination. Currently in the AFFF MDL, state attorneys general lawsuits have been brought against 3M on behalf of the people of the states of Alaska; New York; Ohio; New Jersey; New Hampshire; Vermont, Michigan; Mississippi; North Carolina; Massachusetts; Wisconsin; and on behalf of the people of the territory of Guam and Commonwealth of Northern Mariana Islands.

There are also multiple state attorneys general lawsuits that are pending outside the AFFF MDL, as described below.

New Jersey. In March 2019, the New Jersey Attorney General filed two actions against 3M, DuPont, and Chemours on behalf of the New Jersey Department of Environmental Protection (NJDEP), the NJDEP's commissioner, and the New Jersey Spill Compensation Fund regarding alleged discharges at two DuPont facilities in Pennsville, New Jersey (Salem County) and Parlin, New Jersey (Middlesex County). 3M is included as a defendant in both cases because it allegedly supplied PFOA to DuPont for use at the facilities at issue. Both cases expressly seek to have the defendants pay all costs necessary to investigate, remediate, assess, and restore the affected natural resources of New Jersey. DuPont removed these cases to federal court. In June 2020, the court consolidated the two actions, along with two others brought by the NJDEP relating to the DuPont facilities, for case management and pretrial purposes. The parties are conducting discovery.

New Hampshire. In May 2019, the New Hampshire Attorney General filed two lawsuits alleging contamination of the state's drinking water supplies and other natural resources by PFAS chemicals. As described above, one lawsuit was transferred to the AFFF MDL. The Company recently removed the other case to federal court and attempted to transfer it to the AFFF MDL, which was denied at this juncture in the litigation. The state has moved to remand the case back to state court, which remains pending.

Vermont. In June 2019, the Vermont Attorney General filed two lawsuits alleging contamination of the state's drinking water supplies and other natural resources by PFAS chemicals. As described above, one lawsuit was transferred to the AFFF MDL. The other suit asserts PFAS contamination from non-AFFF sources and names 3M and several entities related to DuPont and Chemours as defendants. This suit is proceeding in state court, where the parties are engaging in discovery and the court has set a trial-ready date in October 2024.

In October 2022, the Vermont Attorney General amended the complaint in the non-AFFF lawsuit, to add claims related to PFBS and GenX and to add a claim under Vermont's Waste Management Act, which was recently amended to add manufacturers as liable parties for the release or threatened release of hazardous materials (which in Vermont includes certain PFAS compounds).

Illinois. In March 2022, the Illinois Attorney General filed a lawsuit in Illinois state court against 3M alleging contamination of the state's natural resources by PFAS compounds disposed of by, or discharged, or emitted from 3M's Cordova plant. The complaint requests monetary damages, injunctive relief, civil penalties, a testing program, and a public outreach and information sharing program. The case was removed to federal court and 3M moved to transfer it to the AFFF MDL, which was denied at this stage in the litigation. The state has moved to remand the case back to state court. In January 2023, the Illinois Attorney General filed a new lawsuit against 3M and other defendants in Illinois state court, alleging contamination of a number of drinking water systems and natural resource damages at several sites statewide, and seeking to recover monetary damages, injunctive relief for remediation, civil penalties and other relief. The complaint states that the Attorney General is not seeking damages for AFFF by this lawsuit.

California. In November 2022, the California Attorney General filed a lawsuit in state court against 18 defendants, including the Company, alleging environmental contamination by PFAS chemicals and seeking injunctive relief, civil penalties, and damages for the costs of investigations, cleanup and remediation. The case has been removed to federal court, and the U.S. Judicial Panel on Multidistrict Litigation (JPML) has issued a conditional transfer order which, if finalized, would send the case to the AFFF MDL.

In addition to the above state attorneys general actions, several other states and the District of Columbia, through their attorneys general, have announced selection processes to retain outside law firms to bring PFAS-related lawsuits against certain manufacturers including the Company. In addition, the Company is in discussions with several state attorneys general and agencies, responding to information and other requests relating to PFAS matters and exploring potential resolution of some of the matters raised.

Aqueous Film Forming Foam (AFFF) Environmental Litigation

3M manufactured and marketed AFFF for use in firefighting at airports and military bases from approximately 1963 to 2002. As of December 31, 2022, 3,350 lawsuits (including approximately 34 putative class actions and more than 200 public water systems) alleging injuries or damages by AFFF use have been filed against 3M (along with other defendants) in various state and federal courts. As further described below, a vast majority of these pending cases are in a federal Multi-District Litigation (MDL) court in South Carolina. Additional AFFF cases continue to be filed in or transferred to the MDL. Claims in the MDL are asserted by individuals, public water systems, putative class members, state and territorial sovereigns, and other entities. Plaintiffs seek a variety of relief in cases in the MDL, including, where applicable, damages for personal injury, property damage, water treatment costs, medical monitoring, natural resource damages, and punitive damages. The Company also continues to defend certain AFFF cases that remain in state court and is in discussions with pre-suit claimants for possible resolutions where appropriate.

In December 2018, the JPML granted motions to transfer and consolidate all AFFF cases pending in federal courts to the U.S. District Court for the District of South Carolina to be managed in an MDL proceeding to centralize pre-trial proceedings. Over the past four years, the parties in the MDL have conducted substantial discovery, including ongoing master discovery and several rounds of discovery involving potential water supplier bellwether cases. In September 2022, the court selected the City of Stuart, Florida public water supplier case as the first bellwether trial, to begin in June 2023. The court has also directed the parties to submit a proposal for an initial set of personal injury bellwether cases. In September 2022, the court issued an order denying defendants' MDL-wide summary judgment motions on the government contractor defense, which defense can be presented to a jury at future trials. The MDL court has repeatedly encouraged the parties to negotiate to resolve cases in the MDL. In October 2022, the court appointed a retired federal judge as mediator, who has held several initial mediation sessions with plaintiff and defense leadership in November and December 2022.

In June 2019, several subsidiaries of Valero Energy Corporation, an independent petroleum refiner, filed eight AFFF cases against 3M and other defendants, including DuPont/Chemours, National Foam, Buckeye Fire Equipment, and Kidde-Fenwal, in various state courts. Plaintiffs seek damages that allegedly have been or will be incurred in investigating and remediating PFAS contamination at their properties and replacing or disposing of AFFF products containing long-chain PFAS compounds. Two of these cases have been removed to federal court and transferred to the AFFF MDL. Five cases remain pending in state courts where they are stayed by agreement of the parties.

As of December 31, 2022, the Company is aware of approximately 50 other AFFF suits originally filed in various state courts in which the Company has been named a defendant. 3M anticipates that most of these cases will eventually be removed to federal court and transferred to the AFFF MDL; however, at least two personal injury cases are expected to remain pending in state courts.

Separately, the Company is aware of pre-suit claims or demands by other parties related to the use and disposal of AFFF, one of which purports to represent a large group of firefighters. The Company had discussions with certain potential pre-suit claimants and, as a result of such discussions, reached a negotiated resolution for an immaterial amount with the City of Bemidji in March 2021.

Other PFAS-related Product and Environmental Litigation

3M manufactured and sold various products containing PFOA and PFOS, including Scotchgard, for several decades. Starting in 2017, 3M has been served with individual and putative class action complaints in various state and federal courts alleging, among other things, that 3M's customers' improper disposal of PFOA and PFOS resulted in the contamination of groundwater or surface water. The plaintiffs in these cases generally allege that 3M failed to warn its customers about the hazards of improper disposal of the product. They also generally allege that contaminated groundwater has caused various injuries, including personal injury, loss of use and enjoyment of their properties, diminished property values, investigation costs, and remediation costs. Several companies have been sued along with 3M, including Saint-Gobain Performance Plastics Corp., Honeywell International Inc. f/k/a Allied-Signal Inc. and/or AlliedSignal Laminate Systems, Inc., Wolverine World Wide Inc., Georgia-Pacific LLC, E.I. DuPont De Nemours and Co., Chemours Co., and various carpet manufacturers.

In New York, 3M is defending 40 individual cases filed in the U.S. District Court for the Northern District of New York and five additional individual cases filed in New York state court against 3M, Saint-Gobain Performance Plastics Corp. (Saint-Gobain), Honeywell International Inc. and E.I. DuPont De Nemours and Co. (DuPont). Tonaga, Inc. (Taconic) is also a defendant in the state court actions. Plaintiffs allege that PFOA discharged from fabric coating facilities operated by non-3M entities (that allegedly had used PFOA-containing materials from 3M, among others) contaminated the drinking water in the Village of Hoosick Falls, the Town of Hoosick and Petersburg, New York. Plaintiffs in both the federal and state individual cases assert various tort claims for personal injury and property damage and in some cases request medical monitoring. In the federal court individual cases, the parties selected 24 claimants in May 2021 for a discovery pool, which was further narrowed to eight claimants in July 2022 for expert discovery. Additionally, 3M is defending a case in New York state court filed by the Town of Petersburg in September 2022. Plaintiff alleges that 3M and several other manufacturers contributed to PFOA contamination in the town's public water supply. 3M is also defending 13 cases in the U.S. District Court for the Eastern District of New York filed by various drinking water providers. The plaintiffs in these cases allege that products manufactured by 3M, DuPont, and additional unnamed defendants contaminated plaintiffs' water supply sources with various PFAS compounds. 3M has filed answers in these cases and discovery is ongoing.

In Michigan, one consolidated putative class action is pending in the U.S. District Court for the Western District of Michigan against 3M and Wolverine World Wide (Wolverine). The action arises from Wolverine's allegedly improper disposal of materials and wastes, including 3M Scotchgard, related to Wolverine's shoe manufacturing operations. Plaintiffs allege Wolverine used 3M Scotchgard in its manufacturing process and that chemicals from 3M's product contaminated the environment and drinking water sources after disposal. 3M and Wolverine have agreed to settle the case with the plaintiffs, and 3M's share is not considered material, pending final court approval in March 2023.

In Alabama and Georgia, 3M, together with multiple co-defendants, is defending two state court cases brought by municipal water utilities, relating to 3M's sale of PFAS-containing products to carpet manufacturers in Georgia. The plaintiffs in these cases allege that the carpet manufacturers improperly discharged PFAS into the surface water and groundwater, contaminating drinking water supplies of cities located downstream along the Coosa River, including Rome, Georgia and Centre, Alabama. These water utility cases have been proceeding through discovery. The City of Rome case has been scheduled for trial in June 2023. In September 2022, the Company reached an agreement with the Gadsden Water Works and Sewer Board to resolve a similar matter. This development, as with developments on other PFAS matters, was reflected in determining changes to 3M's accrual for PFAS-related "other environmental liabilities." Another case originally filed in Georgia state court was brought by individuals asserting PFAS contamination by the Georgia carpet manufacturers and seeking economic damages and injunctive relief on behalf of a putative class of Rome and Floyd County water subscribers. This case has been removed to federal court, where the case is proceeding through discovery.

3M, together with co-defendants, is also defending another putative class action in federal court in Georgia, in which plaintiffs seek relief on behalf of a class of individual ratepayers in Summerville, Georgia who allege their water supply was contaminated by PFAS discharged from a textile mill. In May 2021, the City of Summerville filed a motion to intervene in the lawsuit, which was granted in March 2022. This case is now proceeding through discovery.

In July 2022, a putative class action was filed against 3M and other PFAS manufacturers by The Utilities Board of Tuskegee on behalf of all drinking water utilities within Alabama whose finished drinking water has contained a detectable concentration level of PFOA, PFOS, GenX, or PFBS that exceed the June 2022 health advisory levels issued by the U.S. EPA. 3M filed a motion to dismiss the complaint in October 2022.

In California, 3M, Decra Roofing and certain DuPont-related entities were named as defendants in an action brought in state court by the City of Corona and a local utility authority, alleging PFAS contamination of the plaintiffs' water sources and also referring to 3M's industrial minerals facility in Corona, California as a potential source of contamination. The court granted demurrers filed by Decra and the DuPont entities, while 3M answered the complaint in February 2022. The case is proceeding through discovery as to plaintiff and 3M. In June 2022, the Sacramento Suburban Water District filed a lawsuit in California federal court against 3M and certain other defendants, alleging PFAS contamination from 3M products generally. That case has now been transferred to the AFFF MDL. In October 2022, a putative class action was filed against the Company and other parties on behalf of individuals who have been drinking water from the Temescal Subbasin, from which the City of Corona gets its water, seeking injunctive relief, damages, and medical monitoring.

In North Carolina, the town of Pittsboro filed a lawsuit in January 2023 against 3M and other defendants in state court related to alleged PFAS contamination of its property and water supply. The complaint references AFFF as a potential source of alleged contamination.

In Delaware, 3M, is defending one putative class action brought by individuals alleging PFAS contamination of their water supply resulting from the operations of local metal plating facilities. Plaintiffs allege that 3M supplied PFAS to the metal plating facilities. DuPont, Chemours, and the metal platers have also been named as defendants. This case was removed to federal court, and in September 2022, the court dismissed all but plaintiffs' negligence claim. Plaintiffs have filed a third amended complaint and the parties are currently negotiating a scheduling order to be proposed to the court.

In New Jersey, 3M is a defendant in an action brought in federal court by Middlesex Water Company, alleging PFAS contamination of its water wells. The Court denied 3M's motion for summary judgment in October 2022 and has set a pre-trial conference for March 2023. A trial date has been set for October 2023. In September 2020, 3M was named a defendant in a similar lawsuit brought by the Borough of Hopatcong. In January 2021, 3M was named a defendant in another similar lawsuit brought by the Pequannock Township. Fact discovery has closed in both the Hopatcong and Pequannock matters, and expert discovery is set to commence in February 2023 (Hopatcong) and March 2023 (Pequannock). 3M, together with several co-defendants, is also defending 27 cases in New Jersey federal court brought by individuals with private drinking water wells near certain DuPont and Solvay facilities that were allegedly supplied with PFAS by 3M. These cases have all been coordinated for discovery, which is ongoing. Plaintiffs in ten of these cases seek medical monitoring and property damages. Plaintiffs in the 16 remaining individual cases in federal court allege personal injuries to themselves or their disabled adult children. In July 2022, Plaintiffs sought leave to amend their complaints in the first five cases to add claims concerning seven non-PFAS chemistries as against defendants other than 3M. Nine of the remaining personal injury cases were filed in state court and removed to federal court. Plaintiffs are currently seeking remand in four of these cases. In three of these cases, Plaintiffs also assert claims against Clemente Property and the Covanta Waste Disposal Facility. In December 2022, an additional personal injury case was filed in New Jersey State court. 3M and Middlesex Water Company are also defending a putative class action filed in New Jersey federal court in November 2021 by individuals who received drinking water from Middlesex Water Company that was allegedly contaminated with PFAS. The court denied 3M's motion to dismiss, and the case is proceeding through discovery. In May 2022, Middlesex Water Company filed a third-party complaint against the Company in New Jersey state court in a putative class action of the state residents who are customers of the water company, seeking indemnity from the Company. After Middlesex Water Company removed the case to federal court in July 2022, plaintiffs filed a motion to remand the case to state court. The federal court stayed 3M's deadline to respond to the third-party complaint until after the motion to remand is decided. Finally, in June 2022, a personal injury lawsuit was filed against 3M by a Middlesex Water Company customer. The plaintiff voluntarily dismissed his complaint without prejudice and later re-filed in the MDL.

In South Carolina, a putative class action lawsuit was filed in South Carolina state court against 3M, DuPont and DuPont related entities in March 2022. The lawsuit alleges property damage and personal injuries from contamination from PFAS compounds used and disposed of at the textile plant known as the Galey & Lord plant from 1966 until 2016. The complaint seeks remedies including damages, punitive damages, and medical monitoring. The case has been removed to federal court. Plaintiff recently filed a second amended complaint.

In Massachusetts, a putative class action lawsuit was filed in August 2022 in state court against 3M and several other defendants alleging PFAS contamination from waste generated by local paper manufacturing facilities. The lawsuit alleges property damage and also seeks medical monitoring on behalf of plaintiffs within the Town of Westminster. This case was removed to federal court. 3M anticipates responding to the complaint in the first quarter of 2023.

In Maine, a group of landowners filed a second amended complaint in October 2022 in federal district court, adding 3M and several other alleged chemical suppliers as defendants in a case previously filed against several paper mills, alleging PFAS contamination from waste generated by the paper mills. The lawsuit seeks to recover for alleged property damage.

In October 2018, 3M and other defendants, including DuPont and Chemours, were named in a putative class action in the U.S. District Court for the Southern District of Ohio brought by the named plaintiff, a firefighter allegedly exposed to PFAS chemicals through his use of firefighting foam, purporting to represent a putative class of all U.S. individuals with detectable levels of PFAS in their blood. The plaintiff brings claims for negligence, battery, and conspiracy and seeks injunctive relief, including an order "establishing an independent panel of scientists" to evaluate PFAS. In March 2022, the court certified a class of "[i]ndividuals subject to the laws of Ohio, who have 0.05 [ppt] of PFOA (C-8) and at least 0.05 ppt of any other PFAS in their blood serum." The judge ordered additional briefing to permit defendants to narrow the proposed nationwide class by "show[ing] what states do not recognize the type of claim for relief filed by" the plaintiff. In September 2022, the Sixth Circuit granted the defendants' request to appeal the district court's class certification order. Defendants' appeal is scheduled to be fully briefed by April 2023.

Other PFAS-related Matters

In July 2019, the Company received a written request from the Subcommittee on Environment of the Committee on Oversight and Reform, U.S. House of Representatives, seeking certain documents and information relating to the Company's manufacturing and distribution of PFAS products. In September 2019, a 3M representative testified before and responded to questions from the Subcommittee on Environment with respect to PFAS and the Company's environmental stewardship initiatives. The Company continues to cooperate with the Subcommittee.

The Company continues to make progress in its work, under the supervision of state regulators, to remediate historic disposal of PFAS-containing waste associated with manufacturing operations at its Decatur, Alabama; Cottage Grove, Minnesota; and Cordova, Illinois plants.

As previously reported, the Illinois EPA in August 2014 approved a request by the Company to establish a groundwater management zone at its manufacturing facility in Cordova, Illinois, which includes ongoing pumping of impacted site groundwater, groundwater monitoring and routine reporting of results. In June 2022, the Illinois EPA provided notice of the termination of the Cordova May 2000 Site Remediation Agreement. The Company continues to perform pumping of impacted site groundwater, groundwater monitoring and routine reporting of results to Illinois EPA. In addition, the Company is treating its pumped groundwater at its Cordova wastewater treatment plant.

In Minnesota, the Company continues to work with the Minnesota Pollution Control Agency (MPCA) pursuant to the terms of the previously disclosed May 2007 Settlement Agreement and Consent Order to address the presence of certain PFAS compounds in the soil and groundwater at former disposal sites in Washington County, Minnesota (Oakdale and Woodbury) and at the Company's manufacturing facility at Cottage Grove, Minnesota. Under this agreement, the Company's principal obligations include (i) evaluating releases of certain PFAS compounds from these sites and proposing response actions; (ii) providing treatment or alternative drinking water upon identifying any level exceeding a HBV or Health Risk Limit (HRL) (i.e., the amount of a chemical in drinking water determined by the Minnesota Department of Health (MDH) to be safe for human consumption over a lifetime) for certain PFAS compounds for which a HBV and/or HRL exists as a result of contamination from these sites; (iii) remediating identified sources of other PFAS compounds at these sites that are not controlled by actions to remediate PFOA and PFOS; and (iv) sharing information with the MPCA about certain perfluorinated compounds. In August 2009, the MPCA issued a decision adopting remedial options for the Company's Cottage Grove manufacturing facility. In the spring and summer of 2010, 3M began implementing the approved remedial options at the Cottage Grove and Woodbury sites, and in late 2010, 3M commenced the approved remedial option at the Oakdale site. The Company has completed remediation work and continues with operational and maintenance activities at the Oakdale and Woodbury sites. Remediation work has been substantially completed at the Cottage Grove site, with operational and maintenance activities ongoing.

In Alabama, as previously reported, the Company entered into a voluntary remedial action agreement with the Alabama Department of Environmental Management (ADEM) to remediate the presence of PFAS in the soil and groundwater at the Company's manufacturing facility in Decatur, Alabama associated with the historic (1978-1998) incorporation of wastewater treatment plant sludge. With ADEM's agreement, 3M substantially completed installation of a multilayer cap on the former sludge incorporation areas. Further remediation activities, including certain on-site and off-site investigations and studies, will be conducted in accordance with the July 2020 Interim Consent Order described below.

The Company operates under a 2009 consent order issued under the federal Toxic Substances Control Act (TSCA) (the "2009 TSCA consent order") for the manufacture and use of two perfluorinated materials (FBSA and FBSEE) at its Decatur, Alabama site that prohibits release of these materials into "the waters of the United States." In March 2019, the Company halted the manufacture, processing, and use of these materials at the site upon learning that these materials may have been released from certain specified processes at the Decatur site into the Tennessee River. In April 2019, the Company voluntarily disclosed the releases to the U.S. EPA and ADEM. During June and July 2019, the Company took steps to fully control the aforementioned processes by capturing all wastewater produced by the processes and treating all air emissions. These processes have been back on-line and in operation since July 2019. The Company continues to cooperate with the EPA and ADEM in their investigations and will work with the regulatory authorities to demonstrate compliance with the release restrictions.

The Company is authorized to discharge wastewater from its Decatur plant pursuant to a Clean Water Act National Pollutant Discharge Elimination System (NPDES) permit issued by ADEM. The NPDES permit requires monthly and quarterly reporting on the quality and quantity of pollutants discharged to the Tennessee River. In June 2019, as previously reported, the Company voluntarily disclosed to the EPA and ADEM that it had included incorrect values in certain of its monthly and quarterly reports. The Company has submitted the corrected values to both the EPA and ADEM.

As previously reported, as part of ongoing work with the EPA and ADEM to address compliance matters at the Decatur facility, the Company discovered it had not fully characterized its PFAS discharge in its NPDES permit. In September 2019, the Company disclosed the matter to the EPA and ADEM temporarily idled certain manufacturing processes at 3M Decatur, and installed wastewater treatment controls. The Company restarted idled processes in October 2019.

As a result of the Company's discussions with ADEM to address these and other related matters in the state of Alabama, as previously reported, 3M and ADEM agreed to the terms of an interim Consent Order in July 2020 to cover all PFAS-related wastewater discharges and air emissions from the Company's Decatur facility. Under the interim Consent Order, the Company's principal obligations include commitments related to (i) future ongoing site operations such as (a) providing notices or reports and performing various analytical and characterization studies and (b) future capital improvements; and (ii) remediation activities, including on-site and off-site investigations and studies. Obligations related to ongoing future site operations under the Consent Order will involve additional operating costs and capital expenditures over multiple years. As offsite investigation activities continue, additional remediation amounts may become probable and reasonably estimable.

As previously reported, in December 2019, the Company received a grand jury subpoena from the U.S. Attorney's Office for the Northern District of Alabama for documents related to, among other matters, the Company's compliance with the 2009 TSCA consent order and unpermitted discharges to the Tennessee River. The Company is cooperating and providing responsive documents with respect to this and other inquiries regarding its manufacturing facilities.

In addition, as previously reported, as part of its ongoing evaluation of regulatory compliance at its Cordova, Illinois facility, the Company discovered it had not fully characterized its PFAS discharge in its NPDES permit for the Cordova facility. In November 2019, the Company disclosed this matter to the EPA, and in January 2020 disclosed this matter to the Illinois Environmental Protection Agency (IEPA), submitted an NPDES permit application for the PFAS in its discharge, and in October 2019, put on-line and in operation wastewater treatment specifically designed to treat PFAS. The Company continues to work with the EPA and IEPA to address these issues from the Cordova facility. In November 2022, the Company entered into an SDWA Administrative Consent Order that requires the Company to continue to sample and survey private and public drinking water wells within the vicinity of the Cordova facility, provide treatment of private water wells within a three-mile radius of the Cordova facility, and to provide alternate treatment/supply for the Camanche, Iowa public drinking water system.

In April 2022, the Company received a TSCA information request from EPA seeking information related to the operation of specific PFAS-related processes, and the Company is cooperating with this inquiry and is producing documents and information. In May 2022, the Company received a notice of potential violation and opportunity to confer and a notice of intent to file a complaint from EPA alleging violations of the Resource Conservation and Recovery Act (RCRA) related to the use of emergency spill containment units associated with certain chemical processes at the Cordova facility.

The Company is also reviewing operations at its other plants with similar manufacturing processes, such as the plant in Cottage Grove, Minnesota, to ensure those operations are in compliance with applicable environmental regulatory requirements and Company policies and procedures. As a result of these reviews, as previously reported, the Company discovered it had not fully characterized its PFAS discharge in its NPDES permit for the Cottage Grove facility. In March 2020, the Company disclosed this matter to the Minnesota Pollution Control Agency (MPCA) and the EPA. In July 2020, the Company received an information request from MPCA for documents and information related to, among other matters, the Company's compliance with the Clean Water Act at its Cottage Grove facility. The Company is cooperating with this inquiry and is producing documents and information in response to the request for information.

Separately, as previously reported, in June 2020, the Company reported to EPA and MPCA that it had not fully complied with elements of the inspection, characterization and waste stream profile verification process of the Waste and Feedstream Analysis Plan (WAP/FAP) of its RCRA permit for its Cottage Grove incinerator. The Company and MPCA resolved the issues associated with the foregoing disclosure in a May 2022 stipulation agreement, and permanently retired the Cottage Grove hazardous waste incinerator in December 2021. In connection with the now closed incinerator, the Company in December 2022 received from EPA a draft Consent Agreement and Penalty Order (CAFO) under the Clean Air Act, with a proposed civil penalty to resolve issues raised in a Finding of Violation issued in 2019. The Company is engaging with EPA in discussions towards resolving this matter. In October 2021, the Company received information requests from MPCA seeking additional toxicological and other information related to certain PFAS compounds. The Company is cooperating with these inquires and is producing documents and information in response to the requests. In June 2022, MPCA directed that the Company address the presence of PFAS in its stormwater discharge from the Cottage Grove facility. The Company worked with MPCA to develop a plan to address its stormwater, which is embodied in an order issued by MPCA in December 2022.

In February 2020, as previously reported, the Company received an information request from EPA for documents and information related to, among other matters, the Company's compliance with the Clean Water Act at its facilities that manufacture, process, and use PFAS, including the Decatur, Cordova, and Cottage Grove facilities, and the Company has completed its production of responsive documents and information.

The Company continues to work with relevant federal and state agencies (including EPA, the U.S. Department of Justice, state environmental agencies and state attorneys general) as it conducts these reviews and responds to information, inspection, and other requests from the agencies. The Company cannot predict at this time the outcomes of resolving these compliance matters, what actions may be taken by the regulatory agencies or the potential consequences to the Company.

Other Environmental Litigation

In July 2018, the Company, along with more than 120 other companies, was served with a complaint seeking cost recovery and contribution towards the cleaning up of approximately eight miles of the Lower Passaic River in New Jersey. The plaintiff, Occidental Chemical Corporation, alleges that it agreed to design and pay the estimated \$165 million cost to remove and cap sediment containing eight chemicals of concern, including PCBs and dioxins. The complaint seeks to spread those costs among the defendants, including the Company. The Company's involvement in the case relates to its past use of two commercial drum conditioning facilities in New Jersey. Whether, and to what extent, the Company may be required to contribute to the costs at issue in the case remains to be determined.

For environmental matters and litigation described above, unless otherwise described below, no liability has been recorded as the Company believes liability in those matters is not probable and reasonably estimable and the Company is not able to estimate a possible loss or range of possible loss at this time. The Company's environmental liabilities and insurance receivables are described below.

Environmental Liabilities and Insurance Receivables

The Company periodically examines whether the contingent liabilities related to the environmental matters and litigation described above are probable and reasonably estimable based on experience and ongoing developments in those matters, including discussions regarding negotiated resolutions. During 2022, as a result of ongoing review and recent developments in ongoing environmental matters and litigation, the Company increased its accrual for PFAS-related other environmental liabilities by \$659 million since December 31, 2021 and made related payments of \$479 million. As of December 31, 2022, the Company had recorded liabilities of \$592 million for "other environmental liabilities." The accruals represent the Company's best estimate of the probable loss in connection with the environmental matters and PFAS-related matters and litigation described above. The Company is not able to estimate a possible loss or range of possible loss in excess of the established accruals at this time.

As of December 31, 2022, the Company had recorded liabilities of \$29 million for estimated non-PFAS related "environmental remediation" costs to clean up, treat, or remove hazardous substances at current or former 3M manufacturing or third-party sites. The Company evaluates available facts with respect to each individual site each quarter and records liabilities for remediation costs on an undiscounted basis when they are probable and reasonably estimable, generally no later than the completion of feasibility studies or the Company's commitment to a plan of action. Liabilities for estimated costs of environmental remediation, depending on the site, are based primarily upon internal or third-party environmental studies, and estimates as to the number, participation level and financial viability of any other potentially responsible parties, the extent of the contamination and the nature of required remedial actions. The Company adjusts recorded liabilities as further information develops or circumstances change. The Company expects that it will pay the amounts recorded over the periods of remediation for the applicable sites, currently ranging up to 20 years.

It is difficult to estimate the cost of environmental compliance and remediation given the uncertainties regarding the interpretation and enforcement of applicable environmental laws and regulations, the extent of environmental contamination and the existence of alternative cleanup methods. Developments may occur that could affect the Company's current assessment, including, but not limited to: (i) changes in the information available regarding the environmental impact of the Company's operations and products; (ii) changes in environmental regulations, changes in permissible levels of specific compounds in drinking water sources, or changes in enforcement theories and policies, including efforts to recover natural resource damages; (iii) new and evolving analytical and remediation techniques; (iv) success in allocating liability to other potentially responsible parties; and (v) the financial viability of other potentially responsible parties and third-party indemnitors. For sites included in both "environmental remediation liabilities" and "other environmental liabilities," at which remediation activity is largely complete and remaining activity relates primarily to operation and maintenance of the remedy, including required post-remediation monitoring, the Company believes the exposure to loss in excess of the amount accrued would not be material to the Company's consolidated results of operations or financial condition. However, for locations at which remediation activity is largely ongoing, the Company cannot estimate a possible loss or range of possible loss in excess of the associated established accruals for the reasons described above.

The Company has both pre-1986 general and product liability occurrence coverage and post-1985 occurrence reported product liability and other environmental coverage for environmental matters and litigation. As of December 31, 2022, the Company's receivable for insurance recoveries related to the environmental matters and litigation was \$8 million. Various factors could affect the timing and amount of recovery of this and future expected increases in the receivable, including (i) delays in or avoidance of payment by insurers; (ii) the extent to which insurers may become insolvent in the future, (iii) the outcome of negotiations with insurers, and (iv) the scope of the insurers' purported defenses and exclusions to avoid coverage.

Product Liability Litigation

Aearo Technologies sold Dual-Ended Combat Arms – Version 2 earplugs starting in about 2003. 3M acquired Aearo Technologies in 2008 and sold these earplugs from 2008 through 2015, when the product was discontinued. 3M and Aearo Technologies believe the Combat Arms Earplugs were effective and safe when used properly, but nevertheless, as discussed below, face litigation from approximately 232,000 claimants. As noted in the "Respirator Mask/Asbestos Litigation — Aearo Technologies" section above, in July 2022, the Aearo Entities voluntarily initiated chapter 11 proceedings under the U.S. Bankruptcy Code seeking court supervision to establish a trust, funded by the Company, to efficiently and equitably satisfy all claims determined to be entitled to compensation associated with these matters and those described in the earlier section "Respirator Mask/Asbestos Litigation — Aearo Technologies". 3M entered into an agreement with the Aearo Entities to fund this trust and to support the Aearo Entities as they continue to operate during the chapter 11 proceedings. 3M has committed \$1.0 billion to fund this trust and has committed an additional \$0.2 billion to fund projected related case expenses. Under the terms of the agreement, the Company will provide additional funding if required by the Aearo Entities. Related to these actions, which represent a change in strategy for managing the Combat Arms Version 2 earplugs and Aearo respirator mask/asbestos alleged litigation liabilities, 3M reflected a pre-tax charge of \$1.2 billion (within selling, general and administrative expenses), inclusive of fees and net of related existing accruals, in the second quarter of 2022.

As a result of the bankruptcy proceedings, 3M deconsolidated the Aearo Entities in the third quarter of 2022, resulting in a charge that was not material to 3M. Upon the filings in late July 2022 in the U.S. Bankruptcy Court for the Southern District of Indiana, all litigation against Aearo Entities that filed chapter 11 cases is automatically stayed.

The Aearo Entities have also requested that the Bankruptcy Court confirm that Combat Arms Earplugs litigation against the Company is also stayed or order it enjoined. In August 2022, the Bankruptcy Court denied Aearo's motion for a preliminary injunction to stay all Combat Arms related litigation against 3M. In September 2022, the bankruptcy judge certified Aearo's request to appeal the decision directly to the Seventh Circuit Court of Appeals and in October the Seventh Circuit accepted the appeal. In December 2022, Aearo filed its opening brief with the Seventh Circuit appealing the bankruptcy court's decision. Also in December 2022, the parties to the Aearo bankruptcy agreed to extend the exclusivity period for Aearo to file a plan for reorganization to March 31, 2023. Confidential mediation is underway with court-appointed mediators and settlement discussions between Aearo and the plaintiffs are ongoing. As noted in the co-mediators' report issued on January 20, 2023, 3M continues to support Aearo Entities by engaging in confidential mediation discussions toward a resolution of the Combat Arms Earplugs litigation in the chapter 11 process. In February 2023, the plaintiffs filed with the Bankruptcy Court a motion to dismiss the bankruptcy filings of Aearo Entities.

As of December 31, 2022 3M's consolidated balance sheet reflected amounts associated with the deconsolidated Aearo Entities as follows:

- \$0.7 billion asset balance in equity and other investments (within other assets), reflecting 3M's equity investment interest in the entities.
- \$0.6 billion net liability for former intercompany amounts due from 3M to the deconsolidated entities. The gross balances are reflected in other liabilities (\$0.9 billion) and other assets (\$0.3 billion).
- \$1.2 billion accrued liability related to the commitments describe above, largely reflected within contingent liability claims and other (within other liabilities) on 3M's consolidated balance sheet.

Preceding Combat Arms Earplugs matters:

In December 2018, a military veteran filed an individual lawsuit against 3M in the San Bernardino Superior Court in California alleging that he sustained personal injuries while serving in the military caused by 3M's Dual-Ended Combat Arms earplugs – Version 2. The plaintiff asserts claims of product liability and fraudulent misrepresentation and concealment. The plaintiff seeks various damages, including medical and related expenses, loss of income, and punitive damages.

As of December 31, 2022, the Company is a named defendant in lawsuits (including 14 putative class actions) in various state and federal courts that purport to represent approximately 141,000 individual claimants making similar allegations. The significant increase from year-end 2021 in the number of claimants is largely due to the number of claims moved from the administrative docket to the active docket as the result of the transition orders the multi-district litigation (MDL) judge began issuing at the end of 2021 (as more fully described below), in addition to claims filed directly on the active docket in 2022. In April 2019, the U.S. Judicial Panel on Multidistrict Litigation granted motions to transfer and consolidate all cases pending in federal courts to the U.S. District Court for the Northern District of Florida to be managed in an MDL proceeding to centralize pre-trial proceedings. The plaintiffs and 3M filed preliminary summary judgment motions on the government contractor defense. In July 2020, the MDL court granted the plaintiffs' summary judgment motion and denied the defendants' summary judgment motion, ruling that plaintiffs' claims are not barred by the government contractor defense. The court denied the Company's request to immediately certify the summary judgment ruling for appeal to the U.S. Court of Appeals for the Eleventh Circuit. In December 2020, the court granted the plaintiffs' motion to consolidate three plaintiffs for the first bellwether trial, which began in March 2021.

In April 2021, 3M received an adverse jury verdict in the first bellwether trial. The jury awarded the three plaintiffs less than \$1 million in compensatory damages and \$6 million in punitive damages for a total of \$7 million. 3M appealed the verdicts, challenging, among other rulings, the MDL court's denial of 3M's motion to assert the government contractor defense. The next two bellwether trials occurred in May and June of 2021. In May 2021, 3M received a verdict in its favor in the second bellwether trial, in which a jury rejected claims that 3M knowingly sold earplugs with design defects. In June 2021, 3M received an adverse verdict in the third bellwether trial. The jury found 3M liable for strict liability failure to warn, but found 3M not liable for design defect or fraud. The jury apportioned fault 62 percent to 3M and 38 percent to the plaintiff for a total damage award of approximately \$1 million. 3M appealed the verdict. In January 2023, the Eleventh Circuit Court of Appeals scheduled oral argument for the appeals of the first and third bellwether trials for the week of May 1, 2023. In October 2021, 3M received an adverse verdict in the fourth bellwether trial, in which a jury awarded \$8 million to the plaintiff. 3M received verdicts in its favor in the fifth and sixth bellwether trials. 3M received an adverse verdict in the seventh and eighth bellwether trials, in which the juries awarded the plaintiffs \$13 million and \$23 million, respectively. A post-trial order reduced the award in the seventh bellwether trial to \$8 million. 3M prevailed in the ninth and tenth bellwether cases but received adverse verdicts in the eleventh bellwether case in which the jury awarded each of the two plaintiffs \$15 million in compensatory and \$40 million in punitive damages. A post-trial order reduced the compensatory and punitive damages award to one of the plaintiffs from \$55 million to \$22 million. 3M received adverse verdicts in the twelfth and thirteenth bellwether cases in which the jury awarded one plaintiff with \$50 million and another with \$8 million in compensatory damages. 3M prevailed in the fourteenth bellwether trial. Plaintiff in the fourteenth bellwether trial has filed a notice of appeal. In December 2022, the plaintiff voluntarily dismissed her Eleventh Circuit appeal of a jury verdict in favor of 3M and Aearo. No other cases that resulted in a defense verdict are on appeal before the Eleventh Circuit at this time. In April 2022, a jury returned a plaintiff's verdict in the fifteenth bellwether trial, awarding \$2.2 million in compensatory damages and declining to award punitive damages. A post-trial order reduced the compensatory damages award to \$1.2 million. In May 2022, a jury returned a plaintiff's verdict in the last scheduled federal bellwether trial. The jury awarded \$5 million in compensatory damages and \$72 million in punitive damages. These trials have not included several bellwether cases that plaintiffs' counsel dismissed with prejudice either during discovery or after being set for trial. The Company's appeals to the Eleventh Circuit from the adverse verdicts are proceeding forward, with oral argument on the first two appeals scheduled for May 2023. Other than the Company's funding commitment for its Aearo subsidiaries' chapter 11 proceedings as described above, no liability has been recorded for the Combat Arms earplugs litigation because the Company believes any such liability is not probable and reasonably estimable and the Company is not able to estimate a possible loss or range of possible loss at this time. Following conclusion of the bellwether trial process and unsuccessful settlement discussions, and with another 2,000 cases being prepared for trial while the Company's appeals are still pending, the Aearo Entities and the Company adopted a change in strategy for managing these alleged litigation liabilities that led to the Aearo Entities initiating the chapter 11 proceedings as discussed above. An administrative docket of approximately 90,700 unfiled and unverified claims has also been maintained at the MDL court. The MDL court in August 2021 provided notice of an intent to issue forthcoming transition orders requiring all claims be moved off the administrative docket to the active docket on a rolling basis over 12 months. The orders will provide that any case not moved to the active docket will be dismissed without prejudice, and the administrative docket will then be closed. The MDL court also ordered the parties to prepare for trial 2,000 cases in four waves of 500 cases over the next 14 months. After the preparation of these cases is completed, the cases will be remanded to the federal district courts where the cases were originally filed. In October 2022, the MDL court ordered that while the successor liability issue described below is on appeal, all wave discovery would be stayed, the transition of cases from the administrative docket to the active docket would stop, and that monthly settlement conferences involving all parties (except Aearo) would occur in the MDL. In January 2023, the MDL judge ordered that the MDL mediation would stop while the bankruptcy court mediation is ongoing.

The court ordered a three-day mediation in July 2022; and again in September 2022, a two-day mediation session. The court also set the date for a single plaintiff trial for October 2022, which was postponed to February 2023, and then stayed. In August 2022, subsequent to Aearo's chapter 11 filing, the MDL court issued an order prohibiting 3M from attempting to relitigate issues in the bankruptcy court and from financially supporting any collateral dispute regarding the MDL court's previous rulings. 3M has appealed the order to the Eleventh Circuit Court of Appeals and made a motion to stay the order pending appeal. In October 2022, the Eleventh Circuit granted 3M's motion to stay the order pending appeal. In January 2023, the Eleventh Circuit scheduled oral argument for this appeal for the week of May 1, 2023.

In September 2022, two MDL plaintiffs filed a lawsuit with the U.S. District Court for the Northern District of Florida, seeking to permanently enjoin 3M from transferring assets, issuing dividends or completing the announced spin-off of its Health Care business, to allegedly preserve assets for the Combat Arms claimants. The Company has filed a motion to dismiss the lawsuit and an opposition to the injunction motion. In December 2022, the court dismissed the lawsuit on jurisdictional grounds. Also in December 2022, the MDL court granted plaintiffs' motion for summary judgment that successor liability, claiming that 3M is fully and independently liable for injuries allegedly caused by the CAEv2 and certified the order for appeal to the Eleventh Circuit. In January 2023, 3M sought the Eleventh Circuit's acceptance of the appeal. 3M is also defending lawsuits brought primarily by non-military plaintiffs in state court in Hennepin County, Minnesota. 3M removed these actions to federal court, and the federal court remanded them to state court in March 2020. On appeal, the U.S. Court of Appeals for the Eighth Circuit ruled in October 2021 that the cases brought by non-military plaintiffs were properly remanded to state court, whereas the cases brought by military contractor plaintiffs who had received the Combat Arms Earplugs from the military should have remained in federal court. In November 2021, the Eighth Circuit granted 3M's unopposed motion to vacate the remand orders in the remaining appeals of military service member cases. The military service member cases are expected to be remanded to federal court and transferred to the MDL. There are approximately 40 lawsuits involving approximately 1,000 plaintiffs pending in the state court. The state court cases are subject to a bellwether case selection process. The first trial in Hennepin County was scheduled for October 2022, but has been postponed to July 2023.

As of December 31, 2022, the Company was a named defendant in approximately 5,258 lawsuits in the United States and one Canadian putative class action with a single named plaintiff, alleging that the Bair Hugger™ patient warming system caused a surgical site infection.

As previously disclosed, 3M is a named defendant in lawsuits in federal courts involving over 5,000 plaintiffs alleging that they underwent various joint arthroplasty, cardiovascular, and other surgeries and later developed surgical site infections due to the use of the Bair Hugger™ patient warming system. The plaintiffs seek damages and other relief based on theories of strict liability, negligence, breach of express and implied warranties, failure to warn, design and manufacturing defect, fraudulent and/or negligent misrepresentation/concealment, unjust enrichment, and violations of various state consumer fraud, deceptive or unlawful trade practices and/or false advertising acts.

The U.S. Judicial Panel on Multidistrict Litigation (JPML) consolidated all cases pending in federal courts to the U.S. District Court for the District of Minnesota to be managed in a multi-district litigation (MDL) proceeding. In July 2019, the court excluded several of the plaintiffs' causation experts, and granted summary judgment for 3M in all cases pending at that time in the MDL. Plaintiffs appealed that decision to the U.S. Court of Appeals for the Eighth Circuit. Plaintiffs also appealed a 2018 jury verdict in favor of 3M in the first bellwether trial in the MDL and appealed the dismissal of another bellwether case. A panel of the appellate court in August 2021 reversed the district court's exclusion of the plaintiffs' causation experts and the grant of summary judgment for 3M. The Company sought further appellate en banc review by the full Eighth Circuit court. In November 2021, the Eighth Circuit court denied 3M's petition for rehearing en banc. In February 2022, the Company filed a petition for a writ of certiorari in the U.S. Supreme Court. In May 2022, the U.S. Supreme Court declined 3M's request to review the Eighth Circuit court's decision. The MDL court has not yet issued a new case management order.

In February 2022, the MDL court ordered the parties to engage in any mediation sessions that a court-appointed mediator deems appropriate. Mediation sessions took place in May and August 2022 without success in resolving the litigation. Separately, in August 2021, the Eighth Circuit court affirmed the 2018 jury verdict in 3M's favor in the only bellwether trial in the MDL.

In addition to the federal cases, there are five state court cases. Three are pending in Missouri state court and combine Bair Hugger product liability claims with medical malpractice claims. One of the Missouri cases was tried in September and October of 2022; the jury returned a verdict in 3M's favor on all the claims. Another Missouri case is scheduled for trial in 2024. There is also one case in Etowah County, Alabama that combines Bair Hugger product liability claims with medical malpractice claims. 3M resolved for an immaterial amount the final state court case, which was filed in Hidalgo County, Texas.

As previously disclosed, 3M had been named a defendant in 61 cases in Minnesota state court. In January 2018, the Minnesota state court excluded plaintiffs' experts and granted 3M's motion for summary judgment on general causation. The Minnesota Court of Appeals affirmed the state court orders in their entirety and the Minnesota Supreme Court denied plaintiffs' petition for review and entered the final dismissal in 2019, effectively ending the Minnesota state court cases.

In June 2016, the Company was served with a putative class action filed in the Ontario Superior Court of Justice for all Canadian residents who underwent various joint arthroplasty, cardiovascular, and other surgeries and later developed surgical site infections that the representative plaintiff claims were due to the use of the Bair Hugger™ patient warming system. The representative plaintiff seeks relief (including punitive damages) under Canadian law based on theories similar to those asserted in the MDL.

For product liability litigation matters described in this section for which a liability has been recorded, the Company is not able to estimate a possible loss or range of possible loss in excess of the established accruals at this time.

Securities and Shareholder Litigation

In July 2019, Heavy & General Laborers' Locals 472 & 172 Welfare Fund filed a putative securities class action against 3M Company, its former Chairman and CEO, current Chairman and CEO, and former CFO in the U.S. District Court for the District of New Jersey. In August 2019, an individual plaintiff filed a similar putative securities class action in the same district. Plaintiffs allege that defendants made false and misleading statements regarding 3M's exposure to liability associated with PFAS and bring claims for damages under Section 10(b) of the Securities Exchange Act of 1934 and SEC Rule 10b-5 against all defendants, and under Section 20(a) of the Securities and Exchange Act of 1934 against the individual defendants. In October 2019, the court consolidated the securities class actions and appointed a group of lead plaintiffs. In January 2020, the defendants filed a motion to transfer venue to the U.S. District Court for the District of Minnesota. In August 2020, the court denied the motion to transfer venue, and in September 2020, the defendants filed a petition for writ of mandamus to the U.S. Court of Appeals for the Third Circuit. In November 2020, the federal Court of Appeals granted 3M's petition for a writ of mandamus and directed the New Jersey federal court to transfer the action to the Minnesota federal court. The defendants filed a motion to dismiss the action in January 2021, and in September 2021, the Minnesota federal court granted 3M's motion to dismiss the securities class action, which judgment is now final.

In October 2019, a stockholder derivative lawsuit was filed in the U.S. District Court for the District of New Jersey against 3M and several of its current and former executives and directors. In November and December 2019, two additional derivative lawsuits were filed in a Minnesota state court. The derivative lawsuits rely on similar factual allegations as the putative securities class action discussed above. The Minnesota state court cases were consolidated and stayed pending a decision on the motion to dismiss in the securities class action, and the Minnesota state plaintiffs have agreed to further stay their action pending a decision on the motion to dismiss the federal derivative lawsuit discussed below. In October 2020, the derivative action pending in the U.S. District Court for the District of New Jersey was dismissed, without prejudice, for failure to serve the complaint within the required time period.

In August 2020, a stockholder who had previously submitted a books and records demand filed an additional follow-on derivative lawsuit in the U.S. District Court for the District of New Jersey against 3M and several of its current and former executives and directors. This derivative lawsuit, having been transferred to Minnesota federal court, also relies on similar factual allegations as the putative securities class action discussed above. In February 2021, an additional stockholder derivative lawsuit was filed in the District of Minnesota, making similar factual allegations as the putative securities class action discussed above. The Minnesota federal court consolidated these federal derivative suits and stayed them pending and through any appeal of the securities class action dismissal. The Minnesota federal plaintiffs then filed an amended complaint in February 2022. The defendants moved to dismiss the consolidated federal derivative action in May 2022. Plaintiffs filed their opposition to the motion to dismiss in August 2022 and the defendants filed their reply brief in October 2022. Oral argument was held in January 2023.

Federal False Claims Act / Qui Tam Litigation

In October 2019, 3M acquired Acelity, Inc. and its KCI subsidiaries, including Kinetic Concepts, Inc. and KCI USA, Inc. As previously disclosed in the SEC filings by the KCI entities, in 2009, Kinetic Concepts, Inc. received a subpoena from the U.S. Department of Health and Human Services Office of Inspector General. In 2011, following the completion of the government's review and its decision declining to intervene in two qui tam actions described further below, the qui tam relator-plaintiffs' pleadings were unsealed.

The government inquiry followed two qui tam actions filed in 2008 by two former employees against Kinetic Concepts, Inc. and KCI USA, Inc. (collectively, the “KCI defendants”) under seal in the U.S. District Court for the Central District of California. As 3M has previously disclosed, one qui tam action (the Godecke case) was dismissed in January 2022. In the remaining action (the Hartpence case), the complaint contains allegations that the KCI Defendants violated the federal False Claims Act by submitting false or fraudulent claims to federal healthcare programs by billing for V.A.C.® Therapy in a manner that was not consistent with the Local Coverage Determinations issued by the Durable Medical Equipment Medicare Administrative Contractors and seeks monetary damages.

In June 2019, the district court entered summary judgment in the KCI Defendants’ favor on all of the relator-plaintiff’s claims. The relator-plaintiff then filed an appeal in the U.S. Court of Appeals for the Ninth Circuit. Oral argument in the Hartpence case was held in July 2020. The appellate court issued an opinion in August 2022 reversing the decision of the district court and remanding the case for further proceedings. The district court held a status conference in January 2023 where no case deadlines were set; the litigation remains in a pre-trial stage.

For the matters described in this section for which a liability has been recorded, the amount recorded is not material to the Company’s consolidated results of operations or financial condition.

Compliance Matter

The Company, through its internal processes, discovered certain travel activities and related funding and record keeping issues raising concerns, arising from marketing efforts by certain business groups based in China. The Company initiated an internal investigation to determine whether the expenditures may have violated the U.S. Foreign Corrupt Practices Act (FCPA) or other potentially applicable anti-corruption laws. The Company has retained outside counsel and a forensic accounting firm to assist with the investigation. In July 2019, the Company voluntarily disclosed this investigation to both the Department of Justice and Securities and Exchange Commission and is cooperating with both agencies. The Company is in discussions related to potential resolution but cannot predict at this time the ultimate outcome or actions that may be taken by the Department of Justice or Securities and Exchange Commission.

NOTE 17. Leases

The components of lease expense are as follows:

(Millions)	2022	2021	2020
Operating lease cost	\$ 295	\$ 319	\$ 348
Finance lease cost:			
Amortization of assets	15	15	21
Interest on lease liabilities	2	2	1
Variable lease cost	135	127	101
Total net lease cost	\$ 447	\$ 463	\$ 471

Short-term lease cost and income related to sub-lease activity is immaterial for the Company.

Supplemental balance sheet information related to leases is as follows:

(Millions unless noted)	Location on face of Balance Sheet	2022	2021
Operating leases:			
Operating lease right of use assets	Operating lease right of use assets	\$ 829	\$ 858
Current operating lease liabilities	Operating lease liabilities - current	261	263
Noncurrent operating lease liabilities	Operating lease liabilities	580	591
Total operating lease liabilities		841	854
Finance leases:			
Property and equipment, at cost	Property, plant and equipment	218	223
Accumulated amortization	Property, plant and equipment (accumulated depreciation)	(126)	(117)
Property and equipment, net		92	106
Current obligations of finance leases	Other current liabilities	11	7
Finance leases, net of current obligations	Other liabilities	75	93
Total finance lease liabilities		\$ 86	\$ 100
Weighted average remaining lease term (in years):			
Operating leases		5.5	5.5
Finance leases		6.3	6.6
Weighted average discount rate:			
Operating leases		2.2 %	1.8 %
Finance leases		3.1 %	3.3 %

Supplemental cash flow and other information related to leases is as follows:

(Millions)	2022	2021	2020
Cash paid for amounts included in the measurement of lease liabilities:			
Operating cash flows from operating leases	\$ 295	\$ 317	\$ 326
Operating cash flows from finance leases	2	2	1
Financing cash flows from finance leases	25	19	58
Right of use assets obtained in exchange for lease liabilities:			
Operating leases	261	342	250
Finance leases	6	3	18

Sale leased-back activity in 2022, 2021 and 2020 was not material.

Maturities of lease liabilities were as follows:

(Millions)	December 31, 2022	
	Finance Leases	Operating Leases
2023	\$ 19	\$ 268
2024	18	192
2025	11	131
2026	9	83
2027	7	55
After 2027	26	162
Total	90	891
Less: Amounts representing interest	4	50
Present value of future minimum lease payments	86	841
Less: Current obligations	11	261
Long-term obligations	\$ 75	\$ 580

As of December 31, 2022, the Company has additional operating lease commitments that have not yet commenced of approximately \$14 million. These commitments pertain to 3M's right of use of certain buildings.

NOTE 18. Stock-Based Compensation

At the May 2021 Annual Meeting, the shareholders approved the Amended and Restated 3M Company 2016 Long-Term Incentive Plan (LTIP), which included an increase of 26,633,508 in the number of shares available for issuance. Awards may be issued in the form of incentive stock options, nonqualified stock options, stock appreciation rights, restricted stock, restricted stock units, other stock awards, and performance units and performance shares. As of December 31, 2022, the remaining shares available for grant under the LTIP Program are 32 million and there were approximately 8,357 participants with outstanding options, restricted stock, or restricted stock units.

The Company's annual stock option and restricted stock unit grant is made in February to provide a strong and immediate link between the performance of individuals during the preceding year and the size of their annual stock compensation grants. The grant to eligible employees uses the closing stock price on the grant date. Accounting rules require recognition of expense under a non-substantive vesting period approach, requiring compensation expense recognition when an employee is eligible to retire. Employees are considered eligible to retire at age 55 and after having completed ten years of service. This retiree-eligible population represents 36 percent of the annual grant stock-based compensation expense; therefore, higher stock-based compensation expense is recognized in the first quarter.

In addition to the annual grants, the Company makes other minor grants of stock options, restricted stock units and other stock-based grants. The Company issues cash settled restricted stock units and stock appreciation rights in certain countries. These grants do not result in the issuance of common stock and are considered immaterial by the Company.

Amounts recognized in the financial statements with respect to stock-based compensation programs, which include stock options, restricted stock, restricted stock units, performance shares and the General Employees' Stock Purchase Plan (GESPP), are provided in the following table. Capitalized stock-based compensation amounts were not material.

Stock-Based Compensation Expense

(Millions)	2022	2021	2020
Cost of sales	\$ 48	\$ 47	\$ 50
Selling, general and administrative expenses	169	185	169
Research, development and related expenses	46	42	43
Stock-based compensation expenses	263	274	262
Income tax benefits	(62)	(100)	(82)
Stock-based compensation expenses (benefits), net of tax	\$ 201	\$ 174	\$ 180

Stock Option Program

The following table summarizes stock option activity during the year ended December 31:

(Options in thousands)	2022		2021		2020	
	Number of Options	Weighted Average Exercise Price	Number of Options	Weighted Average Exercise Price	Number of Options	Weighted Average Exercise Price
Under option —						
January 1	34,560	\$ 163.52	35,401	\$ 156.23	33,675	\$ 151.15
Granted	3,776	162.39	3,612	175.04	4,777	157.25
Exercised	(2,101)	98.91	(4,163)	110.20	(2,759)	93.23
Forfeited	(729)	176.21	(290)	182.63	(292)	181.33
December 31	35,506	166.97	34,560	163.52	35,401	156.23
Options exercisable						
December 31	28,210	\$ 167.42	26,956	\$ 161.25	27,537	\$ 149.67

Stock options generally vest over a period from one to three years with the expiration date at ten years from date of grant. As of December 31, 2022, there was \$45 million of compensation expense that has yet to be recognized related to non-vested stock option based awards. This expense is expected to be recognized over the remaining weighted-average vesting period of 21 months. For options outstanding at December 31, 2022, the weighted-average remaining contractual life was 57 months and the aggregate intrinsic value was \$28 million. For options exercisable at December 31, 2022, the weighted-average remaining contractual life was 46 months and the aggregate intrinsic value was \$28 million.

The total intrinsic values of stock options exercised during 2022, 2021 and 2020 was \$116 million, \$325 million and \$206 million, respectively. Cash received from options exercised during 2022, 2021 and 2020 was \$205 million, \$457 million and \$256 million, respectively. The Company's actual tax benefits realized for the tax deductions related to the exercise of employee stock options for 2022, 2021 and 2020 was \$24 million, \$69 million and \$44 million, respectively.

For the primary 2022 annual stock option grant, the weighted average fair value at the date of grant was calculated using the Black-Scholes option-pricing model and the assumptions that follow.

Stock Option Assumptions

	Annual		
	2022	2021	2020
Exercise price	\$ 162.41	\$ 175.04	\$ 157.24
Risk-free interest rate	1.9 %	0.8 %	1.5 %
Dividend yield	2.9 %	2.8 %	2.7 %
Expected volatility	21.8 %	22.6 %	19.7 %
Expected life (months)	83	83	78
Black-Scholes fair value	\$ 25.34	\$ 25.33	\$ 21.58

Expected volatility is a statistical measure of the amount by which a stock price is expected to fluctuate during a period. For the 2022 annual grant date, the Company estimated the expected volatility based upon the following three volatilities of 3M stock: the median of the term of the expected life rolling volatility; the median of the most recent term of the expected life volatility; and the implied volatility on the grant date. The expected term assumption is based on the weighted average of historical grants.

Restricted Stock and Restricted Stock Units

The following table summarizes restricted stock and restricted stock unit activity during the year ended December 31:

(Shares in thousands)	2022		2021		2020	
	Number of Shares	Weighted Average Grant Date Fair Value	Number of Shares	Weighted Average Grant Date Fair Value	Number of Shares	Weighted Average Grant Date Fair Value
Nonvested balance —						
As of January 1	1,987	\$ 175.96	1,722	\$ 189.78	1,573	\$ 201.11
Granted						
Annual	1,102	160.24	822	176.82	733	157.29
Other	—	—	—	—	45	159.49
Vested	(557)	197.48	(462)	228.94	(570)	176.20
Forfeited	(157)	169.22	(95)	176.13	(59)	196.31
As of December 31	2,375	164.07	1,987	175.96	1,722	189.78

Restricted stock units granted generally vest three years following the grant date assuming continued employment. Dividend equivalents equal to the dividends payable on the same number of shares of 3M common stock accrue on these restricted stock units during the vesting period, although no dividend equivalents are paid on any of these restricted stock units that are forfeited prior to the vesting date. Dividends are paid out in cash at the vest date on restricted stock units. Since the rights to dividends are forfeitable, there is no impact on basic earnings per share calculations. Weighted average restricted stock unit shares outstanding are included in the computation of diluted earnings per share.

As of December 31, 2022, there was \$108 million of compensation expense that has yet to be recognized related to non-vested restricted stock and restricted stock units. This expense is expected to be recognized over the remaining weighted-average vesting period of 23 months. The total fair value of restricted stock and restricted stock units that vested during December 31, 2022, 2021 and 2020 was \$88 million, \$83 million and \$91 million, respectively. The Company's actual tax benefits realized for the tax deductions related to the vesting of restricted stock and restricted stock units for 2022, 2021 and 2020 was \$17 million, \$16 million and \$17 million, respectively.

Performance Shares

Instead of restricted stock units, the Company makes annual grants of performance shares to members of its executive management. The 2022 performance criteria for these performance shares (organic sales growth, free cash flow growth, and earnings per share growth) were selected because the Company believes that they are important drivers of long-term stockholder value. The number of shares of 3M common stock that could actually be delivered at the end of the three-year performance period may be anywhere from 0% to 200% of each performance share granted, depending on the performance of the Company during such performance period. When granted, these performance shares are awarded at 100% of the estimated number of shares at the end of the three-year performance period and are reflected under "Granted" in the table below. Non-substantive vesting requires that expense for the performance shares be recognized over one or three years depending on when each individual became a 3M executive. The performance share grants accrue dividends; therefore, the grant date fair value is equal to the closing stock price on the date of grant. Since the rights to dividends are forfeitable, there is no impact on basic earnings per share calculations. Weighted average performance shares whose performance period is complete are included in computation of diluted earnings per share.

The following table summarizes performance share activity during the year ended December 31:

(Shares in thousands)	2022		2021		2020	
	Number of Shares	Weighted Average Grant Date Fair Value	Number of Shares	Weighted Average Grant Date Fair Value	Number of Shares	Weighted Average Grant Date Fair Value
Undistributed balance —						
As of January 1	481	\$ 175.12	423	\$ 188.61	444	\$ 205.58
Granted	269	144.77	166	176.79	203	153.16
Distributed	(116)	207.49	(115)	228.80	(206)	190.84
Performance change	(196)	153.15	40	176.35	25	166.49
Forfeited	(47)	155.71	(33)	171.35	(43)	172.92
As of December 31	391	157.98	481	175.12	423	188.61

As of December 31, 2022, there was \$7 million of compensation expense that has yet to be recognized related to performance shares. This expense is expected to be recognized over the remaining weighted-average earnings period of 19 months. The total fair value of performance shares that were distributed were \$21 million, \$22 million, and \$35 million for 2022, 2021 and 2020, respectively. The Company's actual tax benefits realized for the tax deductions related to the distribution of performance shares were \$4 million, \$4 million, and \$7 million per year for 2022, 2021 and 2020, respectively.

General Employees' Stock Purchase Plan (GESPP):

As of December 31, 2022, shareholders have approved 60 million shares for issuance under the Company's GESPP. Substantially all employees are eligible to participate in the plan. Participants are granted options at 85% of market value at the date of grant. There are no GESPP shares under option at the beginning or end of each year because options are granted on the first business day and exercised on the last business day of the same month.

The weighted-average fair value per option granted during 2022, 2021 and 2020 was \$21.20, \$27.80 and \$23.47, respectively. The fair value of GESPP options was based on the 15% purchase price discount. The Company recognized compensation expense for GESPP options of \$31 million in 2022, \$32 million in 2021, and \$31 million in 2020.

NOTE 19. Business Segments and Geographic Information

3M's businesses are organized, managed and internally grouped into segments based on differences in markets, products, technologies and services. 3M manages its operations in four business segments: Safety and Industrial; Transportation and Electronics; Health Care; and Consumer. 3M's four business segments bring together common or related 3M technologies, enhancing the development of innovative products and services and providing for efficient sharing of business resources. In July 2022, 3M announced its intention to spin off the Health Care business as a separate public company (see Note 3 for additional information). Transactions among reportable segments are recorded at cost. 3M is an integrated enterprise characterized by substantial intersegment cooperation, cost allocations and inventory transfers. Therefore, management does not represent that these segments, if operated independently, would report the operating income information shown.

3M discloses business segment operating income as its measure of segment profit/loss, reconciled to both total 3M operating income and income before taxes. Business segment operating income excludes certain expenses and income that are not allocated to business segments (as described below in "Corporate and Unallocated").

Effective in the first quarter of 2022, the measure of segment operating performance used by 3M's chief operating decision maker (CODM) changed and, as a result, 3M's disclosed measure of segment profit/loss (business segment operating income (loss)) was updated. The change to business segment operating income aligns with the update to how the CODM assesses performance and allocates resources for the Company's business segments. The changes included the items described below. The financial information presented herein reflects the impact of these business segment reporting changes for all periods presented.

Effective in the first quarter of 2022:

Eliminating inclusion of dual credit in measure of segment operating performance

3M business segment operating performance measures were updated to no longer include dual credit to business segments for certain sales and related operating income. Management previously evaluated its business segments based on net sales and operating income performance, including dual credit reporting. 3M reflected additional ("dual") credit to another business segment when the customer account activity ("sales district") with respect to the particular product sold to the external customer was provided by a different business segment. For example, privacy screen protection products are primarily sold by the Display Materials and Systems Division within the Transportation and Electronics business segment; however, certain sales districts within the Consumer business segment provide the customer account activity for sales of the product to particular customers. In this example, the non-primary selling segment (Consumer) previously would also have received credit for the associated net sales initiated through its sales district and the related approximate operating income. The offset to the dual credit business segment reporting was reflected as a reconciling item entitled "Elimination of Dual Credit," such that sales and operating income in total were unchanged.

Reflecting certain litigation-related costs in the Safety and Industrial segment's operating performance measure

3M's business segment operating performance measure with respect to its Safety and Industrial business segment was updated relative to litigation-related costs for non-Aearo and Aearo respirator mask/asbestos litigation matters. Previously, 3M included these costs, when significant, as a special item (as further described below) within Corporate and Unallocated. 3M changed to include all litigation-related costs associated with respirator mask/asbestos litigation matters (along with other Safety and Industrial matters already included therein, such as those related to Combat Arms Earplugs) within the Safety and Industrial business segment. Note, however, that prospectively during the Aearo chapter 11 bankruptcy period (which began in July 2022 — see Note 16) net costs for significant litigation associated with Combat Arms Earplugs and Aearo-respirator mask/asbestos matters are reflected in Corporate and Unallocated.

Business Segment Products

Business Segment	Representative revenue-generating activities, products or services
Safety and Industrial	<ul style="list-style-type: none"> • Industrial abrasives and finishing for metalworking applications • Autobody repair solutions • Closure systems for personal hygiene products, masking, and packaging materials • Electrical products and materials for construction and maintenance, power distribution and electrical original equipment manufacturers (OEMs) • Structural adhesives and tapes • Respiratory, hearing, eye and fall protection solutions • Natural and color-coated mineral granules for shingles
Transportation and Electronics	<ul style="list-style-type: none"> • Advanced ceramic solutions • Attachment tapes, films, sound and temperature management for transportation vehicles • Premium large format graphic films for advertising and fleet signage • Light management films and electronics assembly solutions • Packaging and interconnection solutions • Reflective signage for highway, and vehicle safety
Health Care	<ul style="list-style-type: none"> • Health care procedure coding and reimbursement software • Skin, wound care, and infection prevention products and solutions • Dentistry and orthodontia solutions • Filtration and purification systems
Consumer	<ul style="list-style-type: none"> • Consumer bandages, braces, supports and consumer respirators • Cleaning products for the home • Retail abrasives, paint accessories, car care DIY products, picture hanging and consumer air quality solutions • Stationery products

Some seasonality impacts this business segment related to back-to-school, generally in the third quarter of each year

Business Segment Information

(Millions)

Net Sales	2022	2021	2020
Safety and Industrial	\$ 11,604	\$ 11,981	\$ 10,972
Transportation and Electronics	8,902	9,262	8,406
Health Care	8,421	8,597	7,832
Consumer	5,298	5,513	4,976
Corporate and Unallocated	4	2	(2)
Total Company	\$ 34,229	\$ 35,355	\$ 32,184
Operating Performance	2022	2021	2020
Safety and Industrial	\$ 1,199	\$ 2,466	\$ 2,588
Transportation and Electronics	1,012	1,880	1,701
Health Care	1,815	2,037	1,662
Consumer	994	1,162	1,119
Total business segment operating income	5,020	7,545	7,070
Corporate and Unallocated			
Corporate special items:			
Net costs for significant litigation	(877)	(214)	(148)
Divestiture costs	(60)	—	—
Gain on business divestitures	2,724	—	389
Divestiture-related restructuring actions	(41)	—	(55)
Russia exit charges	(109)	—	—
Total corporate special items	1,637	(214)	186
Other corporate expense - net	(118)	38	(95)
Total Corporate and Unallocated	1,519	(176)	91
Total Company operating income	6,539	7,369	7,161
Other expense/(income), net	147	165	366
Income before income taxes	\$ 6,392	\$ 7,204	\$ 6,795

(Millions)	Assets		Depreciation & Amortization			Capital Expenditures		
	2022	2021	2022	2021	2020	2022	2021	2020
Safety and Industrial	\$ 11,730	\$ 11,744	\$ 566	\$ 593	\$ 562	\$ 512	\$ 339	\$ 451
Transportation and Electronics	6,453	6,999	410	419	429	562	453	454
Health Care	13,343	14,055	623	636	626	272	249	251
Consumer	2,753	2,783	148	147	140	146	109	120
Corporate and Unallocated	12,176	11,491	84	120	154	257	453	225
Total Company	\$ 46,455	\$ 47,072	\$ 1,831	\$ 1,915	\$ 1,911	\$ 1,749	\$ 1,603	\$ 1,501

Assets subject to attribution to business segments largely include accounts receivable; inventories; property, plant and equipment; goodwill; intangible assets; and certain limited other assets. All other items are reflected in Corporate and Unallocated. Accounts receivable and inventory are attributed based on underlying sales or activity. Property, plant and equipment are attributed to a particular business segment based on that item's primary user while certain items such as corporate-shared headquarters/administrative centers, laboratories, distribution centers and enterprise software systems are reflected in Corporate and Unallocated. Intangible assets and goodwill are largely directly associated with a particular reporting unit and attributed on that basis. Business segment depreciation reflected above is based on the underlying usage of assets (while the particular asset itself may be entirely reflected within a different business segment's asset balance as its primary user). This depreciation also includes allocated depreciation associated with a number of the assets reflected in Corporate and Unallocated as described above.

Corporate and Unallocated

Corporate and Unallocated operating income includes “corporate special items” and “other corporate expense-net”. Corporate special items include net costs for significant litigation associated with Combat Arms Earplugs and Aeairo-respirator mask/asbestos matters during the chapter 11 bankruptcy period (which began in July 2022) and with PFAS-related other environmental matters (see Note 16). Corporate special items also include divestiture costs, gain/loss on business divestitures (see Note 3), divestiture-related restructuring costs (see Note 5), and Russia exit costs (see Note 15). Divestiture costs include costs related to separating and divesting substantially an entire business segment of 3M following public announcement of its intended divestiture. Other corporate expense-net includes items such as net costs related to limited unallocated corporate staff and centrally managed material resource centers of expertise costs, corporate philanthropic activity, and other net costs that 3M may choose not to allocate directly to its business segments. Other corporate expense-net also includes costs and income from transition supply, manufacturing, and service arrangements with Neogen Corporation following the 2022 split-off of 3M's Food Safety business and with the acquirer of the former Drug Delivery business following its 2020 divestiture. Items classified as revenue from this activity are included in Corporate and Unallocated net sales. Because Corporate and Unallocated includes a variety of miscellaneous items, it is subject to fluctuation on a quarterly and annual basis.

Geographic Information

Geographic area information is used by the Company as a secondary performance measure to manage its businesses. Export sales and certain income and expense items are generally reported within the geographic area where the final sales to 3M customers are made. Refer to Note 2 for geographic net sales.

(Millions)	Property, Plant and Equipment - net	
	2022	2021
Americas	\$ 6,066	\$ 5,864
Asia Pacific	1,389	1,582
Europe, Middle East and Africa	1,723	1,983
Total Company	\$ 9,178	\$ 9,429

United States net property, plant and equipment (PP&E) was \$5,662 million and \$5,484 million at December 31, 2022 and 2021, respectively. China/Hong Kong net property, plant and equipment (PP&E) was \$518 million and \$578 million at December 31, 2022 and 2021, respectively.

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

None.

Item 9A. Controls and Procedures.

a. The Company carried out an evaluation, under the supervision and with the participation of its management, including the Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of the Company's "disclosure controls and procedures" (as defined in the Exchange Act Rule 13a-15(e)) as of the end of the period covered by this report. Based upon that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that the Company's disclosure controls and procedures are effective.

b. The Company's management is responsible for establishing and maintaining an adequate system of internal control over financial reporting, as defined in the Exchange Act Rule 13a-15(f). Management conducted an assessment of the Company's internal control over financial reporting based on the framework established by the Committee of Sponsoring Organizations of the Treadway Commission in *Internal Control — Integrated Framework (2013)*. Based on the assessment, management concluded that, as of December 31, 2022, the Company's internal control over financial reporting is effective. The Company's internal control over financial reporting as of December 31, 2022 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which is included herein, which expresses an unqualified opinion on the effectiveness of the Company's internal control over financial reporting as of December 31, 2022.

c. There was no change in the Company's internal control over financial reporting that occurred during the Company's most recently completed fiscal quarter that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

The Company is implementing an enterprise resource planning ("ERP") system on a worldwide basis, which is expected to improve the efficiency of certain financial and related transaction processes. The gradual implementation is expected to occur in phases over the next several years. The implementation of a worldwide ERP system will likely affect the processes that constitute our internal control over financial reporting and will require testing for effectiveness.

The Company completed implementation with respect to various processes/sub-processes in certain subsidiaries/locations, including aspects relative to the United States, and will continue to roll out the ERP system over the next several years. As with any new information technology application we implement, this application, along with the internal controls over financial reporting included in this process, was appropriately considered within the testing for effectiveness with respect to the implementation in these instances. We concluded, as part of its evaluation described in the above paragraphs, that the implementation of the ERP system in these circumstances has not materially affected our internal control over financial reporting.

Item 9B. Other Information.

Disclosure Under Iran Threat Reduction and Syria Human Rights Act of 2012

The Company is making the following disclosure under Section 13(r) of the Exchange Act:

Protection of Intellectual Property Rights in Iran Pursuant to Specific License

As part of its intellectual property ("IP") protection efforts, 3M has obtained and maintains patents and trademarks in Iran. Periodically, 3M pays renewal fees, through IP service providers/counsel located in Germany, Dubai and Iran, to the Iran Intellectual Property Office ("IIPO") for these patents and trademarks and has sought to prosecute and defend such trademarks. On January 26, 2022, the Office of Foreign Assets Control ("OFAC") granted to 3M a specific license to make payments to IIPO at its account in Bank Melli, which was designated on November 5, 2018 by OFAC under its counter terrorism authority pursuant to Executive Order 13224. As authorized by OFAC's specific license, in the quarter ended December 31, 2022, 3M paid \$354 as part of its intellectual property protection efforts in Iran. 3M plans to continue these activities, as authorized under the specific license.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

Not applicable

PART III

Documents Incorporated by Reference

In response to Part III, Items 10, 11, 12, 13 and 14, parts of the Company's definitive proxy statement (to be filed pursuant to Regulation 14A within 120 days after Registrant's fiscal year-end of December 31, 2022) for its annual meeting to be held on May 9, 2023, are incorporated by reference in this Form 10-K.

Item 10. Directors, Executive Officers and Corporate Governance.

The information relating to directors and nominees of 3M is set forth under the caption "Proposal No. 1" in 3M's proxy statement for its annual meeting of stockholders to be held on May 9, 2023 ("3M Proxy Statement") and is incorporated by reference herein. Information about executive officers is included in Item 1 of this Annual Report on Form 10-K. The information required by Items 405, 407(c)(3), (d)(4) and (d)(5) of Regulation S-K is contained under the captions "Corporate Governance At 3M — Board Membership Criteria — Identification, Evaluation, and Selection of Nominees," "—Shareholder Nominations," "—Shareholder Nominations – Advance Notice Bylaw", and "—Proxy Access Nominations" and "Corporate Governance At 3M -- Board Committees – Audit Committee" of the 3M Proxy Statement and such information is incorporated by reference herein.

Code of Ethics. All of our employees, including our Chief Executive Officer, Chief Financial Officer and Chief Accounting Officer and Controller, are required to abide by 3M's long-standing business conduct policies to ensure that our business is conducted in a consistently legal and ethical manner. 3M has posted the text of such code of ethics on its website (https://www.3M.com/3M/en_US/ethics-compliance). At the same website, any future amendments to the code of ethics will also be posted. Any person may request a copy of the code of ethics, at no cost, by writing to us at the following address:

3M Company
3M Center, Building 220-11W-09
St. Paul, MN 55144-1000
Attention: Senior Vice President, 3M Ethics &
Compliance

Item 11. Executive Compensation.

The information required by Item 402 of Regulation S-K is contained under the captions "Executive Compensation" (excluding the information under the caption "— Compensation Committee Report") and "Director Compensation" and "Stock Retention Requirement" of the 3M Proxy Statement. Such information is incorporated by reference.

The information required by Items 407(e)(4) and (e)(5) of Regulation S-K is contained in the "Executive Compensation" section under the captions "Compensation Committee Report" and "Compensation Committee Interlocks and Insider Participation" of the 3M Proxy Statement. Such information (other than the Compensation Committee Report, which shall not be deemed to be "filed") is incorporated by reference.

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

The information relating to security ownership of certain beneficial owners and management is set forth under the designation “Security Ownership of Management” and “Security Ownership of Certain Beneficial Owners” in the 3M Proxy Statement and such information is incorporated by reference herein.

Equity compensation plans information as of December 31, 2022 follows:

Equity Compensation Plans Information (1)

Plan Category (options and shares in thousands)	A	B	C
	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted- average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (A))
Equity compensation plans approved by security holders			
Stock options	35,506	\$ 166.97	—
Restricted stock units	2,375		—
Performance shares	391		—
Non-employee director deferred stock units	235		—
Total	38,507		32,377
Employee stock purchase plan	—		20,258
Subtotal	38,507		52,635
Total	38,507		52,635

(1) In column B, the weighted-average exercise price is only applicable to stock options. In column C, the number of securities remaining available for future issuance for stock options, restricted stock units, and stock awards for non-employee directors is approved in total and not individually with respect to these items.

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

With respect to certain relationships and related transactions as set forth in Item 404 of Regulation S-K, no matters require disclosure with respect to transactions with related persons. The information required by Item 404(b) and Item 407(a) of Regulation S-K is contained under the section “Corporate Governance at 3M” under the captions “Director Independence” and “Related Person Transaction Policy and Procedures” of the 3M Proxy Statement and such information is incorporated by reference herein.

Item 14. Principal Accounting Fees and Services.

The information relating to principal accounting fees and services is set forth in the section entitled “Audit Committee Matters” under the designation “Audit Committee Policy on Pre-Approval of Audit and Permissible Non-Audit Services of the Independent Accounting Firm” and “Fees of the Independent Accounting Firm” in the 3M Proxy Statement and such information is incorporated by reference herein.

PART IV

Item 15. Exhibits, Financial Statement Schedules.

- (a) (1) Financial Statements. The consolidated financial statements filed as part of this report are listed in the index to financial statements at the beginning of this document.
- (a) (2) Financial Statement Schedules. Financial statement schedules are omitted because of the absence of the conditions under which they are required or because the required information is included in the Consolidated Financial Statements or the notes thereto. The financial statements of unconsolidated subsidiaries are omitted because, considered in the aggregate, they would not constitute a significant subsidiary.
- (a) (3) Exhibits. The exhibits are either filed with this report or incorporated by reference into this report. See (b) Exhibits, which follow.
- (b) Exhibits.
- (3) Articles of Incorporation and bylaws
- (3.1) Certificate of Incorporation, as amended as of December 4, 2017, is incorporated by reference from our Form 8-K dated December 7, 2017.
- (3.2) Amended and Restated Bylaws, as adopted as of February 7, 2023, are incorporated by reference from our Form 8-K dated February 8, 2023.
- (4) Instruments defining the rights of security holders, including indentures
- (4.1) Indenture, dated as of November 17, 2000, between 3M and The Bank of New York Mellon Trust Company, N.A., as successor trustee, with respect to 3M's senior debt securities, is incorporated by reference from our Form 8-K dated December 7, 2000.
- (4.2) First Supplemental Indenture, dated as of July 29, 2011, to Indenture dated as of November 17, 2000, between 3M and The Bank of New York Mellon Trust Company, N.A., as successor trustee, with respect to 3M's senior debt securities, is incorporated by reference from our Form 10-Q for the quarter ended June 30, 2011.
- (4.3) Description of Securities is incorporated by reference from our Form 10-K for the year ended December 31, 2019.
- (10) Material contracts and management compensation plans and arrangements:
- (10.1)* 3M Company 2016 Long-Term Incentive Plan, as amended and restated effective May 11, 2021, is incorporated by reference from our Form 8-K dated May 13, 2021.
- (10.2)* Form of Stock Option Award Agreement under the 3M Company 2016 Long-Term Incentive Plan is incorporated by reference from our Form 8-K dated May 12, 2016.
- (10.3)* Form of Stock Appreciation Right Award Agreement under the 3M Company 2016 Long-Term Incentive Plan is incorporated by reference from our Form 8-K dated May 12, 2016.
- (10.4)* Form of Restricted Stock Unit Award Agreement under the 3M Company 2016 Long-Term Incentive Plan is incorporated by reference from our Form 8-K dated May 12, 2016.
- (10.5)* Form of Performance Share Award Agreement for performance share awards granted under the 3M Company 2016 Long-Term Incentive Plan on or after February 5, 2018 is incorporated by reference from our Form 10-K for the year ended December 31, 2017.
- (10.6)* Form of Performance Share Award Agreement for performance share awards granted under the 3M Company 2016 Long-Term Incentive Plan on or after February 1, 2021 is incorporated by reference from our Form 10-K for the year ended December 31, 2020.
- (10.7)* Form of Stock Issuance Award Agreement for stock issuances on or after January 1, 2019 to Non-Employee Directors under the 3M Company 2016 Long-Term Incentive Plan is incorporated by reference from our Form 10-K for the year ended December 31, 2018.
- (10.8)* Form of Deferred Stock Unit Award Agreement for deferred stock units granted on or after January 1, 2019 to Non-Employee Directors under the 3M Company 2016 Long-Term Incentive Plan is incorporated by reference from our Form 10-K for the year ended December 31, 2018.
- (10.9)* 3M 2008 Long-Term Incentive Plan (including amendments through February 2, 2016) is incorporated by reference from our Form 10-K for the year ended December 31, 2015.

- (10.10)* Form of Stock Option Agreement for options granted to Executive Officers under the 3M 2008 Long-Term Incentive Plan, commencing February 9, 2010, is incorporated by reference from our Form 10-K for the year ended December 31, 2009.
- (10.11)* Form of Stock Option Agreement for U.S. Employees under 3M 2008 Long-Term Incentive Plan is incorporated by reference from our Form 10-K for the year ended December 31, 2008.
- (10.12)* Amended and Restated 3M VIP Excess Plan, as amended and restated effective December 1, 2021, is incorporated by reference from our Form 10-K for the year ended December 31, 2021.
- (10.13)* Amended and Restated 3M Deferred Compensation Excess Plan, as amended and restated effective December 1, 2021, is incorporated by reference from our Form 10-K for the year ended December 31, 2021.
- (10.14)* 3M Performance Awards Deferred Compensation Plan is incorporated by reference from our Form 10-K for the year ended December 31, 2009.
- (10.15)* 3M Annual Incentive Plan, as amended and restated effective January 1, 2022, is incorporated by reference from our Form 8-K dated November 12, 2021.
- (10.16)* 3M Executive Severance Plan is incorporated by reference from our Form 10-K for the year ended December 31, 2019.
- (10.17)* 3M Compensation Plan for Non-Employee Directors, as amended, through November 8, 2004, is incorporated by reference from our Form 10-K for the year ended December 31, 2004.
- (10.18)* Amendment of 3M Compensation Plan for Non-Employee Directors is incorporated by reference from our Form 8-K dated November 14, 2008.
- (10.19)* Amendment of 3M Compensation Plan for Non-Employee Directors as of August 12, 2013, is incorporated by reference from our Form 10-Q for the quarter ended September 30, 2013.
- (10.20)* Amendment and Restatement of 3M Compensation Plan for Non-Employee Directors as of January 1, 2019, is incorporated by reference from our Form 10-K for the year ended December 31, 2018.
- (10.21)* 3M Executive Life Insurance Plan, as amended, is incorporated by reference from our Form 10-K for the year ended December 31, 2017.
- (10.22)* Policy on Reimbursement of Incentive Payments is incorporated by reference from our Form 10-Q for the quarter ended June 30, 2018.
- (10.23)* Amended and Restated 3M Nonqualified Pension Plan I is incorporated by reference from our Form 10-K for the year ended December 31, 2016.
- (10.24)* Amended and Restated 3M Nonqualified Pension Plan II is incorporated by reference from our Form 10-K for the year ended December 31, 2016.
- (10.25)* Amended and Restated 3M Nonqualified Pension Plan III is incorporated by reference from our Form 10-K for the year ended December 31, 2016.
- (10.26)* Offer Letter of Employment of Monish Patolawala, dated May 19, 2020 is incorporated by reference from our Form 8-K dated June 3, 2020.
- (10.27) Amended and Restated Five-Year Credit Agreement as of November 15, 2019, is incorporated by reference from our Form 8-K dated November 19, 2019.
- (10.28) Amendment No.1, dated November 1, 2022, to the Amended and Restated Five-Year Credit Agreement, is incorporated by reference from our Form 8-K dated November 14, 2022.
- (10.29) 364-day Credit Agreement as of November 12, 2021, is incorporated by reference from our Form 8-K dated November 15, 2021.
- (10.30) 364-day Credit Agreement as of November 10, 2022, is incorporated by reference from our Form 8-K dated November 14, 2022.
- (10.31) Registration Rights Agreement as of August 4, 2009, between 3M Company and State Street Bank and Trust Company as Independent Fiduciary of the 3M Employee Retirement Income Plan, is incorporated by reference from our Form 8-K dated August 5, 2009.
- (10.32)* Form of Performance Share Award Agreement for performance share awards granted under the 3M Company 2016 Long-Term Incentive Plan on or after February 6, 2023, is filed herewith.
- (10.33)* Form of Stock Option Award Agreement for stock options granted under the 3M Company 2016 Long-Term Incentive Plan on or after February 6, 2023, is filed herewith.
- (10.34)* Form of Restricted Stock Unit Award Agreement for restricted stock unit awards granted under the 3M Company 2016 Long-Term Incentive Plan on or after February 6, 2023, is filed herewith.

Filed herewith, in addition to items, if any, specifically identified above:

- (21) Subsidiaries of the Registrant.
- (23) Consent of independent registered public accounting firm.
- (24) Power of attorney.
- (31.1) Certification of the Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, 18 U.S.C. Section 1350.
- (31.2) Certification of the Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, 18 U.S.C. Section 1350.
- (32.1) Certification of the Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, 18 U.S.C. Section 1350.
- (32.2) Certification of the Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, 18 U.S.C. Section 1350.
- (95) Mine Safety Disclosures.
- (101.INS) Inline XBRL Instance Document (the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document)
- (101.SCH) Inline XBRL Taxonomy Extension Schema Document
- (101.CAL) Inline XBRL Taxonomy Extension Calculation Linkbase Document
- (101.DEF) Inline XBRL Taxonomy Extension Definition Linkbase Document
- (101.LAB) Inline XBRL Taxonomy Extension Label Linkbase Document
- (101.PRE) Inline XBRL Taxonomy Extension Presentation Linkbase Document
- (104) Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

* Management contract or compensatory plan or arrangement required to be filed as an exhibit pursuant to Item 15 of Form 10-K.

Item 16. Form 10-K Summary.

A Form 10-K summary is provided at the beginning of this document, with hyperlinked cross-references. This allows users to easily locate the corresponding items in Form 10-K, where the disclosure is fully presented. The summary does not include certain Part III information that is incorporated by reference from a future proxy statement filing.

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.

3M COMPANY

By /s/ Monish Patolawala

Monish Patolawala,
Executive Vice President and Chief Financial and
Transformation Officer
(Principal Financial Officer)
February 8, 2023

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 indicated on February 8, 2023.

<u>Signature</u>	<u>Title</u>
/s/ Michael F. Roman	Chairman of the Board and Chief Executive Officer (Principal Executive Officer and Director)
/s/ Theresa E. Reinseth	Senior Vice President, Corporate Controller and Chief Accounting Officer (Principal Accounting Officer)
Thomas K. Brown	Director
Pamela J. Craig	Director
David B. Dillon	Director
Michael L. Eskew	Director
James R. Fitterling	Director
Suzan Kereere	Director
Amy E. Hood	Director
Muhtar Kent	Director
Dambisa F. Moyo	Director
Gregory R. Page	Director

Monish Patolawala, by signing his name hereto, does hereby sign this document pursuant to powers of attorney duly executed by the other persons named, filed with the Securities and Exchange Commission on behalf of such other persons, all in the capacities and on the date stated, such persons constituting a majority of the directors of the Company.

By /s/ Monish Patolawala
Monish Patolawala, *Attorney-in-Fact*

Shareholder information

Account Information

Registered 3M shareholders can access account information and get answers to frequently asked questions in several ways:

Internet: www.shareowneronline.com
 Telephone: (651) 450-4064 or 1-800-401-1952
 E-mail: Go to www.shareowneronline.com and select Contact Us.
 Mail: EQ Shareowner Services
 P.O. Box 64854
 St. Paul, MN 55164-0854

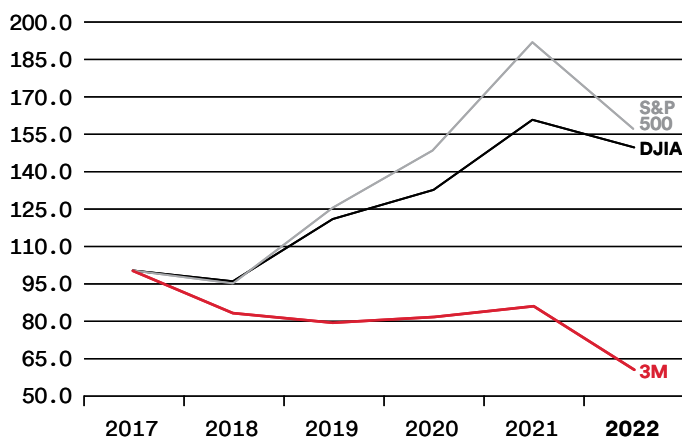
Dividends

Quarterly dividends on 3M common stock typically are paid on or about the 12th of March, June, September and December. 3M has paid dividends since 1916. Shareholders can reinvest dividends and make additional cash contributions through the Automatic Dividend Reinvestment Plan or have dividend payments automatically deposited into checking or savings accounts through the Electronic Dividend Deposit Service.

Stock Listings

3M's common stock trades on the New York and Chicago stock exchanges, and is also traded on the SIX Swiss Exchange. Our symbol is MMM. 3M is one of 30 companies in the Dow Jones Industrial Average and is also a component of the Standard & Poor's 500 Index.

3M Stock Performance (With Dividend Reinvestment)



The graph above compares the five-year cumulative total shareholder return for 3M common stock with that of the Standard & Poor's 500 Stock Index (S&P 500) and the Dow Jones Industrial Average (DJIA). The comparison assumes that \$100 was invested in 3M stock and the two indexes on Dec. 31, 2017, and that all quarterly dividends were reinvested.

Annual Shareholders' Meeting

3M's annual meeting of shareholders will be held virtually on Tuesday, May 9, 2023 at 8:30 a.m. (Central Daylight Time). Shareholders of record may vote proxies via the Internet at www.proxyvote.com, by calling 1-800-690-6903, or by mail. If a broker holds your shares, please contact the broker to determine your voting options.

Investor Inquiries

Securities analysts, portfolio managers and representatives of financial institutions should contact:
 3M Investor Relations
 3M Center, Building 223-02-N-20
 St. Paul, MN 55144-1000
 Phone: (651) 737-6523

Corporate News and Reports

Corporate news releases, 3M's Annual Report, and Forms 10-K and 10-Q are available online at: investors.3M.com

Product Information

Information about 3M products and services is available at:
 Internet: www.3M.com/product
 Telephone: 1-800-3M HELPS (1-800-364-3577)

Forward-Looking Statements

This Annual Report contains forward-looking statements that involve risks and uncertainties that could cause results to differ materially from those projected. Please refer to the section titled "Cautionary Note Concerning Factors That May Affect Future Results" in Item 1 and "Risk Factors" in Item 1A of the Annual Report on Form 10-K for a discussion of these risks and uncertainties.

Visit us on the Web

www.3M.com

On the cover:

Improved transportation safety through enhanced infrastructure.



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