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

FORM 10-K

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2020

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, Inc.
	MMM	Chicago Stock Exchange, Inc.
0.375% Notes due 2022	MMM22A	New York Stock Exchange, Inc.
0.950% Notes due 2023	MMM23	New York Stock Exchange, Inc.
1.500% Notes due 2026	MMM26	New York Stock Exchange, Inc
1.750% Notes due 2030	MMM30	New York Stock Exchange, Inc.
1.500% Notes due 2031	MMM31	New York Stock Exchange, Inc.

Note: The common stock of the registrant is also traded on the SWX 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 ☐

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 $101.7 billion as of January 31, 2021 (approximately $89.9 billion as of June 30, 2020, the last business day of the registrant's most recently completed second quarter).

Shares of common stock outstanding at January 31, 2021: 579.1 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, 2020) for its annual meeting to be held on May 11, 2021, 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, 2020

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.

3M COMPANY
ANNUAL REPORT ON FORM 10-K
For the Year Ended December 31, 2020
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 20, refer to the Notes to Consolidated Financial Statements in Item 8.

Available Information

The 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 Securities and Exchange Commission (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. 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.

As described in Note 19, effective in the first quarter of 2020, the Company changed its business segment reporting in its continuing effort to improve the alignment of businesses around markets and customers. Additionally, the Company consolidated the way it presents geographic area net sales by providing an aggregate Americas geographic region (combining former United States and Latin America and Canada areas). Also, effective in the second quarter of 2020, the measure of segment operating performance used by 3M's chief operating decision maker changed and, as a result, the Company's disclosed measure of segment profit/loss has been updated. Information provided herein reflects the impact of these changes for all periods presented.

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Business Segment	Safety and Industrial	Transportation and Electronics	Health Care	Consumer
Underlying divisions/businesses *Refer to Note 2 for disaggregated revenue information*	• Abrasives • Automotive aftermarket • Closure and masking systems • Communication markets (divested in 2018) • Electrical markets • Industrial adhesives and tapes • Personal safety • Roofing granules • Other safety and industrial	• Advanced materials • Automotive and aerospace • Commercial solutions • Display materials and systems • Electronics materials solutions • Transportation and safety • Other transportation and electronics	• Drug delivery (divested in 2020) • Food safety • Health information systems • Medical solutions • Oral care solutions • Separation and purification sciences • Other health care	• Consumer health care • Home care • Home improvement • Stationery and office • Other consumer
Representative revenue-generating activities, products or services	• 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	• 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	• Food safety indicator solutions • 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 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
Example brands/offerings	• 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	• 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	• 3M™ Petrifilm™ and 3M™ Allergen Testing • 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	• ACE™ , 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	• Connected safety • Structural bonding • Surface finishing • Respiratory protection • Building components • Automation and robotics • Grid modernization • Automotive electrification • Sustainable packaging	• Automotive electrification • Semiconductor fabrication and assembly • Datacenter thermal management	• Advanced wound care • Population health clinical care improvement platform • Increased food safety • Biopharma industry expansion • Custom orthodontics	• Air quality • Connected filters and other products

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, 2020, the Company employed approximately 95,000 people (full-time equivalents), with approximately 40,000 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. 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

In addition to a professional work environment that promotes innovation 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 2020, the coronavirus (COVID-19) pandemic caused fluctuations in supply markets. Generally, as demand for certain COVID-related products surged, 3M saw a corresponding tightening in supply and some degree of price inflation in associated markets. Within the supply chain of less essential products, 3M experienced raw material price deflation as economies slowed and certain producers scaled back or idled operations. Conversely, as markets re-opened and demand increased, the Company experienced raw material price inflation with some level of stabilization late in the year.

The Company continued to deploy productivity projects to minimize the impact of raw material inflation and market supply challenges, including input management, reformulations, and multi-sourcing activities. Overall, on a consolidated basis, 3M experienced net raw material price deflation in 2020. To date, the Company is receiving sufficient quantities of all raw materials to meet its reasonably foreseeable production requirements. It is difficult to predict future shortages of raw materials or the impact any such shortages would have. 3M has avoided disruption to its manufacturing operations through careful management of existing raw material inventories, strategic relationships with key suppliers, and development as well as 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.

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, tax, the U.S. Foreign Corrupt Practices Act and other anti-bribery laws, U.S. trade sanctions, 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 2020, 3M expended approximately $55 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 $400 million for 2021 and 2022 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 4, 2021).

Name	Age	Present Position	Year Elected to Present Position	Other Positions Held during 2016 - 2020
Michael F. Roman	61	Chairman of the Board, President 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	53	Senior Vice President, Innovation and Stewardship and Chief Technology Officer	2020	Senior Vice President of Research and Development and Chief Technology Officer, 2017-2019 Managing Director, DACH Region, 2016-2017
Ivan K. Fong	59	Senior Vice President, General Counsel and Secretary	2019	Senior Vice President, Legal Affairs & General Counsel, 2012-2019
Eric D. Hammes	46	Executive Vice President, Enterprise Operations	2019	Senior Vice President, Manufacturing & Supply Chain, 2019 Senior Vice President, Business Transformation & Information Technology, 2017-2019 Vice President, Corporate Controller and Chief Accounting Officer, 2014-2017
Ashish K. Khandpur	53	Executive Vice President, Transportation & Electronics Business Group	2019	Executive Vice President, Electronics & Energy Business Group, 2017-2019 Senior Vice President, Research and Development, and Chief Technology Officer, 2014-2017
Veena M. Lakkundi	52	Senior Vice President, Strategy & Business Development	2020	Vice President and General Manager, Industrial Adhesives and Tapes Division, 2019-2020 Vice President and Chief Ethics & Compliance Officer, Ethics & Compliance, Legal Affairs, 2019 Vice President, Chief Compliance Officer, Compliance and Business Conduct, Legal Affairs, 2017-2019 Business Director, Manufacturing Solutions, Industrial Adhesives and Tapes Division, 2015-2017
Jeffrey R. Lavers	57	Executive Vice President, Consumer Business Group	2020	Vice President and General Manager, Automotive and Aerospace Solutions Division, 2019-2020 Vice President and General Manager, Construction and Home Improvement Division, 2015-2019
Kristen M. Ludgate	58	Senior Vice President, Human Resources	2018	Senior Vice President, Corporate Communications and Enterprise Services, 2018 Vice President, Global Human Resources Business Operations, Human Resources, 2017-2018 Vice President, Associate General Counsel & Chief Compliance Officer, Compliance and Business Conduct, 2015-2017
Monish Patolawala	51	Senior Vice President and Chief Financial Officer	2020	Chief Financial Officer, Health Care and Vice President, Operational Transformation, General Electric, 2019-2020 Chief Financial Officer, Health Care, General Electric, 2015-2019
Mojdeh Poul	58	Executive Vice President, Health Care Business Group	2019	Executive Vice President, Safety and Graphics Business Group, 2018-2019 President and General Manager, 3M Canada, 2016-2018 Vice President and General Manager, Infection Prevention Division, 2014-2016
Denise R. Rutherford	58	Senior Vice President, Corporate Affairs	2019	Vice President, Research & Development and Commercialization, Industrial Business Group, 2017- 2019 Managing Director, 3M Japan, 2016-2017 Vice President, Greater China Area and Managing Director, 3M China, 2015-2016
Michael G. Vale	54	Executive Vice President, Safety & Industrial Business Group	2019	Executive Vice President, Health Care Business Group, 2016-2019 Executive Vice President, Consumer Business Group, 2012-2016

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 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, capital markets and other external conditions, such as interest rates, financial conditions of our suppliers and customers, trade restrictions such as tariffs in addition to retaliatory counter measures, and natural and other disasters or climate change affecting the operations of the Company or our suppliers and customers,
- risks related to public health crises such as the global pandemic associated with the coronavirus (COVID-19),
- liabilities related to certain fluorochemicals and the outcome of contingencies,
- 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 development, and future performance or results of current or anticipated products,
- fluctuations in the costs and availability of purchased components, compounds, raw materials and energy,
- Information technology systems including ERP system roll-out and implementations,
- 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 availability of and access to credit markets,
- pension and postretirement obligation assumptions and future contributions,
- asset impairments,
- tax liabilities and effects of changes in tax rates, laws or regulations, and
- legal and regulatory proceedings, legal compliance risks (including 3rd party risks) with regards to environmental, product liability and other laws and regulations 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 I, Item 2, "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 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 business is subject to global competition and geopolitical risks that are beyond its control, such as disruptions in financial markets, economic downturns, government actions impacting international trade agreements, imposing trade restrictions such as tariffs, and retaliatory counter measures, government deficit reduction and other austerity measures in specific countries or regions, or in the various industries in which the Company operates; social, political or labor conditions in specific countries or regions; or adverse changes in the availability and cost of capital, interest rates, or exchange control, ability to expatriate earnings and other regulations in the jurisdictions in which the Company operates. 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 operate.

** The Company is subject to risks related to public health crises such as the global pandemic associated with the coronavirus (COVID-19).*

3M, as a global company, is impacted by public health crises such as the global pandemic associated with COVID-19. The outbreak has significantly increased economic and demand uncertainty. In addition, public and private sector policies and initiatives to reduce the transmission of COVID-19, such as the imposition of travel restrictions and the adoption of remote working, have impacted 3M's operations. In these challenging and dynamic circumstances, 3M continues to work to protect its employees and the public, maintain business continuity and sustain its operations, including ensuring the safety and protection of approximately 50,000 people who work in our plants and distribution centers across the world, many of whom support the manufacturing and delivery of products that are critical in response to the global pandemic. COVID-19 has impacted 3M's supply chains relative to global demand for products like respirators, surgical masks and commercial cleaning solutions. Even with 3M's accelerated production at its global facilities combined with capacity from other manufacturers, the industry-wide challenge is that global demand for N95 and other respirators continues to exceed the industries' ability to deliver. Within individual regions and countries around the world, 3M is working with governments, distributors and others to prioritize supplies to the most critical customer and public health needs. 3M's manufacturing, supply chain and distribution protocols have, for example, been impacted by the need to prioritize rated orders issued by the Federal Emergency Management Agency pursuant to the U.S. Defense Production Act. In addition, trade barriers, export restrictions and other similar measures imposed by national governments also negatively impact the supplies of personal protection equipment including those made by 3M going into the most needed areas. COVID-19 has also affected the ability of suppliers and vendors to provide products and services to 3M. Some of these COVID-related factors have increased demand for certain 3M products, while others have decreased demand from certain end markets or could make it more difficult for 3M to serve customers. 3M has received reports of price gouging, counterfeiting and other illegal or fraudulent activities involving its N95 respirators, has taken legal action in several states and continues to work with state, federal and international law enforcement to protect the public and 3M against those who seek to exploit 3M's brand and reputation and defraud others. 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. For example, COVID-19 has led to disruption and volatility in the global capital markets, which increases the cost of capital and could adversely impact access to capital. As economies start to reopen in certain parts of the world, workplace safety, for the Company and others, will increasingly become a focus of concern. As part of the return to work process at the Company, the Company could face additional privacy and data security risks related to the collection of data regarding employees and contractors with respect to COVID-19 testing, temperature checks, and contact tracing. Due to the speed and scope with which the COVID situation is developing and evolving and the uncertainty of its duration and the timing of recovery, 3M is not able at this time to predict the extent to which the COVID-19 pandemic may have a material effect on its 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.

Risks Related to Legal and Regulatory Proceedings

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

As previously reported, 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 a broad group of perfluoroalkyl and polyfluoroalkyl substances produced by the Company, collectively known as “PFAS.” 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 critical to the manufacture of electronic devices such as cell phones, tablets and semi-conductors. They are also used to help prevent infections in 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. As science and technology evolve and advance, and in response to evolving knowledge and the understanding that PFAS compounds had the potential to build up over time, 3M announced in 2000 that we would voluntarily phase out production of 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 coatings for food packaging, for example. 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. An adverse outcome in any one or more of these matters could be material to our financial results. 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 or lawsuits 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, 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 or otherwise.

** The Company’s future results may be affected by various asserted and unasserted legal and regulatory proceedings and legal compliance risks, including those involving product liability, antitrust, intellectual property, environmental, tax, the U.S. Foreign Corrupt Practices Act and other anti-bribery laws, U.S. 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, the Sunshine Act, or other matters. 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 outcome of these legal proceedings may differ from the Company’s expectations because the outcomes of litigation, including regulatory matters, are often difficult to reliably predict. Although the Company maintains general liability insurance, 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 any particular period. In addition, negative publicity related to product liability, environmental, health and safety or other matters referenced above involving the Company may negatively impact the Company’s reputation. 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 (i) the development and timing of the introduction of competitive products; (ii) the Company’s response to downward pricing to stay competitive; (iii) changes in customer order patterns, such as changes in the levels of inventory maintained by customers and the timing of customer purchases which may be affected by announced price changes, changes in the Company’s incentive programs, or the customer’s ability to achieve incentive goals; (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 and energy, due to shortages, increased demand, supply interruptions, manufacturing site disruptions, 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, or be terminated. Any sustained interruption in the Company's receipt of adequate supplies or disruption to key manufacturing sites' operations could have a material adverse effect on the Company. In addition, while the Company has a process to minimize volatility in component and material pricing, no assurance can be given that the Company will be able to successfully manage price fluctuations 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, 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 breaches and other disruptions to the Company's information technology infrastructure could interfere with the Company's operations, compromise information belonging to the Company or its customers, suppliers, and employees, exposing the Company to liability which could adversely impact the Company's business and reputation.*

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 security laws, regulations and customer-imposed controls. 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 vulnerable to the security risks of our vendors and third-party service providers, security breaches, damage, disruptions or shutdowns due to attacks by threat actors including nation-state actors, computer viruses, hardware, software, and system vulnerabilities, ransomware, service or cloud provider disruptions or security breaches, 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, which was driven by the pandemic, may also introduce additional threats to our information technology networks and infrastructure. Despite our cybersecurity measures, it is possible for security vulnerabilities to remain undetected for an extended time period, up to and including several years. While we have experienced, and expect to continue to experience, threats and disruptions to the Company's information technology infrastructure, none of them to date has had a material impact to the Company. Any such threats or disruptions could result in legal claims or proceedings, liability or penalties under privacy laws, interference with the Company's operations, and damage to the Company's reputation, 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 unusual 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, including, for example, the recently completed acquisition of Acelity, Inc. and its KCI subsidiaries (a leading global medical technology company), future results will be affected by the Company's ability to integrate acquired businesses quickly and obtain the anticipated synergies. The Company realigned from five to four business segments, effective in April of 2019, to better serve its global customers and markets. Successful execution of the realignment and the associated adjustments of our portfolio and business operating model, as well as other organizational changes, will be important to 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 estimated.*

The Company’s financial results depend on the successful execution of its business operating plans. The Company utilizes various tools, such as Lean Six Sigma, and engages in ongoing global business transformation. Business transformation is defined as changes in processes and internal/external service delivery across 3M to move to more efficient business models to improve operational efficiency and productivity, while allowing 3M to serve customers with greater speed and efficiency. This is enabled by the ongoing multi-year phased implementation of an ERP system. There can be no assurance that all of the projected productivity improvements will be realized. In addition, the ability to adapt to business model and other changes and agility to respond to customer needs and service expectations are important, which, 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. 3M currently has an A1 credit rating with a negative outlook from Moody’s Investors Service and an A+ credit rating with a negative outlook from Standard & Poor’s. 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, assessment and enforcement approaches. In addition, changes in tax laws including further regulatory developments arising from U.S. tax reform legislation and/or regulations around the world 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 uncertainty of the regulation changes and other tax-related factors stated above, it is currently not possible to assess the ultimate impact of these actions on our financial statements.

Item 1B. <u>Unresolved Staff Comments.</u>

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 64 manufacturing facilities in 29 states. Internationally, the Company operates 97 manufacturing and converting facilities in 35 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 intersegment 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. For the year 2020, 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, 2021, there were 68,372 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 SWX Swiss Exchange. Cash dividends declared and paid totaled $1.47 and $1.44 per share for each quarter in 2020 and 2019, 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, 2020	567,358	$ 175.01	567,162	$ 7,973
February 1-29, 2020	752,388	$ 157.29	750,262	$ 7,855
March 1-31, 2020	723,676	$ 140.55	723,676	$ 7,753
Total January 1-March 31, 2020	2,043,422	$ 156.28	2,041,100	$ 7,753
April 1-30, 2020	86	$ 133.13	—	$ 7,753
May 1-31, 2020	—	$ —	—	$ 7,753
June 1-30, 2020	—	$ —	—	$ 7,753
Total April 1-June 30, 2020	86	$ 114.18	—	$ 7,753
July 1-31, 2020	—	$ —	—	$ 7,753
August 1-31, 2020	—	$ —	—	$ 7,753
September 1-30, 2020	779	$ 172.38	—	$ 7,753
Total July 1-September 30, 2020	779	$ 172.38	—	$ 7,753
October 1-31, 2020	—	$ —	—	$ 7,753
November 1-30, 2020	680	$ 173.64	—	$ 7,753
December 1-31, 2020	—	$ —	—	$ 7,753
Total October 1-December 31, 2020	680	$ 173.64	—	$ 7,753
Total January 1-December 31, 2020	2,044,967	$ 156.29	2,041,100	$ 7,753

(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. Selected Financial Data.

(Dollars in millions, except per share amounts)	2020	2019*	2018**	2017	2016
Years ended December 31:					
Net sales	**$ 32,184**	$ 32,136	$ 32,765	$ 31,657	$ 30,109
Net income attributable to 3M	**5,384**	4,570	5,349	4,858	5,050
Per share of 3M common stock:					
Net income attributable to 3M — basic	**9.32**	7.92	9.09	8.13	8.35
Net income attributable to 3M — diluted	**9.25**	7.81	8.89	7.93	8.16
Cash dividends declared and paid per 3M common share	**5.88**	5.76	5.44	4.70	4.44
At December 31:					
Total assets	**$ 47,344**	$ 44,659	$ 36,500	$ 37,987	$ 32,906
Long-term debt (excluding portion due within one year) and long-term lease obligations	**18,082**	17,629	13,486	12,156	10,723

* The Company adopted ASU No. 2016-02 and related standards (collectively, Accounting Standards Codification (ASC) 842, *Leases)*, as described in Note 1, on January 1, 2019 using the modified retrospective method of adoption. The adoption resulted in the recording of right of use assets and associated lease liabilities of $0.8 billion each as of January 1, 2019, $0.5 billion of which relates to long-term operating lease obligations.

** The Company adopted ASU No. 2014-09 and related standards (collectively, ASC 606, *Revenue from Contracts with Customers*), as described in Note 2, on January 1, 2018 using the modified retrospective method of adoption, the impact of which was not material to the Company's consolidated results of operations and financial condition. Prior periods have not been restated.

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 for year end 2018 and certain year-on-year comparisons between 2019 and 2018 can be found in "Management's Discussion and Analysis of Financial Condition and Results of Operations" sections in the Company's Annual Report on Form 10-K for the year ended December 31, 2019.

OVERVIEW

3M is a diversified global manufacturer, technology innovator and marketer of a wide variety of products and services. As more fully described in both the Performance by Business Segment section in MD&A and in Note 19, effective in the first quarter of 2020, the Company changed its business segment reporting in its continuing effort to improve the alignment of businesses around markets and customers. Additionally, the Company consolidated the way it presents geographic area net sales by providing an aggregate Americas geographic region (combining former United States and Latin America and Canada areas). Also, effective in the second quarter of 2020, the measure of segment operating performance used by 3M's chief operating decision maker changed and, as a result, the Company's disclosed measure of segment profit/loss has been updated. Business segment information presented 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.

Consideration of COVID-19:

3M is impacted by the global pandemic and related effects associated with the coronavirus (COVID-19). The Company updated its risk factors with respect to COVID-19, which can be found in Item 1A "Risk Factors" in this document.

Public and private sector policies and initiatives to reduce the transmission of COVID-19, such as the imposition of travel restrictions and the adoption of remote working, have impacted 3M's operations. 3M continues to work to protect its employees and the public, maintain business continuity and sustain its operations, including ensuring the safety and protection of people who work in its plants and distribution centers across the world, many of whom support the manufacturing and delivery of products that are critical in response to the global pandemic. COVID-19 has impacted 3M's supply chains relative to global demand for products like respirators, surgical masks and commercial cleaning solutions. As this situation continues, 3M also closely monitors and responds to potential impacts to the Company's broader supply chain associated with other products. COVID-19 has also affected the ability of suppliers and vendors to provide products and services to 3M. Furthermore, COVID-19 has impacted the broader economies of affected countries, including negatively impacting economic growth.The Company has taken steps to help employees lead safe and productive lives during the outbreak including remote working; escalated procedures in factories related to personal safety, cleaning and medical screening measures; and pandemic leave policies. 3M closely monitors how the spread of COVID-19 is affecting employees and business operations and has preparedness plans to help protect the safety of employees around the world while safely continuing business. While nearly all of our manufacturing locations and distribution centers are fully or partially operational, the Company implemented plant and/or line shutdowns during 2020 related to certain markets due to weaker customer demand or government mandates. Some of the above factors have increased the demand for 3M products, while others have decreased demand or made it more difficult for 3M to serve customers. Serving 3M customers is a priority and teams continue to communicate with individual customers about potential disruptions.

3M's total sales increased 0.1% for the full year 2020 when compared to 2019. Organic local-currency sales decreased 1.7% for the full year 2020 when compared to 2019. Given the diversity of 3M's businesses, the impact of COVID-19 varied across the Company throughout 2020. 3M experienced strong sales growth in personal safety, as well as in other areas such as home improvement, general cleaning, semiconductor, data center, and biopharma filtration. COVID-related respirator sales are estimated to have impacted year-on-year organic local-currency sales growth by approximately 3 percent for the year ending December 31, 2020. At the same time, weakness in several end markets, while improving, contributed in part to sales declines in a number of 3M's businesses with the biggest year-on-year total sales decreases in oral care (down 19 percent), advanced materials (down 17 percent), automotive and aerospace (down 16 percent), commercial solutions (down 14 percent), stationery and office (down 11 percent), closure and masking (down 11 percent), automotive aftermarket (down 10 percent), and businesses aligned to general industrial applications such as abrasives (down 15 percent) and industrial adhesives and tapes (down 5 percent).

3M's operating income margins increased 3.1 percentage points year-on-year for the year ending December 31, 2020. Factoring out the impact on operating income of special items as described in the *Certain amounts adjusted for special items - (non-GAAP measures)* section below, operating income margins increased 0.1 points to 21.3 percent for the year ending December 31, 2020 when compared to 2019. Various COVID-19 implications contributed in part to these results.

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 as described above. While it is not feasible to identify or quantify all the other direct and indirect implications on 3M's results of operations, below are factors that 3M believes have also affected its 2020 results:

Factors contributing to charges:

- Period expenses of unabsorbed manufacturing costs and increased expected credit losses on customer receivables.
- Restructuring actions addressing structural enterprise costs and operations in certain end markets as a result of the COVID-19 pandemic and related economic impact resulting in a second quarter 2020 charge of $58 million (as further discussed in Note 5).
- Committed financial support to various COVID-relief and medical research initiatives.
- Charge of $22 million related to equity securities as discussed in the "Assets and Liabilities that are Measured at Fair Value on a Nonrecurring Basis" section of Note 15 that use the measurement alternative described therein in addition to an immaterial pre-tax charge related to impairment of certain indefinite lived tradenames in the first quarter of 2020. 3M continues to regularly consider if COVID-19 and other related market implications could indicate it is more likely than not the carrying amount of various applicable assets may be impaired and assess whether certain investments without readily determinable fair values may have been impacted.

Factors providing benefits or other impacts:

- Decreased discretionary spending in areas such as travel, professional services, and advertising/merchandising as well as cost reduction efforts, hiring freezes, and maintaining only essential contract workers. 3M continues to monitor discretionary spending and deploy cost control efforts as the situation continues.
- Government-sponsored COVID-response stimulus and relief initiatives, including certain employment retention benefits under the Coronavirus Aid, Relief and Economic Security (CARES) Act in the United States.
- Lower self-insured medical visit/instance expense during 2020.
- Instituted accelerated vacation usage policies which benefited the second quarter of 2020 year-on-year, but provided a penalty in comparison to prior year in the second half of 2020.

As previously disclosed, in light of circumstances, 3M took actions to ensure sources of cash may remain strong, including the March 2020 issuance of $1.75 billion of registered notes, suspension of share repurchases, and the decrease of its 2020 capital spending to approximately $1.5 billion. While capital spending decreased, it included additional expansion of respirator production capacity. 3M continues to have access to its commercial paper program and undrawn committed credit facility. Refer to the Financial Condition and Liquidity section below for more information on the Company's liquidity position.

The Company also continues to evaluate the extent to which it may avail itself of various government-sponsored COVID-response stimulus, relief, and production initiatives around the world, such as under the Defense Production Act (DPA) and CARES Act in the United States. During 2020 and into January 2021, 3M reached certain agreements with governments in the U.S. and other countries involving just over $250 million of asset funding to expand capacity to supply N-95 respirators.

Due to the speed with which the COVID-19 situation is developing and evolving and the uncertainty of its duration and the timing of recovery, 3M is not able at this time to predict the extent to which the COVID-19 pandemic may have a material effect on its consolidated results of operations or financial condition.

Earnings per share (EPS) attributable to 3M common shareholders – diluted:

The following table provides the increase (decrease) in diluted earnings per share for 2020 compared to the same period last year, in addition to 2019 compared to 2018. As applicable, certain items in the table reflect specific income tax rates associated therewith.

	Year ended December 31,	
(Earnings per diluted share)	**2020**	**2019**
Same period last year	**$ 7.81**	$ 8.89
Significant litigation-related charges/benefits	**1.01**	1.28
TCJA measurement period adjustment	**—**	0.29
Loss on deconsolidation of Venezuelan subsidiary	**0.28**	—
Gain/loss on sale of businesses	**(0.22)**	(0.73)
Divestiture-related restructuring actions	**—**	0.18
Same period last year, excluding special items	**$ 8.88**	$ 9.91
Increase/(decrease) in earnings per share - diluted, due to:		
Organic growth/productivity and other	**(0.06)**	(0.60)
Non divestiture-related restructuring actions	**0.12**	(0.41)
Acquisitions/divestitures	**(0.10)**	(0.24)
Foreign exchange impacts	**(0.11)**	—
Income tax rate	**(0.03)**	—
Shares of common stock outstanding	**0.04**	0.22
Current period, excluding special items	**$ 8.74**	$ 8.88
Significant litigation-related charges/benefits	**0.07**	(1.01)
Loss on deconsolidation of Venezuelan subsidiary	**—**	(0.28)
Gain/loss on sale of businesses	**0.52**	0.22
Divestiture-related restructuring actions	**(0.08)**	—
Current period	**$ 9.25**	$ 7.81

Year 2020 EPS:

For year ended December 31, 2020, net income attributable to 3M was $5.384 billion, or $9.25 per diluted share basis, compared to $4.570 billion, or $7.81 per diluted share, for year ended December 31, 2019, an increase of 18.4 percent on a per diluted share basis.

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.

On an adjusted basis, net income attributable to 3M was $5.088 billion, or $8.74 per diluted share for 2020 compared to $5.193 billion, or $8.88 per diluted share in December 31, 2019, a decrease of 1.5 percent on a per diluted share basis.

Additional discussion related to the components of the year-on-year change in earnings per diluted share follows:

Organic growth/productivity and other:

- Lower organic volume growth in 2020 as a result of significant COVID-19 related impacts, in addition to COVID-related net factors described in the preceding Overview—Consideration of COVID-19 section, decreased earnings per diluted share year-on-year. 3M also experienced year-over-year increased costs as a result of the regular review of its respirator mask

liabilities and certain follow-on accelerated depreciation following some of the restructuring described below. Partially offsetting this net decrease in earnings per share were year-on-year net gains related to certain property sales (in 2020 within Safety and Industrial and in 2019 within Corporate and Unallocated) in addition to benefits recognized in 2020 related to the restructuring and other actions taken in 2019 (and the adjustments thereto in 2020) along with continued cost management and productivity efforts.
- On a combined basis, higher defined benefit pension and postretirement service cost increased expense year-on-year.
- Interest expense (net of interest income) increased in 2020, as a result of higher U.S. average debt balances and lower year-on-year interest income driven by lower average interest rates on cash balances. 2020 interest expense also included an early debt extinguishment charge in conjunction with the repayment of notes in December 2020.

Non divestiture-related restructuring actions:
- 3M recorded non divestiture-related restructuring pre-tax charges aggregating $195 million in 2020. These included charges in the second quarter of 2020 to address certain COVID-related impacts and in the fourth quarter as 3M initiated actions to further enhance its operational and marketing capabilities. In 2019, charges included $282 million as the Company committed to actions in light of slower than expected 2019 sales and associated with realigning its organizational structure and operating model. See Note 5 for additional details.
- The year-on-year impact of the non divestiture-related restructuring actions taken in 2020 and 2019 increased earnings per diluted share by 12 cents.

Acquisitions/divestitures:
- Acquisition impacts, which are measured for the first twelve months post-transaction, relate to the acquisitions of M*Modal (first quarter 2019), and Acelity (fourth quarter 2019). These items collectively decreased earnings per diluted share by 7 year-on-year for 2020. The net impacts related to these acquisitions included income from operations, more than offset by transaction and integration costs. Financing costs related to these acquisitions is also included.
- Divestiture impacts include the lost operating income from divested businesses, which decreased earnings per diluted share by 3 cents year-on-year for 2020. This was primarily related to the divestiture of the Company's drug delivery business.

Foreign exchange impacts:
- Foreign currency impacts (net of hedging) decreased pre-tax earnings year-on-year by approximately $81 million in 2020, which decreased earnings per diluted share by 11 cents, excluding the impact of foreign currency changes on tax rates.

Income tax rate:
- Certain items above reflect specific income tax rates associated therewith. Overall, the effective tax rate for 2020 was 19.6 percent, a decrease of 0.2 percentage points versus 2019. On an adjusted basis (as discussed below), the effective tax rate increased 0.1 percentage points year-on-year for 2020.
- Factors that decreased the effective tax rate for 2020 included geographical income mix and adjustments to uncertain tax positions. These decreases were partially offset by decreased benefit from stock options. Refer to Note 10 for additional details.

Shares of common stock outstanding:
- Lower shares outstanding increased earnings per share year-on-year by 4 cents per diluted share for 2020. Weighted-average diluted shares outstanding in 2020 declined 0.5 percent year-on-year, which benefited earnings per share. The decrease in the outstanding weighted-average diluted shares relates to the Company's purchase of $368 million of its own stock, prior to suspension of share repurchases under its board-approved stock repurchase program in late March 2020 with other repurchase activity limited to 3M's stock compensation plans.

Year 2019 EPS:

Organic growth/productivity and other:
- Negative organic local-currency sales growth as a result of softness in certain end markets and channel inventory adjustments, along with actions taken by 3M in response to lower sales volumes and high inventory levels, which resulted in lower manufacturing and inventory absorption, reduced earnings per diluted share. Partially offsetting these impacts were benefits from restructuring actions taken in the second quarter of 2019.

- Defined benefit pension and postretirement service cost expense decreased expense year-on-year, which benefited earnings per diluted share.
- Lower income related to non-service cost components of pension and postretirement expense, increased expense year-on-year.
- Interest expense (net of interest income) increased in 2019, as a result of higher U.S. average debt balances, partially offset by the increase in interest income driven by higher balances in cash, cash equivalents and marketable securities during the year resulting from the proceeds from debt issuances in advance of the October 2019 Acelity acquisition.

Non divestiture-related restructuring actions:

- During the second quarter of 2019, in light of slower than expected 2019 sales, and additionally in the fourth quarter to realign 3M's organizational structure and operating model, management approved and committed to undertake certain restructuring actions. In aggregate, the Company recorded a full year 2019 combined pre-tax charge of $282 million, or 41 cents per diluted share. See Note 5 for additional details.

Acquisitions/divestitures:

- Acquisition impacts, which are measured for the first twelve months post-transaction, relate to the acquisitions of M*Modal (first quarter 2019), and Acelity (fourth quarter 2019). These items collectively decreased earnings per diluted share by 19 cents year-on-year for 2019. The net impacts related to these acquisitions included income from operations, more than offset by transaction and integration costs. Interest expense related to financing costs of these acquisitions is also included. Expenses related to the October 2019 acquisition of Acelity also include financing costs and the tax effect of repatriating funds in advance of the close of the acquisition.
- Divestiture impacts collectively decreased earnings per diluted share by 5 cents year-on-year for 2019. They include remaining stranded costs and lost operating income related to the 2018 divestiture of the Communication Markets Division, which decreased earnings per diluted share by 4 cents year-on-year, and lost operating income from other divested businesses (primarily the Company's gas and flame detection business), which decreased earnings per diluted share by 1 cent year-on-year.

Foreign exchange impacts:

- Foreign currency impacts (net of hedging) were essentially flat year-on-year, excluding the impact of foreign currency changes on tax rates.

Income tax rate:

- Certain items above reflect specific income tax rates associated therewith. Overall, the effective tax rate for 2019 was 19.8 percent, a decrease of 3.6 percentage points versus 2018. On an adjusted basis (as discussed below), the effective tax rate increased 0.2 percentage points year-on-year for 2019.
- Factors that decreased the effective tax rate on a GAAP basis for 2019 included prior year measurement period adjustments related to 2017 Tax Cuts and Jobs Act (TCJA), prior year resolution of the NRD lawsuit (as described in Note 16) and geographical income mix. These decreases were partially offset by the deconsolidation of the Venezuelan subsidiary, adjustments to uncertain tax positions, and significant litigation-related charges. Refer to Note 10 for additional details.

Shares of common stock outstanding:

- Lower shares outstanding increased earnings per share year-on-year by 22 cents per diluted share for 2019. Weighted-average diluted shares outstanding in 2019 declined 2.8 percent year-on-year which benefited earnings per share. The decrease in the outstanding weighted-average diluted shares relates to the Company's purchase of $1.4 billion of its own stock in 2019.

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

In addition to reporting financial results in accordance with U.S. GAAP, the Company also provides non-GAAP measures that adjust for the impacts of special items. For the periods presented, special items include the items described below. Beginning in 2020, the Company includes gain/loss on sale of businesses and divestiture-related restructuring actions as special items due to their potential distortion of underlying operating results. Information provided herein reflects the impact of this change for all periods presented. Operating income (measure of segment operating performance), 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. The Company considers these non-GAAP measures in evaluating and managing the Company's operations. The Company believes that discussion of results adjusted for these items is meaningful to investors as it provides a useful analysis of ongoing underlying operating trends. The determination of these items may not be comparable to similarly titled measures used by other companies. Special items include:

Significant litigation-related charges/benefits:

- In 2020, 3M recorded a net pre-tax charge of $17 million ($13 million after tax) related to PFAS (certain perfluorinated compounds) matters. The charge was more than offset by a reduction in tax expense of $52 million related to resolution of tax treatment with authorities regarding the previously disclosed 2018 agreement reached with the State of Minnesota that resolved the Natural Resources Damages lawsuit. These items, in aggregate, resulted in a $39 million after tax benefit.
- In 2019, the Company recorded significant litigation-related charges of $762 million ($590 million after tax) related to PFAS matters and coal mine dust respirator mask lawsuits of which $214 million ($166 million after tax) occurred in the fourth quarter. The aggregate 2019 pre-tax charge was reflected in cost of sales ($328 million) and selling, general and administrative expense ($434 million). These charges are further discussed in Note 16.
- In 2018, the Company recorded significant litigation-related charges of $897 million ($770 million after tax) for PFAS matters related to the previously disclosed agreement reached with the State of Minnesota that resolved the Natural Resource Damages lawsuit. Essentially all of the aggregate 2018 pre-tax charge was reflected in selling, general and administrative expense.

Gain/loss on sale of businesses:

- In the first quarter of 2020, 3M recorded a pre-tax gain of $2 million ($1 million loss after tax) related to the sale of its advanced ballistic-protection business and recognition of certain contingent consideration. In the second quarter of 2020, 3M recorded a pre-tax gain of $387 million ($304 million after tax) related to the sale of its drug delivery business. Refer to Note 3 for further details.
- In the first quarter of 2019, 3M recorded a gain related to the sale of certain oral care technology comprising a business in addition to reflecting an earnout on a previous divestiture, which together resulted in a net gain of $8 million ($7 million after tax). In the second quarter of 2019, as a result of a "held for sale" tax benefit related to the legal entities associated with the pending divestiture of the Company's gas and flame detection business, 3M recorded an after-tax gain of $43 million. In the third quarter of 2019, 3M recorded a gain related to the divestiture of the Company's gas and flame detection business and an immaterial impact as a result of measuring a disposal group at the lower of its carrying amount or fair value less cost to sell, which in aggregate resulted in a pre-tax gain of $106 million ($79 million after tax).
- In the first quarter of 2018, 3M recorded a gain related to the sale of certain personal safety product offerings primarily focused on noise, environmental, and heat stress monitoring, the sale of its polymer additives compounding business, and a gain on final closing adjustments from a prior divestiture which, in aggregate, resulted in a net pre-tax gain of $24 million ($19 million after tax). In the second quarter of 2018, 3M recorded a pre-tax gain of $12 million ($10 million after tax) related to the sale of its abrasive glass products business. In the fourth quarter of 2018, 3M recorded a gain of $2 million related to an earnout from a previous divestiture. Additionally, in 2018, 3M completed the sale of substantially all of its Communication Markets Division and reflected a pre-tax gain of $509 million ($410 million after tax).

Divestiture-related restructuring actions:

- In the second quarter 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. As a result, 3M recorded a second quarter 2020 pre-tax charge of $55 million ($46 million after tax) and made a subsequent immaterial adjustment thereto. Refer to Note 5 for further details.

- During 2018, management approved and committed to undertake certain restructuring actions as further described in Note 5, related to addressing corporate functional costs following the Communication Markets Division divestiture resulting in a 2018 pre-tax charge of $127 million ($110 million after tax), net of adjustments for reductions in cost estimates of $10 million.

Loss on deconsolidation of Venezuelan subsidiary:

- In the second quarter of 2019, 3M recorded a pre-tax charge of $162 million related to the deconsolidation of the Company's Venezuelan subsidiary as further discussed in Note 1.

Measurement period accounting for TCJA:

- 3M recorded a net tax expense of $176 million in 2018 as a measurement period adjustment to the enactment of the 2017 Tax Cuts and Jobs Act (TCJA). See Note 10 for additional information.

(Dollars in millions, except per share amounts)	Operating Income	Operating Income Margin	Income Before Taxes	Provision for Income Taxes	Effective Tax Rate	Net Income Attributable to 3M	Earnings Per Diluted Share	Earnings per diluted share percent change
Year ended December 31, 2018 GAAP	$ 7,207	22.0 %	$ 7,000	$ 1,637	23.4 %	$ 5,349	$ 8.89	
Adjustments for special items:								
Significant litigation-related charges/benefits	897		897	127		770	1.28	
Gain/loss on sale of businesses	(547)		(547)	(107)		(440)	(0.73)	
Divestiture-related restructuring actions	127		127	17		110	0.18	
Measurement period accounting for TCJA	—		—	(176)		176	0.29	
Year ended December 31, 2018 adjusted amounts (non-GAAP measures)	$ 7,684	23.5 %	$ 7,477	$ 1,498	20.0 %	$ 5,965	$ 9.91	
Year ended December 31, 2019 GAAP	$ 6,174	19.2 %	$ 5,712	$ 1,130	19.8 %	$ 4,570	$ 7.81	(12.1)%
Adjustments for special items:								
Significant litigation-related charges/benefits	762		762	172		590	1.01	
Gain/loss on sale of businesses	(114)		(114)	15		(129)	(0.22)	
Loss on deconsolidation of Venezuelan subsidiary	—		162	—		162	0.28	
Year ended December 31, 2019 adjusted amounts (non-GAAP measures)	$ 6,822	21.2 %	$ 6,522	$ 1,317	20.2 %	$ 5,193	$ 8.88	(10.4)%
Year ended December 31, 2020 GAAP	$ 7,161	22.3 %	$ 6,711	$ 1,318	19.6 %	$ 5,384	$ 9.25	18.4 %
Adjustments for special items:								
Significant litigation-related charges/benefits	17		17	56		(39)	(0.07)	
Gain/loss on sale of businesses	(389)		(389)	(86)		(303)	(0.52)	
Divestiture-related restructuring actions	55		55	9		46	0.08	
Year ended December 31, 2020 adjusted amounts (non-GAAP measures)	$ 6,844	21.3 %	$ 6,394	$ 1,297	20.3 %	$ 5,088	$ 8.74	(1.5)%

Year 2020 sales and operating income by business segment:

The following tables contain sales and operating income results by business segment for the years ended December 31, 2020 and 2019. Refer to the section entitled "Performance by Business Segment" later in MD&A for additional discussion concerning 2020 verses 2019 results, including Corporate and Unallocated. Refer to Note 19 for additional information on business segments, including Elimination of Dual Credit.

	2020			2019			2020 vs 2019 % change	
(Dollars in millions)	Net Sales	% of Total	Oper. Income	Net Sales	% of Total	Oper. Income	Net Sales	Oper. Income
Business Segments								
Safety and Industrial	**$ 11,767**	**36.6 %**	**$ 3,054**	$ 11,514	35.8 %	$ 2,510	2.2 %	21.7 %
Transportation and Electronics	**8,827**	**27.4**	**1,927**	9,591	29.8	2,221	(8.0)	(13.3)
Health Care	**8,345**	**25.9**	**1,828**	7,431	23.1	1,858	12.3	(1.6)
Consumer	**5,336**	**16.6**	**1,249**	5,151	16.0	1,124	3.6	11.2
Corporate and Unallocated	**(1)**	**—**	**(363)**	110	0.3	(1,130)	—	—
Elimination of Dual Credit	**(2,090)**	**(6.5)**	**(534)**	(1,661)	(5.0)	(409)	—	—
Total Company	**$ 32,184**	**100.0 %**	**$ 7,161**	$ 32,136	100.0 %	$ 6,174	0.1 %	16.0 %

	Year ended December 31, 2020				
Worldwide Sales Change By Business Segment	**Organic local-currency sales**	**Acquisitions**	**Divestitures**	**Translation**	**Total sales change**
Safety and Industrial	3.5 %	—%	(0.6)%	(0.7) %	2.2 %
Transportation and Electronics	(7.1)	—	(1.1)	0.2	(8.0)
Health Care	1.0	15.5	(4.1)	(0.1)	12.3
Consumer	4.1	—	—	(0.5)	3.6
Total Company	(1.7)%	3.5 %	(1.4)%	(0.3)%	0.1 %

Year 2020 sales results by geographic area/business segment:

Percent change information compares the year ended December 31, 2020 with the same period last year, unless otherwise indicated. Additional discussion of business segment results is provided in the Performance by Business Segment section.

	Year ended December 31, 2020				
	Americas	Asia Pacific	Europe, Middle East & Africa	Other Unallocated	Worldwide
Net sales (millions)	$ 16,525	$ 9,569	$ 6,109	$ (19)	$ 32,184
% of worldwide sales	51.3 %	29.7 %	19.0 %	—	100.0 %
Components of net sales change:					
Volume — organic	(1.2)%	(2.9)%	(4.0)%	—	(2.3)%
Price	1.0	(0.5)	1.2	—	0.6
Organic local-currency sales	(0.2)	(3.4)	(2.8)	—	(1.7)
Acquisitions	5.5	0.7	2.8	—	3.5
Divestitures	(1.5)	(0.2)	(2.9)	—	(1.4)
Translation	(1.3)	0.6	1.0	—	(0.3)
Total sales change	2.5 %	(2.3)%	(1.9)%	—	0.1 %
Total sales change:					
Safety and Industrial	2.8 %	(1.4)%	4.7 %	—	2.2 %
Transportation and Electronics	(15.4)%	(2.4)%	(12.9)%	—	(8.0)%
Health Care	20.5 %	(0.8)%	3.8 %	—	12.3 %
Consumer	5.2 %	(1.3)%	1.5 %	—	3.6 %
Organic local-currency sales change:					
Safety and Industrial	5.0 %	(1.5)%	5.6 %	—	3.5 %
Transportation and Electronics	(11.4)%	(2.8)%	(13.8)%	—	(7.1)%
Health Care	3.9 %	(6.0)%	0.2 %	—	1.0 %
Consumer	6.3 %	(2.2)%	0.1 %	—	4.1 %

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

- In the Americas geographic area, U.S. total sales increased 6 percent and organic-local currency sales increased 1 percent. Total sales in Mexico decreased 14 percent while organic local-currency sales decreased 12 percent. In Canada, total sales decreased 1 percent as organic local-currency sales decreases of 4 percent were partially offset by acquisition-related sales growth. In Brazil, total sales decreased 17 percent while organic local-currency sales increased 7 percent, as organic sales growth was more than offset by foreign currency translation impacts.
- In the Asia Pacific geographic area, China total sales increased 4 percent and organic local-currency sales increased 3 percent. In Japan, total sales decreased 3 percent and organic local currency sales decreased 7 percent.

Foreign currency translation decreased year-on-year sales by 0.3 percent, while selling prices increased by 0.6 percent year-on-year for 2020, with price growth in EMEA and Americas, while Asia Pacific decreased.

Year 2019 sales results by geographic area/business segment:

Percent change information compares the full year 2019 with the full year 2018, unless otherwise indicated. Additional discussion of business segment results is provided in the Performance by Business Segment section.

	Year ended December 31, 2019				
	Americas	Asia Pacific	Europe, Middle East & Africa	Other Unallocated	Worldwide
Net sales (millions)	$ 16,124	$ 9,796	$ 6,226	$ (10)	$ 32,136
% of worldwide sales	50.1 %	30.5 %	19.4 %	—	100.0 %
Components of net sales change:					
Volume — organic	(1.5)%	(2.8)%	(2.2)%	—	(2.1)%
Price	0.8	(0.1)	1.3	—	0.6
Organic local-currency sales	(0.7)	(2.9)	(0.9)	—	(1.5)
Acquisitions	3.5	0.3	1.0	—	2.0
Divestitures	(0.6)	(0.2)	(1.9)	—	(0.7)
Translation	(0.6)	(1.7)	(4.6)	—	(1.7)
Total sales change	1.6 %	(4.5)%	(6.4)%	—	(1.9)%
Total sales change:					
Safety and Industrial	(5.3)%	(7.6)%	(11.0)%	—	(7.2)%
Transportation and Electronics	(3.8)%	(5.3)%	(6.6)%	—	(5.1)%
Health Care	15.5 %	2.5 %	0.6 %	—	8.9 %
Consumer	2.2 %	(2.8)%	(4.6)%	—	0.5 %
Organic local-currency sales change:					
Safety and Industrial	(3.3)%	(4.7)%	(2.4)%	—	(3.4)%
Transportation and Electronics	(3.3)%	(4.1)%	(2.2)%	—	(3.6)%
Health Care	1.1 %	3.1 %	1.4 %	—	1.5 %
Consumer	2.6 %	(1.1)%	0.4 %	—	1.7 %

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

- In the Americas geographic area, U.S. total sales increased 2 percent and organic-local currency decreased 1 percent. Total sales remained flat in Mexico, as organic local-currency sales increases of 1 percent were partially offset by lost sales from divested businesses and foreign currency translation impacts. In Canada, total sales and organic local currency increased 3 percent. In Brazil, total sales decreased 4 percent, as organic local-currency sales growth of 3 percent was more than offset by foreign currency translation impacts.
- In the Asia Pacific geographic area, China total sales decreased 7 percent and organic local-currency sales decreased 4 percent. In Japan, total sales decreased 2 percent and organic local currency sales decreased 3 percent.

Foreign currency translation decreased year-on-year sales by 1.7 percent, while selling prices increased by 0.6 percent year-on-year for 2019, with price growth in EMEA and Americas, while Asia Pacific was flat.

Managing currency risks:

The stronger U.S. dollar had a negative impact on sales in full year 2020 compared to the same period last year. Net of the Company's hedging strategy, foreign currency negatively impacted earnings for full year 2020 compared to the same period last year. 3M utilizes a number of tools to hedge currency risk related to earnings. 3M uses natural hedges such as pricing, productivity, hard currency and 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:

3M generated $8.1 billion of operating cash flow in 2020, an increase of $1.0 billion when compared to 2019. This increase was primarily due to cost saving actions taken in response to COVID-19 and lower year-on-year significant litigation-related charges and the timing of associated payments. This followed an operating cash flow increase of $631 million when comparing 2019 to 2018. 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 2020, the Company purchased $0.4 billion of its own stock, compared to purchases of $1.4 billion in 2019. As of December 31, 2020, approximately $7.8 billion remained available under the authorization. In the first quarter of 2020, the Company suspended repurchases under its board-approved share repurchase program with other repurchase activity limited to 3M's stock compensation plans. The Company plans to resume share purchases in 2021. In February 2021, 3M's Board of Directors declared a first-quarter 2021 dividend of $1.48 per share, an increase of 1 percent. This marked the 63rd consecutive year of dividend increases for 3M.

Raw materials:

In 2020, the coronavirus (COVID-19) pandemic caused fluctuations in supply markets. Generally, as demand for certain COVID-related products surged, 3M saw a corresponding tightening in supply and some degree of price inflation in associated markets. Within the supply chain of less essential products, 3M experienced raw material price deflation as economies slowed and certain producers scaled back or idled operations. Conversely, as markets re-opened and demand increased, the Company experienced raw material price inflation with some level of stabilization late in the year.

In response, the Company continued to deploy productivity projects to minimize the impact of raw material inflation and market supply challenges, including input management, reformulations, and multi-sourcing activities. Overall, on a consolidated basis, 3M experienced net raw material deflation in 2020. To date, the Company is receiving sufficient quantities of all raw materials to meet its reasonably foreseeable production requirements. It is difficult to predict future shortages of raw materials or the impact any such shortages would have. 3M has avoided disruption to its manufacturing operations through careful management of existing raw material inventories, strategic relationships with key suppliers, and development as well as 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.

Pension and postretirement defined benefit/contribution plans:

On a worldwide basis, 3M's pension and postretirement plans were 87 percent funded at year-end 2020. The primary U.S. qualified pension plan, which is approximately 67 percent of the worldwide pension obligation, was 91 percent funded and the international pension plans were 93 percent funded. The U.S. non-qualified pension plan is not funded due to tax considerations and other factors. Asset returns in 2020 for the primary U.S. qualified pension plan were 13.6%, 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 2021 is 6.50%. The primary U.S. qualified pension plan year-end 2020 discount rate was 2.55%, down 0.70 percentage points from the year-end 2019 discount rate of 3.25%. The decrease in U.S. discount rates resulted in an increased valuation of the projected benefit obligation (PBO). The primary U.S. qualified pension plan's funded status decreased 1 percentage point in 2020 due to the higher PBO resulting from the discount rate decrease and partially offset by higher return on 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 2021. The Company does not have a required minimum cash pension contribution obligation for its U.S. plans in 2021. 3M expects global defined benefit pension and postretirement expense in 2021 to decrease by approximately $40 million pre-tax when compared to 2020. 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)	2020	2019	2020 versus 2019
Cost of sales	**51.6 %**	53.4 %	(1.8)%
Selling, general and administrative expenses (SG&A)	**21.5**	21.9	(0.4)
Research, development and related expenses (R&D)	**5.8**	5.9	(0.1)
Gain on sale of businesses	**(1.2)**	(0.4)	(0.8)
Operating income margin	**22.3 %**	19.2 %	3.1 %

Operating income margins increased year over year for 2020. The increase from 2019 to 2020 was primarily driven by lower significant litigation-related charges and higher gains on divestitures (net of divestiture-related restructuring actions) year-on-year. These items are further described in the *Certain amounts adjusted for special items - (non-GAAP measures)* section above. A number of factors impact the various income statement line items. Expanded discussion of each of the income statement line items follows in the various sections below.

In 2020 the Company's operating expenses were impacted by factors described in the preceding Overview – Consideration of COVID-19 section above.

In 2020 and 2019, 3M approved and committed to certain restructuring actions that impacted cost of sales, SG&A, and R&D (see Note 5 for additional details). In addition to actions related to divestitures (as discussed earlier in the *Certain amounts adjusted for special items - (non-GAAP measures)* section), for 2020 these included charges to address certain COVID-related impacts and actions to further enhance its operational and marketing capabilities. In 2019, charges included actions in light of slower than expected 2019 sales and associated with realigning its organizational structure and operating model.

Pension and postretirement service cost expense is recorded in cost of sales, SG&A, and R&D. In total, 3M's defined benefit pension and postretirement service cost expense increased $31 million in 2020. Refer to Note 13 (Pension and Postretirement Plans) for the service cost components of net periodic benefit costs.

The Company is investing in an initiative called business transformation, with these investments impacting cost of sales, SG&A, and R&D. Business transformation encompasses the ongoing multi-year phased implementation of an enterprise resource planning (ERP) system on a worldwide basis, as well as changes in processes and internal/external service delivery across 3M.

Cost of Sales:

Cost of sales includes manufacturing, engineering and freight costs.

Cost of sales, measured as a percent of sales, decreased during 2020 when compared to 2019. Decreases were related to lower significant litigation-related charges taken in 2020, which were partially offset by 2020 COVID-related net impacts, including period expenses of unabsorbed manufacturing costs, in addition to higher restructuring action charges taken in 2020 along with certain related follow-on accelerated depreciation. In addition, selling prices increased year-on-year by 0.6 percent for full year 2020, and lower raw material costs reduced cost of sales as a percentage of sales.

Selling, General and Administrative Expenses:

SG&A in dollars decreased slightly in 2020 when compared to 2019. The decrease was driven by cost saving actions taken in response to COVID-19, in addition to benefits from prior year restructuring (and adjustments thereto in 2020). Additional factors that decreased SG&A in 2020 also include lower year-on-year impact related to significant litigation-related charges. In terms of SG&A as a percent of sales, partially offsetting these decreases was the overall effect of the COVID-19 pandemic on sales that resulted in higher costs as a percent of sales. SG&A was also impacted by increased spending year-on-year related to Acelity, which was acquired in the fourth quarter of 2019.

Research, Development and Related Expenses:

R&D in dollars decreased slightly in 2020 when compared to 2019 and remained relatively consistent as a percent of sales at 5.8% in 2020 compared to 5.9% in 2019. 3M continued to invest in its key initiatives, including R&D aimed at disruptive innovation programs with the potential to create entirely new markets and disrupt existing markets. Incremental R&D spending in 2020 included activities related to the Acelity business acquired in the fourth quarter of 2019. 3M also experienced lower year-on-year restructuring activities impacting R&D.

Gain on Sale of Businesses:

During the first quarter of 2020, the Company recorded a pre-tax gain of $2 million ($1 million loss after tax) related to the sale of its advanced ballistic-protection business and recognition of certain contingent consideration. During the second quarter of 2020, the Company recorded a pre-tax gain of $387 million ($304 after tax) related to the sale of substantially all of its drug delivery business.

During the first quarter of 2019, the Company sold certain oral care technology comprising a business and reflected an earnout on a previous divestiture resulting in a pre-tax gain of $8 million ($7 million gain after tax). In the third quarter of 2019, 3M recorded a gain related to the divestiture of the Company's gas and flame detection business and an immaterial impact as a result of measuring a disposal group at the lower of its carrying amount or fair value less cost to sell, which in aggregate resulted in a pre-tax gain of $106 million ($79 million after tax). Refer to Note 3 for additional details on divestitures.

Operating Income Margin:

3M uses operating income as one of its primary business segment performance measurement tools. Refer to the table below for a reconciliation of operating income margins for 2020 and 2019.

	Year ended December 31,	
(Percent of net sales)	**2020**	**2019**
Same period last year	**19.2 %**	22.0 %
Significant litigation-related charges/benefits	**2.4**	2.7
Gain/loss on sale of businesses	**(0.4)**	(1.6)
Divestiture-related restructuring actions	**—**	0.4
Same period last year, excluding special items	**21.2 %**	23.5 %
Increase/(decrease) in operating income margin, due to:		
Organic volume/productivity and other	**(0.1)**	(1.7)
Non divestiture-related restructuring actions	**0.2**	(0.8)
Acquisitions/divestitures	**(0.5)**	(0.6)
Selling price and raw material impact	**0.7**	0.4
Foreign exchange impacts	**(0.2)**	0.4
Current period, excluding special items	**21.3 %**	21.2 %
Significant litigation-related charges/benefits	**—**	(2.4)
Gain/loss on sale of businesses	**1.2**	0.4
Divestiture-related restructuring actions	**(0.2)**	—
Current period	**22.3 %**	19.2 %

Year 2020 operating income:

Operating income margins increased 3.1 percentage points in 2020 when compared to 2019. Factoring out the impact on operating income of special items as described in the *Certain amounts adjusted for special items – (non-GAAP measures)* section above, operating margins increased 0.1 percentage points to 21.3 percent in 2020 when compared to 2019.

Additional discussion related to the components of the year-on-year change in operating income margins follows:

Organic volume/productivity and other:

- Lower organic volume growth in 2020 as a result of significant COVID-19 related impacts, in addition to COVID-related net factors described in the preceding Overview—Consideration of COVID-19 section, decreased operating income margins year-on-year. 3M also experienced year-over-year increased costs as a result of the regular review of its respirator mask liabilities and certain follow-on accelerated depreciation following some of the restructuring described below. Partially offsetting this net decrease were year-on-year net gains related to certain property sales (in 2020 with Safety and Industrial and in 2019 within Corporate and Unallocated) in addition to benefits recognized in 2020 related to the restructuring and other actions taken in 2019 (and the adjustments thereto in 2020) along with continued cost management and productivity efforts.
- Operating income margins decreased year-on-year due to higher defined benefit pension and postretirement service cost expense.

Non divestiture-related restructuring actions:

- 3M recorded non divestiture-related restructuring charges that impacted operating income aggregating $195 million in 2020. These included charges in the second quarter of 2020 to address certain COVID-related impacts and in the fourth quarter as 3M initiated actions to further enhance its operational and marketing capabilities. In 2019, charges included $246 million impacting operating income (and $36 million impacting other expense (income)) as the Company committed to actions in light of slower than expected 2019 sales and associated with realigning its organizational structure and operating model. See Note 5 for additional details.
- The year-on-year impact of the non divestiture-related restructuring charges taken in 2020 and 2019 increased operating income margins.

Acquisitions/divestitures:

- Acquisition-related impacts relate to the ongoing integration of M*Modal and Acelity, which decreased operating income margins year-on-year.
- Divestiture impacts, which includes lost operating income from divested businesses, increased operating income margins year-on-year.

Selling price and raw material impact:

- Higher selling prices in addition to lower raw material cost impacts benefited operating income margins year-on-year for 2020.

Foreign exchange impacts:

- Foreign currency effects (net of hedge gains) decreased operating income margins year-on-year.

Significant litigation-related charges:

- Operating income margins for 2020 and 2019 included the $17 million and $762 million impact, respectively, of significant litigation-related charges (as discussed earlier in the *Certain amounts adjusted for special items - (non-GAAP measures)* section).

Gain/loss on sale of businesses:

- 2020 and 2019 included gains of $389 million and $114 million, respectively, on sale of businesses. See the *Certain amounts adjusted for special items - (non-GAAP measures)* section for more information.

Divestiture-related restructuring actions:

- Operating income margins for full year 2020 included the $55 million second quarter impact as a result of certain restructuring actions following the divestiture of substantially all of the drug delivery business addressing corporate functional costs and manufacturing footprint across 3M in relation to the magnitude of amounts previously allocated/burdened to the divested business. Refer to Note 5 for further details. This item was also discussed earlier in the *Certain amounts adjusted for special items - (non-GAAP measures)* section.

Year 2019 operating income:

Operating income margins decreased 2.8 percentage points for the full year 2019 when compared to full year 2018. Factoring out the impact on operating income of special items as described in the *Certain amounts adjusted for special items – (non-GAAP measures)* section above, operating margins decreased 2.3 percentage points to 21.2 percent in 2019 when compared to 2018.

Organic volume/productivity and other:

- Negative organic local sales volume growth as a result of softness in certain end markets and channel inventory adjustments, along with actions taken by 3M in response to lower sales volumes and high inventory levels, which resulted in lower manufacturing and inventory absorption, reduced operating margins. Partially offsetting these impacts were benefits from restructuring actions taken in the second quarter of 2019.
- Operating income margins increased year-on-year due to lower defined benefit pension and postretirement service cost expense.

Non divestiture-related restructuring actions:

- During the second quarter of 2019, in light of slower than expected 2019 sales, and additionally in the fourth quarter to realign 3M's organizational structure and operating model, management approved and committed to undertake certain restructuring actions. The resulting charges included $246 million impacting operating income (and $36 million impacting other expense (income)). See Note 5 for additional details.

Acquisitions/divestitures:

- Acquisition-related impacts relate to the on-going integration of M*Modal and Acelity, which decreased operating income margins year-on-year.
- Divestiture impacts include the lost operating income from divested businesses, which increased operating income margins year-on-year and primarily relate to the divestiture of the Communication Markets Division.
- Remaining stranded costs from the 2018 divestiture of the Communication Markets Division also reduced operating margins year-on-year.

Selling price and raw material impact:

- Higher selling prices, partially offset by raw material cost increases, benefited operating income margins year-on-year for 2019.

Foreign exchange impacts:

- Foreign currency effects (net of hedge gains) increased operating income margins year-on-year.

Significant litigation-related charges:

- Operating income margins for 2018 and 2019 included the $897 million and $762 million impact, respectively, of significant litigation-related charges (as discussed earlier in the *Certain amounts adjusted special items - (non-GAAP measures)* section.

Other Expense (Income), Net:

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

The decrease in other expense (income) during 2020 was primarily due to the 2019 impact of deconsolidation of the Company's Venezuelan subsidiary. Refer to Note 1 for additional details.

Interest expense (net of interest income) increased during 2020 and 2019. The increase in 2020 was due to higher U.S. average debt balances and lower year-on-year interest income driven by lower average interest rates on cash balances. 2020 interest expense also included an early debt extinguishment charge in conjunction with the repayment of notes in December 2020. The increase in 2019 was driven by higher U.S. average debt balances, partially offset by the year-on-year increase in interest income driven by higher balances in cash, cash equivalents and marketable securities during the year resulting from the proceeds from debt issuances in advance of the October 2019 Acelity acquisition.

In addition, other expense (income) was impacted by lower year-on-year pension and postretirement net periodic benefit non-service benefits for 2020 and 2019, respectively. The lower year-on-year benefit in 2020 was primarily due to the increased expense from lower December 31, 2019 discount rates. The decreases in 2019 was primarily due to the charge associated with the voluntary retirement program taken in the second quarter of 2019 in addition to the pension settlement charges in the fourth quarter of 2019 related to employee retirements. Refer to Note 13 for additional details.

Provision for Income Taxes:

(Percent of pre-tax income)	2020	2019
Effective tax rate	**19.6 %**	19.8 %

The effective tax rate for 2020 was 19.6 percent, a decrease of 0.2 percentage points when compared to 2019. The effective tax rate for 2019 was 19.8 percent, compared to 23.4 percent in 2018, a decrease of 3.6 percentage points. Factors that impacted the tax rates between years are further discussed in the Overview section above and in Note 10.

3M currently estimates its effective tax rate for 2021 will be approximately 20 to 21 percent.

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)	2020	2019
Income (loss) from unconsolidated subsidiaries, net of taxes	**$ (5)**	$ —

Income (loss) from unconsolidated subsidiaries, net of taxes, is primarily attributable to the Company’s ownership interest in Kindeva using the equity method of accounting following 3M’s divestiture of the drug delivery business in 2020. See Note 3 for further discussion.

Net Income Attributable to Noncontrolling Interest:

(Millions)	2020	2019
Net income (loss) attributable to noncontrolling interest	**$ 4**	$ 12

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.

Currency Effects:

3M estimates that year-on-year currency effects, including hedging impacts, decreased pre-tax income by $81 million in 2020 and increased pre-tax income by $1 million in 2019. This estimate includes the effect of translating profits from local currencies into U.S. dollars; the impact of currency fluctuations on the transfer of goods between 3M operations in the United States and abroad; and transaction gains and losses, including derivative instruments designed to reduce foreign currency exchange rate risks. 3M estimates that year-on-year foreign currency transaction effects, including hedging impacts, decreased pre-tax income by approximately $21 million in 2020 and increased pre-tax income by approximately $201 million in 2019. These estimates include transaction gains and losses, including derivative instruments designed to reduce foreign currency exchange rate risks. Refer to Note 14 in the Consolidated Financial Statements for additional information concerning 3M's hedging activities.

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 2020, the Company changed its business segment reporting in its continuing effort to improve the alignment of businesses around markets. Also, effective in the second quarter of 2020, 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) has been updated for all 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.

As discussed in Note 19, 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 includes dual credit for certain related operating income (as described below in "Elimination of Dual Credit"). Business segment operating income excludes certain expenses and income that are not allocated to business segments (as described below in "Corporate and Unallocated"). Additionally, the following special items are excluded from business segment operating income and, instead, are included within Corporate and Unallocated: significant litigation-related charges/benefits, gain/loss on sale of businesses, and divestiture-related restructuring actions.

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 includes a variety of miscellaneous items, such as corporate investment gains and losses, certain derivative gains and losses, certain insurance-related gains and losses, certain litigation and environmental expenses, corporate restructuring charges and certain under- or over-absorbed costs (e.g. pension, stock-based compensation) that the Company determines not to allocate directly to its business segments. Additionally, Corporate and Unallocated operating income includes special items such as significant litigation-related charges/benefits, gain/loss on sale of businesses, and divestiture-related restructuring costs. Corporate and Unallocated also includes sales, costs, and income from contract manufacturing, transition services and other arrangements with the acquirer of the Communication Markets Division following its 2018 divestiture through 2019 and the acquirer of the former drug delivery business following its 2020 divestiture. Because this category includes a variety of miscellaneous items, it is subject to fluctuation on a quarterly and annual basis.

Corporate and Unallocated net operating loss decreased by $767 million in 2020 when compared to 2019.

Special Items
Refer to the *Certain amounts adjusted for special items - (non-GAAP measures)* section and Note 5 for additional details on the impact of significant litigation-related charges/benefits, gain/loss on sale of businesses, and divestiture-related restructuring actions that are reflected in Corporate and Unallocated.

Other Corporate Expense - Net
Other corporate operating expenses increased in 2020. The increases were due to year-over-year increased net costs as a result of the regular review of 3M's respirator mask liabilities, lower year-on-year gains from certain property sales reflected in Corporate and Unallocated, in addition to transition service and other arrangement costs, net of income, post-divestiture of the Company's former drug delivery business in 2020, and increased legal expenses. These increases were partially offset by lower year-on-year non divestiture-related restructuring costs reflected in Corporate and Unallocated.

Operating Business Segments:

Information related to 3M's business segments is presented in the tables that follow. Organic local-currency sales include both organic volume impacts plus selling price impacts. Acquisition impacts, if any, are measured separately for the first twelve months post-transaction. The divestiture impacts, if any, foreign currency translation impacts and total sales change are also provided for each business segment. Any references to EMEA relate to Europe, Middle East and Africa on a combined basis.

The following discusses total year results for 2020 compared to 2019 and 2019 compared to 2018, for each business segment. Refer to the preceding "Sales and operating income by geographic area" section for organic local-currency sales growth by business segment within major geographic areas.

Safety and Industrial Business (36.6% of consolidated sales):

	2020	2019
Sales (millions)	**$ 11,767**	$ 11,514
Sales change analysis:		
Organic local-currency	**3.5 %**	(3.4)%
Divestitures	**(0.6)**	(1.7)
Translation	**(0.7)**	(2.1)
Total sales change	**2.2 %**	(7.2)%
Business segment operating income (millions)	**$ 3,054**	$ 2,510
Percent change	**21.7 %**	(12.2)%
Percent of sales	**26.0 %**	21.8 %

Year 2020 results:

Sales in Safety and Industrial totaled $11.8 billion, an increase of 2.2 percent compared to the same period last year. Organic local-currency sales increased 3.5 percent, divestitures decreased sales by 0.6 percent, and foreign currency translation decreased sales by 0.7 percent.

On an organic local-currency sales basis:
- Sales increased in personal safety and roofing granules, while industrial adhesives and tapes, electrical markets, closure and masking systems, automotive aftermarket, and abrasives sales declined year-on-year.
- Strong growth related to unprecedented demand for respirators as a result of the COVID-19 pandemic was partially offset by softness that impacted sales growth across most of the Company's general industrial-related portfolio.

Divestitures:
- 2018 divestitures that impacted 2019 results relate to the sale of certain personal safety product offerings primarily focused on noise, environmental, and heat stress monitoring (first quarter 2018), and it's abrasives glass products business (second quarter of 2018).
- Also in 2018, 3M completed the sale of substantially all of its Communication Markets Division.
- In August 2019, 3M completed the sale of its gas and flame detection business.

Business segment operating income:
- Business segment operating income margins increased 4.2 percentage points, primarily related to strong productivity, continued cost discipline and benefits from certain property sale, 2019 restructuring and other actions.

Year 2019 results:

Sales in Safety and Industrial totaled $11.5 billion, down 7.2 percent in U.S. dollars, compared to full year 2018. Organic local-currency sales decreased 3.4 percent, divestitures decreased sales by 1.7 percent, and foreign currency translation decreased sales by 2.1 percent.

On an organic local-currency sales basis:

- Sales increased in roofing granules and personal safety, while electrical markets, industrial adhesives and tapes, abrasives, automotive aftermarket, and closure and masking systems declined year-on-year.

Divestitures:

- In February 2018, 3M closed on the sale of certain personal safety product offerings primarily focused on noise, environmental, and heat stress monitoring.
- In May 2018, 3M divested an abrasives glass products business.
- In 2018, 3M completed the sale of substantially all of its Communication Markets Division.
- In August 2019, 3M completed the sale of its gas and flame detection business.

Business segment operating income:

- Operating income margins decreased 1.2 percentage points, primarily related to sales declines, particularly in Asia Pacific and the U.S, in addition to inventory reductions and restructuring impacts.

Transportation and Electronics Business (27.4% of consolidated sales):

		2020		2019
Sales (millions)	**$**	**8,827**	$	9,591
Sales change analysis:				
Organic local-currency		**(7.1)%**		(3.6)%
Divestitures		**(1.1)**		—
Translation		**0.2**		(1.5)
Total sales change		**(8.0)%**		(5.1)%
Business segment operating income (millions)	**$**	**1,927**	$	2,221
Percent change		**(13.3)%**		(16.0)%
Percent of sales		**21.8 %**		23.2 %

Year 2020 results:

Sales in Transportation and Electronics totaled $8.8 billion, down 8.0 percent in U.S. dollars. Organic local-currency sales decreased 7.1 percent, divestitures decreased sales by 1.1 percent, and foreign currency translation increased sales by 0.2 percent.

On an organic local-currency sales basis:

- Sales declined in transportation safety, advanced materials, commercial solutions, and automotive and aerospace. Automotive and aerospace was primarily impacted by the decline in global car and light truck builds. Commercial solutions and transportation safety were impacted by soft-end markets such as hospitality, advertising and highway infrastructure due to social distancing and work-from-home protocols as a result of COVID-19.
- Sales increased in 3M’s electronics-related businesses. Electronics-related growth was led by demand for semiconductor, data center, and factory automation end-markets, and was partially offset by softness in the consumer electronics end-market.

Divestitures:

- In January 2020, 3M completed the sale of its advanced ballistic-protection business. Refer to Note 3 for details.

Business segment operating income:

- Business segment operating income margins decreased 1.4 percentage points, primarily related to lower sales and reduced productivity in key end-markets due to COVID-19 related impacts, partially offset by continued cost discipline and benefits from last year's restructuring actions.

Year 2019 results:

Sales in Transportation and Electronics totaled $9.6 billion, down 5.1 percent in U.S. dollars. Organic local-currency sales decreased 3.6 percent, and foreign currency translation decreased sales by 1.5 percent.

On an organic local-currency sales basis:

- Sales increased in advanced materials and transportation safety, while commercial solutions and automotive and aerospace solutions declined.
- Automotive and aerospace was impacted by the decline in global car and light truck builds along with channel inventory reductions within its Automotive OEM business, particularly in China.
- Sales decreased 6 percent in 3M's electronics-related businesses, with decreases in both display materials and systems and electronics materials solutions. Electronics-related growth was impacted by soft consumer electronics and factory automation end markets in addition to channel inventory adjustments.
- Sales decreased 4 percent in Asia Pacific, where 3M's electronics business is concentrated.

Business segment operating income:

- Operating income margins decreased 3.0 percentage points, primarily impacted by continued sales declines, particularly in Asia Pacific and the U.S, in addition to inventory reductions. Operating income margins were also impacted by the restructuring charges initiated in 2019.

Health Care Business (25.9% of consolidated sales):

	2020	2019
Sales (millions)	**$ 8,345**	$ 7,431
Sales change analysis:		
Organic local-currency	**1.0 %**	1.5 %
Acquisitions	**15.5**	9.4
Divestitures	**(4.1)**	—
Translation	**(0.1)**	(2.0)
Total sales change	**12.3 %**	8.9 %
Business segment operating income (millions)	**$ 1,828**	$ 1,858
Percent change	**(1.6)%**	(3.1)%
Percent of sales	**21.9 %**	25.0 %

Year 2020 results:

Sales in Health Care totaled $8.3 billion, up 12.3 percent in U.S. dollars. Organic local-currency sales increased 1.0 percent, acquisitions increased sales by 15.5 percent, divestitures decreased sales by 4.1 percent, and foreign currency translation decreased sales by 0.1 percent.

On an organic local-currency sales basis:

- Sales increased in medical solutions, separation and purification sciences, and food safety, while sales decreased in health information systems and oral care.
- Increases in healthcare volumes benefited both medical solutions and oral care after significant disruptions in the second quarter, with strong pandemic-related demand for disposable respirators resulting in increased sales for medical solutions, while oral care sales decreased year-on-year. In addition, health information systems decreased due to hospitals remaining cautious relative to their information technology investments.

Acquisitions:
- In February 2019, 3M acquired M*Modal, a leading healthcare technology provider of cloud-based, conversational artificial intelligence-powered systems that help physicians efficiently capture and improve the patient narrative.
- In October 2019, 3M completed the acquisition of Acelity Inc. and its KCI subsidiaries, a leading global medical technology company focused on advanced wound care and specialty surgical applications.

Divestitures:
- In the first quarter of 2019, the Company sold certain oral care technology comprising a business.
- In May 2020, 3M completed the sale of substantially all of its drug delivery business.

Business segment operating income:
- Operating income margins decreased 3.1 percentage points year-on-year, driven by impacts related to the Acelity acquisition in addition to significant sales declines in oral care during the second quarter of 2020, partially offset by continued cost discipline and benefits from 2019 restructuring and other costs.

Year 2019 results:

Sales in Health Care totaled $7.4 billion, up 8.9 percent in U.S. dollars. Organic local-currency sales increased 1.5 percent, acquisitions increased sales 9.4 percent, and foreign currency translation decreased sales by 2.0 percent.

On an organic local-currency sales basis:
- Sales increased in health information systems, food safety, and medical solutions, while separation and purification sciences decreased, and oral care was flat.
- Drug delivery declined year-on-year, as continued softness in the business negatively impacted overall Health Care organic growth.

Acquisitions:
- In February 2019, 3M acquired M*Modal, a leading healthcare technology provider of cloud-based, conversational artificial intelligence-powered systems that help physicians efficiently capture and improve the patient narrative.
- In October 2019, 3M completed the acquisition of Acelity Inc. and its KCI subsidiaries, a leading global medical technology company focused on advanced wound care and specialty surgical applications.

Divestitures:
- In the first quarter of 2018, 3M completed the sale of its polymer additives compounding business.
- In the first quarter of 2019, the Company sold certain oral care technology comprising a business.

Business segment operating income:
- Operating income margins decreased 3.1 percentage points year-on-year.

Consumer Business (16.6% of consolidated sales):

	2020	2019
Sales (millions)	**$ 5,336**	$ 5,151
Sales change analysis:		
Organic local-currency	**4.1 %**	1.7 %
Translation	**(0.5)**	(1.2)
Total sales change	**3.6 %**	0.5 %
Business segment operating income (millions)	**$ 1,249**	$ 1,124
Percent change	**11.2 %**	3.7 %
Percent of sales	**23.4 %**	21.8 %

Year 2020 results:

Sales in Consumer totaled $5.3 billion, an increase of 3.6 percent in U.S. dollars. Organic local-currency sales increased 4.1 percent and foreign currency translation decreased sales by 0.5 percent.

On an organic local-currency sales basis:
- Sales grew in home improvement and home care, while consumer health care and stationery and office declined.
- Stationery and office declined year-on-year as a result of many business offices and schools remaining partially or fully closed due to the pandemic.
- Sales showed continued strength in the Company's Command™, Filtrete™, Scotch Blue™, Scotch Brite™, and Meguiars™ brands.

Business segment operating income:
- Operating income margins increased 1.6 percentage points year-on-year as a result of strong organic sales growth and continued cost discipline.

Year 2019 results:

Sales in Consumer totaled $5.2 billion, an increase of 0.5 percent in U.S. dollars. Organic local-currency sales increased 1.7 percent and foreign currency translation decreased sales by 1.2 percent.

On an organic local-currency sales basis:
- Sales grew in home improvement, while home care and stationery and office were flat. Consumer health care decreased year on year.
- Geographically, the U.S. showed particular strength in the Company's Filtrete™ and Command™ brands, while Asia Pacific was impacted by lower consumer demand for respiratory solutions.

Business segment operating income:
- Operating income margins increased 0.7 percentage points year-on-year. Increases in operating income margins were primarily due to benefits from portfolio and footprint actions taken, partially offset by the restructuring charges initiated in 2019.

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,	
	2020	**2019**	**2018**	**2020**	**2019**	**2018**	**2020**	**2019**
Americas	**56,042**	56,027	53,661	**$ 943**	$ 1,218	$ 1,044	**$ 5,752**	$ 5,873
Asia Pacific	**18,271**	18,724	18,971	**235**	241	238	**1,662**	1,637
Europe, Middle East and Africa	**20,674**	21,412	20,884	**323**	240	295	**2,007**	1,823
Total Company	**94,987**	96,163	93,516	**$ 1,501**	$ 1,699	$ 1,577	**$ 9,421**	$ 9,333

Employment:

Employment decreased by approximately 1,200 positions in 2020 and increased by approximately 2,600 positions in 2019. The above table includes the impact of acquisitions (which involved approximately 5,500 positions in 2019), 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. In 2020, 63 percent of 3M’s capital spending was within the Americas, followed by Europe, Middle East and Africa, and Asia Pacific. 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 of the consolidated financial statements. As stated in Note 1, the preparation of financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue and expenses, and related disclosure of contingent assets and liabilities. Management bases its estimates on historical experience and on various assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates.

The Company believes its most critical accounting estimates relate to legal proceedings, pension and postretirement obligations, goodwill and certain long-lived assets, and uncertainty in income tax positions. 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 and can rely heavily on estimates and assumptions. The Company accrues an estimated liability for legal proceeding claims that are both probable and 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 makes certain estimates and judgements in relation to its defined benefit pension and postretirement obligations.

The benefit 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 in the actuarial gains and losses recorded in other comprehensive income.

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, 2020 Liability:			
Benefit obligation	2.55 %	1.38 %	2.35 %
2021 Net Periodic Benefit Cost Components:			
Service cost	2.84 %	1.23 %	2.71 %
Interest cost	1.93 %	1.13 %	1.68 %

Another significant element in determining the Company's pension expense is the 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 2021 is 6.50%, a decrease from 6.75% in 2020. 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 4.36% for 2021 compared to 4.70% for 2020. Refer to Note 13 for information on how the 2020 rates were determined.

3M follows ASC 820, *Fair Value Measurements and Disclosures* in determining the fair value of plan assets within the Company's pension and postretirement benefit plans. While the Company believes the valuation methods used to determine the fair value of plan assets 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. See Note 13 for additional discussion of actuarial assumptions used in determining defined benefit pension and postretirement health care liabilities and expenses.

For the year ended December 31, 2020, the Company recognized consolidated defined benefit pre-tax pension and postretirement service cost expense of $456 million and a benefit of $50 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 $406 million, up from $357 million in 2019.

In 2021, defined benefit pension and postretirement service cost expense is anticipated to total approximately $497 million while non-service pension and postretirement net benefit costs is anticipated to be a benefit of approximately $130 million, for a total consolidated defined benefit pre-tax pension and postretirement expense of $367 million, a decrease of approximately $40 million compared to 2020.

The table below summarizes the impact on 2021 pension expense for the U.S. and international pension plans of a 0.25 percentage point increase/decrease in the expected long-term rate of return on plan assets and discount rate assumptions used to measure plan liabilities and 2020 net periodic benefit cost. The table assumes all other factors are held constant, including the slope of the discount rate yield curves.

	Increase (Decrease) in Net Periodic Benefit Cost			
	Discount Rate		Expected Return on Assets	
(Millions)	**-0.25%**	**+0.25%**	**-0.25%**	**+0.25%**
U.S. pension plans	$ 34	$ (34)	$ 39	$ (39)
International pension plans	27	(28)	21	(17)

Goodwill and Certain Long-Lived Assets:

The Company makes certain estimates and judgments in relation to goodwill and certain long-lived assets. Those include considerations made in the valuation of certain acquired identifiable definite-lived and indefinite-lived assets as a result of business combinations as well as considerations in the recoverability and impairment assessments of long-lived assets and goodwill.

Acquisition of certain identifiable definite-lived and indefinite-lived assets

In conjunction with an acquisition of a business, the Company records identifiable definite-lived and indefinite-lived intangible assets acquired at their respective fair values as of the date of acquisition. The corresponding fair value estimates for these assets acquired include projected future cash flows, associated discount rates used to calculate present value, asset life cycles, royalty rates, and customer retention rates. The fair value calculated for indefinite-lived intangible assets such as certain tradenames, in addition to intangible assets that are definite-lived such as patents, customer relationships, tradenames and other technology-based assets may change during the finalization of the purchase price allocation, due to the significant estimates used in determining their fair value. As a result, the Company may make adjustments to the provisional amounts recorded for certain items as part of the purchase price allocation subsequent to the acquisition, not to exceed one year after the acquisition date, until the purchase accounting allocation is finalized.

Assessments of long-lived assets and goodwill

As of December 31, 2020, net property, plant and equipment totaled $9.4 billion and net identifiable intangible assets totaled $5.8 billion, of which $0.7 billion related to indefinite-lived tradenames. In addition, 3M goodwill totaled approximately $13.8 billion as of December 31, 2020. Long-lived 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 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. Goodwill is tested for impairment annually in the fourth quarter of each year, as further discussed below, 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 long-lived assets or goodwill would be impaired.
Management makes estimates and assumptions in preparing the consolidated financial statements for which actual results will emerge over long periods of time. This includes the recoverability of long-lived assets employed in the business, including assets of acquired businesses. These estimates and assumptions are closely monitored by management and periodically adjusted as circumstances warrant. For instance, expected asset lives may be shortened or an impairment recorded based on a change in the expected use of the asset or performance of the related asset group. Factors which could result in future impairment charges include, among others, changes in worldwide economic conditions, changes in competitive conditions and customer preferences, and fluctuations in foreign currency exchange rates. These risk factors are discussed in Item 1A, “Risk Factors,” of this document. In addition, changes in the weighted average cost of capital could also impact impairment testing results.

As of December 31, 2020, the $0.7 billion of indefinite-lived tradenames primarily relates to Capital Safety (acquired in 2015), whose tradenames ($520 million at acquisition date) have been in existence for over 60 years (refer to Note 4 for more detail). The primary valuation technique used in estimating the fair value of indefinite lived intangible assets (tradenames) is a discounted cash flow approach. Specifically, a relief of royalty rate is applied to estimated sales, with the resulting amounts then discounted using an appropriate market/technology discount rate. The relief of royalty rate is the estimated royalty rate a market participant would pay to acquire the right to market/produce the product. In the first quarter of 2020, 3M reflected an immaterial charge related to impairment of certain indefinite-lived assets in 2020. Based on annual impairment testing in the third quarter of 2020, no additional impairment was indicated.

3M goodwill totaled approximately $13.8 billion as of December 31, 2020. 3M’s annual goodwill impairment testing is performed in the fourth quarter of each year. 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 using earnings for the reporting unit multiplied by a price/earnings ratio for comparable industry groups, or by using a discounted cash flow analysis. 3M typically uses the price/earnings ratio approach for stable and growing businesses that have a long history and track record of generating positive operating income and cash flows. 3M uses the discounted cash flow approach for start-up, loss position and declining businesses, in addition to using for businesses where the price/earnings ratio valuation method indicates additional review is warranted. 3M also uses discounted cash flow as an additional tool for businesses that may be growing at a slower rate than planned due to economic or other conditions. Where applicable, 3M uses a weighted-average discounted cash flow analysis for certain divisions, using projected cash flows that were weighted based on different sales growth and terminal value assumptions, among other factors. The weighting was based on management's estimates of the likelihood of each scenario occurring.

As described in Note 19, effective in the first quarter of 2020, 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. In conjunction with the change in segment reporting, 3M completed an assessment indicating no goodwill impairment existed as a result of this new segment structure. The discussion that follows relates to the separate fourth quarter 2020 annual impairment test and is in the context of the reporting unit structure that existed at that time.

Based on the annual test in the fourth quarter of 2020, no goodwill impairment was indicated for any of the reporting units. As of October 1, 2020, 3M had 22 primary reporting units, with ten reporting units accounting for approximately 93 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 Solutions, 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 that have no goodwill associated with them.

3M will continue to monitor its reporting units and asset groups in 2021 for any triggering events or other indicators of impairment.

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, provides financial flexibility and enables the Company to invest through business cycles. 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. Organic investments will be supplemented by complementary acquisitions. The Company also continues to actively manage its portfolio to maximize value for shareholders. Given uncertainty arising from COVID-19, the Company suspended repurchases under its board-approved share repurchase program effective March 2020 with other repurchase activity limited to 3M's stock compensation plans. 3M will continue to return cash to shareholders through dividends and plans to resume share repurchases in 2021. 3M maintains strong liquidity and further added to its liquidity position through the issuance of $1.75 billion in registered notes in March 2020. 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'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. At December 31, 2020, there was no commercial paper issued and outstanding.

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. 3M currently has an A1 credit rating with a negative outlook from Moody's Investors Service and an A+ credit rating with negative outlook from Standard and Poor's.

The Company's total debt was $1.5 billion lower at December 31, 2020 when compared to December 31, 2019. Decreases in debt are further described in Note 12 and include the repayment of aggregate $445 million principal amount of Third Lien Notes subject to in-substance defeasance, 650 million euros and $500 million aggregate principal amount of floating-rate medium-term notes that matured, the December 2020 repayment of $1 billion aggregate principal amount of notes related to make-whole-call offers, lower commercial paper balance, and the repayment of the 80 billion Japanese yen and 150 million euro credit facilities. These decreases were partially offset by the March 2020 issuance of $1.75 billion of registered notes. 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. The Company has reviewed its debt securities, bank facilities, and derivative instruments and continues to evaluate commercial contracts that may utilize LIBOR as the reference rate. 3M will continue its assessment and monitor regulatory developments during the transition period.

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, 2020, 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). Additionally, the August 2019 and March 2020 debt was issued under the WKSI shelf registration, but not as part of the medium-term notes program (Series F). Information with respect to long-term debt issuances and maturities for the periods presented is included in Note 12.

The Company has a $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 2020 with an expiration date of November 2021. The 364-day credit agreement includes a provision under which 3M may convert any advances outstanding on the maturity date into term loans with a maturity date one year later. These credit facilities were undrawn at December 31, 2020. 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, 2020, this ratio was approximately 17 to 1. Debt covenants do not restrict the payment of dividends.

Apart from the committed credit facilities described above, in September 2019, 3M entered into a credit facility initially expiring in July 2020 that was further extended to August 2021 in the amount of 80 billion Japanese yen. In November 2019, 3M entered into a credit facility expiring in November 2020 in the amount of 150 million euros. During the third quarter of 2020, the Company paid the outstanding balances and closed these credit facilities. The Company also had $273 million in stand-alone letters of credit and bank guarantees issued and outstanding at December 31, 2020. These instruments are utilized in connection with normal business activities.

Cash, Cash Equivalents and Marketable Securities:

At December 31, 2020, 3M had $5.1 billion of cash, cash equivalents and marketable securities, of which approximately $2.8 billion was held by the Company's foreign subsidiaries and approximately $2.3 billion was held by the United States. These balances are invested in bank instruments and other high-quality fixed income securities. At December 31, 2019, 3M had $2.5 billion of cash, cash equivalents and marketable securities, of which approximately $2.4 billion was held by the Company's foreign subsidiaries and approximately $100 million was held by the United States. The increase from December 31, 2019 primarily resulted from strong cash flow from operations, reduced capital expenditures, and lower share repurchases.

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, 2020 and 2019.

	December 31,		2020 versus
(Millions)	**2020**	**2019**	**2019**
Total debt	**$ 18,795**	$ 20,313	$ (1,518)
Less: Cash, cash equivalents and marketable securities	**5,068**	2,494	2,574
Net debt (non-GAAP measure)	**$ 13,727**	$ 17,819	$ (4,092)

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, 2020	December 31, 2019	2020 versus 2019
Current assets	**$ 14,982**	$ 12,971	$ 2,011
Less: Current liabilities	**7,948**	9,222	(1,274)
Working capital (non-GAAP measure)	**$ 7,034**	$ 3,749	$ 3,285

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 increased $3.3 billion compared with December 31, 2019. Balance changes in current assets increased working capital by $2.0 billion, driven by increases in cash and cash equivalents and inventory, partially offset by decreases in accounts receivable. Balance changes in current liabilities increased working capital by $1.3 billion, primarily due to decreases in short-term borrowing and the current portion of long-term debt.

Accounts receivable decreased $86 million from December 31, 2019, primarily due to ongoing collection management and increased expected credit losses on customer receivables related to COVID-19 uncertainty. Inventory increased $105 million from December 31, 2019 primarily as a result of foreign currency impacts. These increases were partially offset by inventory decreases as a result of the divestiture of the drug delivery business.

Return on Invested Capital (non-GAAP measure):

Return on Invested Capital (ROIC) is not defined under U.S. generally accepted accounting principles. Therefore, ROIC should not be considered a substitute for other measures prepared in accordance with U.S. GAAP and may not be comparable to similarly titled measures used by other companies. The Company defines ROIC as adjusted net income (net income including non-controlling interest plus after-tax interest expense) divided by average invested capital (equity plus debt). The Company believes ROIC is meaningful to investors as it focuses on shareholder value creation. The calculation is provided in the below table.

In 2020, ROIC of 18.2 percent was higher than 2019. The increase was driven by the lower year-over-year impact of significant litigation-related charges in addition to the non-repeating charge from the 2019 deconsolidation of the Company’s Venezuela subsidiary. 2019 ROIC was also negatively impacted by the increase in cash and cash equivalents in anticipation of the funding of the acquisition of Acelity.

Years ended December 31 (Millions)		**2020**		**2019**
Return on Invested Capital (non-GAAP measure)				
Net income including non-controlling interest	**$**	**5,388**	$	4,582
Interest expense (after-tax) (1)		**425**		359
Adjusted net income (Return)	**$**	**5,813**	$	4,941
Average shareholders' equity (including non-controlling interest) (2)	**$**	**11,500**	$	10,198
Average short-term and long-term debt (3)		**20,413**		17,982
Average invested capital	**$**	**31,913**	$	28,180
Return on invested capital (non-GAAP measure)		**18.2 %**		17.5 %
(1) Effective income tax rate used for interest expense		**19.6 %**		19.8 %
(2) Calculation of average equity (includes non-controlling interest)				
Ending total equity as of:				
March 31	**$**	**10,209**	$	9,757
June 30		**10,915**		10,142
September 30		**11,943**		10,764
December 31		**12,931**		10,126
Average total equity	**$**	**11,500**	$	10,198
(3) Calculation of average debt				
Ending short-term and long-term debt as of:				
March 31	**$**	**22,495**	$	16,370
June 30		**20,762**		15,806
September 30		**19,598**		19,439
December 31		**18,795**		20,313
Average short-term and long-term debt	**$**	**20,413**	$	17,982

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:

Years Ended December 31 (Millions)	2020	2019
Net income including noncontrolling interest	**$ 5,388**	$ 4,582
Depreciation and amortization	**1,911**	1,593
Company pension and postretirement contributions	**(156)**	(210)
Company pension and postretirement expense	**406**	357
Stock-based compensation expense	**262**	278
Gain on sale of businesses	**(389)**	(111)
Income taxes (deferred and accrued income taxes)	**(33)**	(68)
Loss on deconsolidation of Venezuelan subsidiary	**—**	162
Accounts receivable	**165**	345
Inventories	**(91)**	370
Accounts payable	**252**	(117)
Other — net	**398**	(111)
Net cash provided by operating activities	**$ 8,113**	$ 7,070

Cash flows from operating activities can fluctuate significantly from period to period, as pension funding decisions, tax timing differences and other items can significantly impact cash flows.

In 2020, cash flows provided by operating activities increased $1.0 billion compared to the same period last year, with this increase primarily due to cost saving actions taken in response to COVID-19 and lower year-on-year significant litigation-related charges and the timing of associated payments. The combination of accounts receivable, inventories and accounts payable improved operating cash flow by $326 million in 2020, compared to an operating cash flow improvement of $598 million in 2019. Additional discussion on working capital changes is provided earlier in the "Financial Condition and Liquidity" section.

Cash Flows from Investing Activities:

Years ended December 31 (Millions)	2020	2019
Purchases of property, plant and equipment (PP&E)	**$ (1,501)**	$ (1,699)
Proceeds from sale of PP&E and other assets	**128**	123
Acquisitions, net of cash acquired	**(25)**	(4,984)
Purchases and proceeds from maturities and sale of marketable securities and investments, net	**232**	(192)
Proceeds from sale of businesses, net of cash sold	**576**	236
Other — net	**10**	72
Net cash provided by (used in) investing activities	**$ (580)**	$ (6,444)

Investments in property, plant and equipment enable growth across many diverse markets, helping to meet product demand and increasing manufacturing efficiency. In 2020, 3M reduced overall spending in light of uncertainty regarding COVID-19, but continued to invest in expanding the Company's ability to increase production of respiratory products to meet worldwide demand. The Company expects 2021 capital spending to be approximately $1.8 billion to $2.0 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. The Company is actively considering additional acquisitions, investments and strategic alliances, and from time to time may also divest certain businesses. Acquisitions, net of cash acquired, in 2020 primarily relate to the payment made for contingent consideration in regards to the Acelity acquisition. Proceeds from sale of businesses in 2020 primarily relate to the sales of the Company's advanced ballistic-protection business and its drug delivery business. Acquisitions, net of cash acquired, in 2019 primarily include the purchase of M*Modal and Acelity Inc. Proceeds from sale of businesses in 2019 primarily relate to the sale of certain oral care technology comprising a business and the gas and flame detection business.

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. In 2020 these included the maturity of the held-to-maturity debt security that was purchased to satisfy the redemption of the Third Lien Notes (which matured in May 2020). 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:

Years ended December 31 (Millions)	**2020**	**2019**
Change in short-term debt — net	**$ (143)**	$ (316)
Repayment of debt (maturities greater than 90 days)	**(3,482)**	(2,716)
Proceeds from debt (maturities greater than 90 days)	**1,750**	6,281
Total cash change in debt	**$ (1,875)**	$ 3,249
Purchases of treasury stock	**(368)**	(1,407)
Proceeds from issuances of treasury stock pursuant to stock option and benefit plans	**429**	547
Dividends paid to stockholders	**(3,388)**	(3,316)
Other — net	**(98)**	(197)
Net cash used in financing activities	**$ (5,300)**	$ (1,124)

2020 Debt Activity:

Total debt was approximately $18.8 billion at December 31, 2020 and $20.3 billion at December 31, 2019. Repayment of debt primarily consists of the aggregate $445 million principal amount of Third Lien Notes and the 650 million euros and $500 million aggregate principal amount of floating-rate medium-term notes that matured in May 2020 and August 2020, respectively. During the third quarter of 2020, the Company paid the outstanding balances on their Japanese yen and euro credit facilities. In addition, $1.0 billion aggregate principal amount of notes maturing in September 2021 were repaid in December 2020 via make-whole-call offers. Increases in debt were related to the March 2020 issuance of $1.75 billion in registered notes. There was no outstanding commercial paper at December 31, 2020, as compared to $150 million at December 31, 2019. 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.

2019 Debt Activity:

Total debt was approximately $5.7 billion higher at December 31, 2019 when compared to December 31, 2018. Increases in debt related to the first quarter and third quarter 2019 issuances of $2.25 billion of medium-term notes and $3.25 billion of other registered notes, respectively, 69 billion Japanese yen (approximately $632 million at December 31, 2019 exchange rates) outstanding from the 80 billion Japanese yen credit facility established in September 2019, 150 million euros (approximately $168 million at December 31, 2019 exchange rates) outstanding credit facility established in November 2019, and $0.5 billion of debt assumed and not yet repaid as a result of the Company's acquisition of Acelity Inc. Repayment of debt primarily consists of the June 2019 repayment of $625 million aggregate principal amount of fixed-rate medium-term notes that had matured, in addition to debt assumed and subsequently repaid as a result of the Company's acquisitions of M*Modal and Acelity Inc. as discussed in Note 3. Outstanding commercial paper decreased $285 million from December 31, 2018 to December 31, 2019. Refer to Note 12 for more detail regarding debt.

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 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 2020, the Company purchased $0.4 billion of its own stock, compared to purchases of $1.4 billion in 2019. As of December 31, 2020, approximately $7.8 billion remained available under the authorization. In the first quarter of 2020, the Company suspended repurchases under its board-approved share repurchase program with other repurchase activity limited to 3M's stock compensation plans. The Company plans to resume share purchases in 2021. 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:

Cash dividends paid to shareholders totaled $3.388 billion ($5.88 per share) in 2020, $3.316 billion ($5.76 per share) in 2019, and $3.193 billion ($5.44 per share) in 2018. 3M has paid dividends since 1916. In February 2021, 3M's Board of Directors declared a first-quarter 2021 dividend of $1.48 per share, an increase of 1 percent. This is equivalent to an annual dividend of $5.92 per share and marked the 63rd 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 cash 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. The first quarter of each year is typically 3M's seasonal low for free cash flow and free cash flow conversion. 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.

Free cash flow conversion grew to 123% in 2020 compared to 118% in 2019 as increases in free cash flow out-paced increases in net income attributable to 3M.

Years ended December 31 (Millions)	2020	2019
Major GAAP Cash Flow Categories		
Net cash provided by (used in) operating activities	**$ 8,113**	$ 7,070
Net cash provided by (used in) investing activities	**(580)**	(6,444)
Net cash provided by (used in) financing activities	**(5,300)**	(1,124)
Free Cash Flow (non-GAAP measure)		
Net cash provided by (used in) operating activities	**$ 8,113**	$ 7,070
Purchases of property, plant and equipment	**(1,501)**	(1,699)
Free cash flow	**$ 6,612**	$ 5,371
Net income attributable to 3M	**$ 5,384**	$ 4,570
Free cash flow conversion	**123 %**	118 %

Off-Balance Sheet Arrangements and Contractual Obligations:

As of December 31, 2020, the Company has not utilized special purpose entities to facilitate off-balance sheet financing arrangements. Refer to the section entitled "Warranties/Guarantees" in Note 16 for discussion of accrued product warranty liabilities and guarantees.

In addition to guarantees, 3M, in the normal course of business, periodically enters into agreements that require the Company to indemnify either major customers or suppliers for specific risks, such as claims for injury or property damage arising out of the use of 3M products or the negligence of 3M personnel, or claims alleging that 3M products infringe third-party patents or other intellectual property. While 3M's maximum exposure under these indemnification provisions cannot be estimated, these indemnifications are not expected to have a material impact on the Company's consolidated results of operations or financial condition.

Contractual Obligations

A summary of the Company's significant contractual obligations as of December 31, 2020, follows:

		Payments due by year					
(Millions)	**Total**	**2021**	**2022**	**2023**	**2024**	**2025**	**After 2025**
Total debt (Note 12)	$ 18,795	$ 806	$ 1,659	$ 1,878	$ 1,100	$ 1,790	$ 11,562
Interest on long-term debt	6,540	501	475	449	416	389	4,310
Operating leases (Note 17)	930	273	201	141	93	60	162
Finance leases (Note 17)	123	20	18	18	16	10	41
Tax Cuts and Jobs Act (TCJA) transition tax (Note 10)	653	69	69	129	172	214	—
Unconditional purchase obligations and other	1,735	1,027	330	218	97	48	15
Total contractual cash obligations	$ 28,776	$ 2,696	$ 2,752	$ 2,833	$ 1,894	$ 2,511	$ 16,090

As a result of put provisions associated with certain debt instruments, long-term debt payments due in 2021 include floating rate notes totaling $53 million (classified as current portion of long-term debt).

In conjunction with the 2017 Tax Cuts and Jobs Act (TCJA), the Company has a transition tax liability that is payable over 8 years beginning in 2018. See Note 10 for additional details.

Unconditional purchase obligations are defined as agreements to purchase goods or services that are enforceable and legally binding on the Company. Included in the unconditional purchase obligations category above are certain obligations related to take or pay contracts, capital commitments, service agreements and utilities. These estimates include both unconditional purchase obligations with terms in excess of one year and normal ongoing purchase obligations with terms of less than one year. Many of these commitments relate to take or pay contracts, in which 3M guarantees payment to ensure availability of products or services that are sold to customers. The Company expects to receive consideration (products or services) for these unconditional purchase obligations. Contractual capital commitments are included in the preceding table, but these commitments represent a small part of the Company's expected capital spending. The purchase obligation amounts do not represent the entire anticipated purchases in the future but represent only those items for which the Company is contractually obligated. The majority of 3M's products and services are purchased as needed, with no unconditional commitment. For this reason, these amounts will not provide a reliable indicator of the Company's expected future cash outflows on a stand-alone basis.

Other obligations, included in the preceding table within the caption entitled "Unconditional purchase obligations and other" include the current portion of the liability for uncertain tax positions under ASC 740, which is expected to be paid out in cash in the next 12 months, when applicable. The Company is not able to reasonably estimate the timing of the long-term payments, or the amount by which the liability will increase or decrease over time; therefore, the long-term portion of the total net tax liability of $933 million is excluded from the preceding table. In addition, the transition tax prescribed under the Tax Cuts and Jobs Act (TCJA) is separately included in the table above. Refer to Note 10 for further details. Additionally, included within the caption entitled "Unconditional purchase obligations and other" are operating lease commitments that have not yet commenced, which as of December 31, 2020, totaled approximately $18 million. These commitments pertain to 3M's right of use buildings.

As discussed in Note 13, the Company does not have a required minimum cash pension contribution obligation for its U.S. plans in 2021 and Company contributions to its U.S. and international pension plans are expected to be largely discretionary in future years; therefore, amounts related to these plans are not included in the preceding table.

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 dedesignate 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 $2.3 billion at December 31, 2020. The dollar equivalent gross notional amount of the Company's foreign exchange forward and option contracts not designated as hedging instruments was $3.2 billion at December 31, 2020. In addition, as of December 31, 2020, the Company had 3.5 billion Euros 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, 2020 was $403 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. The related mark-to-market gain or loss on qualifying hedges was included in other comprehensive income to the extent effective, and reclassified into cost of sales in the period during which the hedged transaction affected earnings.

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, 2020. The model (third-party bank dataset) used a 95 percent confidence level over a 12-month time horizon. The exposure to changes in currency rates model used nine currencies, interest rates related to two currencies, and commodity prices related to five commodities. This model does not purport to represent what actually will be experienced by the Company. This model does not include foreign currency hedges, because the Company believes their inclusion would not materially impact the results. The following table summarizes the possible adverse and positive impacts to after-tax earnings related to these exposures.

	Adverse impact on after-tax earnings		Positive impact on after-tax earnings	
(Millions)	**2020**	**2019**	**2020**	**2019**
Foreign exchange rates	**$ (169)**	$ (133)	**$ 175**	$ 137
Interest rates	**(1)**	(11)	**2**	10
Commodity prices	**—**	(2)	**—**	1

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 $70 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 $40 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.

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, 2020, the Company's internal control over financial reporting is effective.

The Company's internal control over financial reporting as of December 31, 2020 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, 2020.

3M Company

Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors 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, 2020 and 2019, and the related consolidated statements of income, of comprehensive income, of changes in equity and of cash flows for each of the three years in the period ended December 31, 2020, 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, 2020, 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, 2020 and 2019, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2020 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, 2020, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Change in Accounting Principle

As discussed in Note 1 to the consolidated financial statements, the Company changed the manner in which it accounts for leases in 2019.

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 matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates 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 matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Legal Proceedings Contingencies

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 liability is probable. Where the reasonable estimate of the probable loss is a range, management records 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 contingencies is a critical audit matter are there was 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, 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.

/s/ PricewaterhouseCoopers LLP
Minneapolis, Minnesota
February 4, 2021

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)	2020	2019	2018
Net sales	$ 32,184	$ 32,136	$ 32,765
Operating expenses			
Cost of sales	16,605	17,136	16,682
Selling, general and administrative expenses	6,929	7,029	7,602
Research, development and related expenses	1,878	1,911	1,821
Gain on sale of businesses	(389)	(114)	(547)
Total operating expenses	25,023	25,962	25,558
Operating income	7,161	6,174	7,207
Other expense (income), net	450	462	207
Income before income taxes	6,711	5,712	7,000
Provision for income taxes	1,318	1,130	1,637
Income of consolidated group	$ 5,393	$ 4,582	$ 5,363
Income (loss) from unconsolidated subsidiaries, net of taxes	(5)	—	—
Net income including noncontrolling interest	$ 5,388	$ 4,582	$ 5,363
Less: Net income (loss) attributable to noncontrolling interest	4	12	14
Net income attributable to 3M	$ 5,384	$ 4,570	$ 5,349
Weighted average 3M common shares outstanding — basic	577.6	577.0	588.5
Earnings per share attributable to 3M common shareholders — basic	$ 9.32	$ 7.92	$ 9.09
Weighted average 3M common shares outstanding — diluted	582.2	585.1	602.0
Earnings per share attributable to 3M common shareholders — diluted	$ 9.25	$ 7.81	$ 8.89

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

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

(Millions)	2020	2019	2018
Net income including noncontrolling interest	**$ 5,388**	$ 4,582	$ 5,363
Other comprehensive income (loss), net of tax:			
Cumulative translation adjustment	**447**	211	(467)
Defined benefit pension and postretirement plans adjustment	**171**	(560)	444
Cash flow hedging instruments	**(142)**	(72)	176
Total other comprehensive income (loss), net of tax	**476**	(421)	153
Comprehensive income (loss) including noncontrolling interest	**5,864**	4,161	5,516
Comprehensive (income) loss attributable to noncontrolling interest	**(2)**	(11)	(8)
Comprehensive income (loss) attributable to 3M	**$ 5,862**	$ 4,150	$ 5,508

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)	2020	2019
Assets		
Current assets		
Cash and cash equivalents	**$ 4,634**	$ 2,353
Marketable securities — current	**404**	98
Accounts receivable — net of allowances of $233 and $161	**4,705**	4,791
Inventories		
Finished goods	**2,081**	2,003
Work in process	**1,226**	1,194
Raw materials and supplies	**932**	937
Total inventories	**4,239**	4,134
Prepaids	**675**	704
Other current assets	**325**	891
Total current assets	**14,982**	12,971
Property, plant and equipment	**26,650**	26,124
Less: Accumulated depreciation	**(17,229)**	(16,791)
Property, plant and equipment — net	**9,421**	9,333
Operating lease right of use assets	**864**	858
Goodwill	**13,802**	13,444
Intangible assets — net	**5,835**	6,379
Other assets	**2,440**	1,674
Total assets	**$ 47,344**	$ 44,659
Liabilities		
Current liabilities		
Short-term borrowings and current portion of long-term debt	**$ 806**	$ 2,795
Accounts payable	**2,561**	2,228
Accrued payroll	**747**	702
Accrued income taxes	**300**	194
Operating lease liabilities — current	**256**	247
Other current liabilities	**3,278**	3,056
Total current liabilities	**7,948**	9,222
Long-term debt	**17,989**	17,518
Pension and postretirement benefits	**4,405**	3,911
Operating lease liabilities	**609**	607
Other liabilities	**3,462**	3,275
Total liabilities	**$ 34,413**	$ 34,533
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, 2020: 577,749,638		
Shares outstanding - December 31, 2019: 575,184,835		
Additional paid-in capital	**6,162**	5,907
Retained earnings	**43,761**	42,135
Treasury stock, at cost:	**(29,404)**	(29,849)
Accumulated other comprehensive income (loss)	**(7,661)**	(8,139)
Total 3M Company shareholders' equity	**12,867**	10,063
Noncontrolling interest	**64**	63
Total equity	**$ 12,931**	$ 10,126
Total liabilities and equity	**$ 47,344**	$ 44,659

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

		3M Company Shareholders				
(Dollars in millions, except per share amounts)	Total	Common Stock and Additional Paid-in Capital	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Income (Loss)	Non-controlling Interest
Balance at December 31, 2017	**$ 11,622**	**$ 5,361**	**$ 39,115**	**$ (25,887)**	**$ (7,026)**	**$ 59**
Net income	5,363		5,349			14
Other comprehensive income (loss), net of tax:						
Cumulative translation adjustment	(467)				(461)	(6)
Defined benefit pension and post-retirement plans adjustment	444				444	—
Cash flow hedging instruments - unrealized gain (loss)	176				176	—
Total other comprehensive income (loss), net of tax	153					
Dividends declared ($5.44 per share, Note 8)	(3,193)		(3,193)			
Transfer of ownership involving non-wholly owned subsidiaries	—		14		1	(15)
Stock-based compensation	291	291				
Reacquired stock	(4,888)			(4,888)		
Issuances pursuant to stock option and benefit plans	500		(649)	1,149		
Balance at December 31, 2018	**$ 9,848**	**$ 5,652**	**$ 40,636**	**$ (29,626)**	**$ (6,866)**	**$ 52**
Impact of adoption of ASU No. 2018-02	—		853		(853)	
Impact of adoption of ASU No. 2016-02	14		14			
Net income	4,582		4,570			12
Other comprehensive income (loss), net of tax:						
Cumulative translation adjustment	211				212	(1)
Defined benefit pension and post-retirement plans adjustment	(560)				(560)	—
Cash flow hedging instruments - unrealized gain (loss)	(72)				(72)	—
Total other comprehensive income (loss), net of tax	(421)					
Dividends declared ($5.76 per share, Note 8)	(3,316)		(3,316)			
Stock-based compensation	264	264				
Reacquired stock	(1,381)			(1,381)		
Issuances pursuant to stock option and benefit plans	536		(622)	1,158		
Balance at December 31, 2019	**$ 10,126**	**$ 5,916**	**$ 42,135**	**$ (29,849)**	**$ (8,139)**	**$ 63**
Net income	**5,388**		**5,384**			**4**
Other comprehensive income (loss), net of tax:						
Cumulative translation adjustment	**447**				**449**	**(2)**
Defined benefit pension and post-retirement plans adjustment	**171**				**171**	**—**
Cash flow hedging instruments - unrealized gain (loss)	**(142)**				**(142)**	**—**
Total other comprehensive income (loss), net of tax	**476**					
Dividends declared ($5.88 per share, Note 8)	**(3,388)**		**(3,388)**			
Purchase of non-controlling interest	**(1)**					**(1)**
Stock-based compensation	**255**	**255**				
Reacquired stock	**(358)**			**(358)**		
Issuances pursuant to stock option and benefit plans	**433**		**(370)**	**803**		
Balance at December 31, 2020	**$ 12,931**	**$ 6,171**	**$ 43,761**	**$ (29,404)**	**$ (7,661)**	**$ 64**

Supplemental share information	**2020**	**2019**	**2018**
Treasury stock			
Beginning balance	**368,848,221**	367,457,888	349,148,819
Reacquired stock	**2,286,109**	7,575,647	23,526,293
Issuances pursuant to stock options and benefit plans	**(4,850,912)**	(6,185,314)	(5,217,224)
Ending balance	**366,283,418**	368,848,221	367,457,888

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)	2020	2019	2018
Cash Flows from Operating Activities			
Net income including noncontrolling interest	**$ 5,388**	$ 4,582	$ 5,363
Adjustments to reconcile net income including noncontrolling interest to net cash provided by operating activities			
Depreciation and amortization	**1,911**	1,593	1,488
Company pension and postretirement contributions	**(156)**	(210)	(370)
Company pension and postretirement expense	**406**	357	410
Stock-based compensation expense	**262**	278	302
Gain on sale of businesses	**(389)**	(111)	(545)
Deferred income taxes	**(165)**	(273)	(57)
Loss on deconsolidation of Venezuelan subsidiary	**—**	162	—
Changes in assets and liabilities			
Accounts receivable	**165**	345	(305)
Inventories	**(91)**	370	(509)
Accounts payable	**252**	(117)	408
Accrued income taxes (current and long-term)	**132**	205	134
Other — net	**398**	(111)	120
Net cash provided by (used in) operating activities	**8,113**	7,070	6,439
Cash Flows from Investing Activities			
Purchases of property, plant and equipment (PP&E)	**(1,501)**	(1,699)	(1,577)
Proceeds from sale of PP&E and other assets	**128**	123	262
Acquisitions, net of cash acquired	**(25)**	(4,984)	13
Purchases of marketable securities and investments	**(1,579)**	(1,635)	(1,828)
Proceeds from maturities and sale of marketable securities and investments	**1,811**	1,443	2,497
Proceeds from sale of businesses, net of cash sold	**576**	236	846
Other — net	**10**	72	9
Net cash provided by (used in) investing activities	**(580)**	(6,444)	222
Cash Flows from Financing Activities			
Change in short-term debt — net	**(143)**	(316)	(284)
Repayment of debt (maturities greater than 90 days)	**(3,482)**	(2,716)	(1,034)
Proceeds from debt (maturities greater than 90 days)	**1,750**	6,281	2,251
Purchases of treasury stock	**(368)**	(1,407)	(4,870)
Proceeds from issuance of treasury stock pursuant to stock option and benefit plans	**429**	547	485
Dividends paid to shareholders	**(3,388)**	(3,316)	(3,193)
Other — net	**(98)**	(197)	(56)
Net cash provided by (used in) financing activities	**(5,300)**	(1,124)	(6,701)
Effect of exchange rate changes on cash and cash equivalents	**48**	(2)	(160)
Net increase (decrease) in cash and cash equivalents	**2,281**	(500)	(200)
Cash and cash equivalents at beginning of year	**2,353**	2,853	3,053
Cash and cash equivalents at end of period	**$ 4,634**	$ 2,353	$ 2,853

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

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.

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

As described in Note 19, effective in the first quarter of 2020, the Company changed its business segment reporting in its continuing effort to improve the alignment of businesses around markets and customers. Additionally, the Company consolidated the way it presents geographic area net sales by providing an aggregate Americas geographic region (combining former United States and Latin America and Canada areas). Also, effective in the second quarter of 2020, the measure of segment operating performance used by 3M’s chief operating decision maker changed and, as a result, the Company’s disclosed measure of segment profit/loss has been updated. 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 with the exception of 3M’s subsidiaries in Argentina, the economy of which was considered highly inflationary beginning in 2018, and accordingly 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.

3M had a consolidating subsidiary in Venezuela, the financial statements of which were remeasured as if its functional currency were that of its parent because Venezuela’s economic environment is considered highly inflationary. The operating income of this subsidiary was immaterial as a percent of 3M’s consolidated operating income for the periods presented. In light of circumstances, including the country’s unstable environment and heightened unrest leading to sustained lack of demand, and expectation that these circumstances will continue for the foreseeable future, during May 2019, 3M concluded it no longer met the criteria of control in order to continue consolidating its Venezuelan operations. As a result, as of May 31, 2019, the Company began reflecting its interest in the Venezuelan subsidiary as an equity investment that does not have a readily determinable fair value. This resulted in a pre-tax charge of $162 million within other expense (income) in the second quarter of 2019. The charge primarily relates to $144 million of foreign currency translation losses associated with foreign currency movements before Venezuela was accounted for as a highly inflationary economy and pension elements previously included in accumulated other comprehensive loss along with write-down of intercompany receivable and investment balances associated with this subsidiary. Beginning May 31, 2019, 3M’s consolidated balance sheets and statements of operations no longer include the Venezuelan entity’s operations other than an immaterial equity investment and associated loss or income thereon largely only to the extent, if any, that 3M provides support or materials and receives funding or dividends.

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 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 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 would be 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 $145 million and $137 million at December 31, 2020 and 2019, 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 using earnings for the reporting unit multiplied by a price/earnings ratio for comparable industry groups or by using 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 four 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 ten to twenty years, patents largely between seven to twenty years, other technology-based largely between four to twenty years, definite lived tradenames largely between six and twenty years, and other intangibles largely between five to eight 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, 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. Asset impairment charges related to intangible assets and property, plant and equipment reflect the excess of the assets' carrying values over their fair values.

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 transfers 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 substantially all arrangements recognized over time, the Company applies the "right to invoice" practical expedient. As a result, 3M recognizes revenue at the invoice amount when the entity has a right to invoice a customer at an amount that corresponds directly with the value to the customer of the Company's performance completed to date.

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 by industry and regional economic data, current expectations of future credit losses, 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 $278 million in 2020, $348 million in 2019 and $396 million in 2018.

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 $1.878 billion in 2020, $1.911 billion in 2019 and $1.821 billion in 2018. 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 $1.146 billion in 2020, $1.253 billion in 2019 and $1.253 billion in 2018. 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, 2020 and 2019, the Company had valuation allowances of $135 million and $158 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 2020, 2019 and 2018 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 (18.1 million average options for 2020, 8.9 million average options for 2019, and 2.9 million average options for 2018). The computations for basic and diluted earnings per share for the years ended December 31 follow:

Earnings Per Share Computations

(Amounts in millions, except per share amounts)	2020	2019	2018
Numerator:			
Net income attributable to 3M	**$ 5,384**	$ 4,570	$ 5,349
Denominator:			
Denominator for weighted average 3M common shares outstanding – basic	**577.6**	577.0	588.5
Dilution associated with the Company's stock-based compensation plans	**4.6**	8.1	13.5
Denominator for weighted average 3M common shares outstanding – diluted	**582.2**	585.1	602.0
Earnings per share attributable to 3M common shareholders – basic	**$ 9.32**	$ 7.92	$ 9.09
Earnings per share attributable to 3M common shareholders – diluted	**$ 9.25**	$ 7.81	$ 8.89

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, interest rate and commodity market 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.

After adoption of ASU 2016-02 and related standards in 2019, 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 noncancelable lease term as adjusted for contractual options to terminate or renew, and payments for non-components such as sales tax. Certain 3M leases contain immaterial variable lease payments based on number of units produced.

New Accounting Pronouncements

In June 2016, the FASB issued ASU No. 2016-13, *Measurement of Credit Losses on Financial Instruments*, which revised guidance for the accounting for credit losses on financial instruments within its scope, and through March 2020 issued ASUs that amended the standard (ASU No. 2018-19, ASU No. 2019-04, ASU No. 2019-05, ASU No. 2019-11, and ASU No. 2020-03). The new standard introduced an approach, based on expected losses, to estimate credit losses on certain types of financial instruments and modified the impairment model for available-for-sale debt securities. The new approach to estimating credit losses (referred to as the current expected credit losses model) applies to most financial assets measured at amortized cost and certain other instruments, including trade and other receivables, loans, held-to-maturity debt securities, net investments in leases and off-balance-sheet credit exposures. With respect to available-for-sale (AFS) debt securities, the ASU amended the current other-than-temporary impairment model. For such securities with unrealized losses, entities still consider if a portion of any impairment is related only to credit losses and therefore recognized as a reduction in income. However, rather than also reflecting that credit loss amount as a permanent reduction in cost (amortized cost) basis of that AFS debt security, the ASU requires that credit losses be reflected as an allowance. As a result, under certain circumstances, a recovery in value could result in previous allowances, or portions thereof, reversing back into income. For 3M, this ASU was effective January 1, 2020. Adoption of this ASU did not have a material impact due to the nature and extent of 3M’s financial instruments in scope for this ASU (primarily accounts receivable) and the historical, current and expected credit quality of its customers as of the date of adoption.

In August 2018, the FASB issued ASU No. 2018-15, *Customer’s Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract*, which aligned the accounting for implementation costs incurred in a cloud computing arrangement that is a service arrangement (i.e. hosting arrangement) with the guidance on capitalizing costs in ASC 350-40, Internal-Use Software. The ASU permitted either a prospective or retrospective transition approach. For 3M, the ASU was effective as of January 1, 2020, with the Company adopting on a prospective basis. Relevant capitalizable costs are included in prepaid expenses or other non-current assets, as applicable, prospectively beginning in 2020. Implementation costs incurred as part of 3M’s cloud-computing service arrangements were not material in 2020.

In December 2019, the FASB issued ASU No. 2019-12, *Simplifying the Accounting for Income Taxes (Topic 740).* This ASU simplifies the accounting for income taxes by, among other things, eliminating certain existing exceptions related to the general approach in ASC 740 relating to franchise taxes, reducing complexity in the interim-period accounting for year-to-date loss limitations and changes in tax laws, and clarifying the accounting for transactions outside of business combination that result in a step-up in the tax basis of goodwill. The transition requirements are primarily prospective and the effective date for 3M is January 1, 2021, with early adoption permitted. As 3M does not have material activity associated with items such as franchise taxes or the types of transactions described above, does not typically have entities subject to relevant loss limitations and is not currently addressing enacted tax law changes for which this ASU applies, 3M does not expect this ASU to have a material impact on its consolidated results of operations and financial condition.

In January 2020, the FASB issued ASU No. 2020-01, *Clarifying the Interactions between Topic 321, Investments—Equity Securities, Topic 323, Investments—Equity Method and Joint Ventures, and Topic 815, Derivatives and Hedging*. This ASU clarifies that when accounting for certain equity securities, a company should consider observable transactions before applying or upon discontinuing the equity method of accounting for the purposes of applying the measurement alternative. Further, this ASU notes when determining the accounting for certain derivatives, a company should not consider if the underlying securities would be accounted for under the equity method or fair value option. The transition requirements are prospective and the effective date for 3M is January 1, 2021, with early adoption permitted. As 3M does not currently have a material amount of equity securities and equity method investments or relevant derivatives, 3M does not expect this ASU to have a material impact on its consolidated results of operations and financial condition, but will apply such guidance, where applicable, to future circumstances.

In March 2020, the FASB issued ASU No. 2020-04, *Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting* and in January 2021 issued ASU No. 2021-01, *Reference Rate Reform (Topic 848): Scope*. These ASUs provides temporary optional expedients and exceptions to existing guidance on contract modifications and hedge accounting to facilitate the market transition from existing reference rates, such as LIBOR which is being phased out beginning at the end of 2021, to alternate reference rates, such as SOFR. These standards were effective upon issuance and allowed application to contract changes as early as January 1, 2020. These provisions may impact the Company as contract modifications and other changes occur during the LIBOR transition period. The Company continues to evaluate the optional relief guidance provided within these ASUs, has reviewed its debt securities, bank facilities, and derivative instruments and continues to evaluate commercial contracts that may utilize LIBOR as the reference rate. 3M will continue its assessment and monitor regulatory developments during the LIBOR transition period.

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 at December 31, 2019 and 2020. Approximately $410 million of the December 31, 2019 balance was recognized as revenue during the year ended December 31, 2020, while approximately $600 million of the December 31, 2018 balance was recognized as revenue during the year ended December 31, 2019.

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 $586 million for the year ended December 31, 2020. Applicable rental revenue for the years ended December 31, 2019 and 2018 was not material.

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

	Year ended December 31,		
Net Sales (Millions)	**2020**	**2019**	**2018**
Abrasives	**$ 1,180**	$ 1,387	$ 1,512
Automotive Aftermarket	**1,102**	1,229	1,356
Closure and Masking Systems	**993**	1,111	1,224
Communication Markets	**—**	—	175
Electrical Markets	**1,121**	1,200	1,244
Industrial Adhesives and Tapes	**2,562**	2,689	2,841
Personal Safety	**4,433**	3,504	3,601
Roofing Granules	**390**	366	353
Other Safety and Industrial	**(14)**	28	108
Total Safety and Industrial Business Segment	**$ 11,767**	$ 11,514	$ 12,414
Advanced Materials	**$ 1,036**	$ 1,245	$ 1,236
Automotive and Aerospace	**1,612**	1,913	2,074
Commercial Solutions	**1,529**	1,785	1,863
Electronics	**3,767**	3,711	3,971
Transportation Safety	**890**	943	951
Other Transportation and Electronics	**(7)**	(6)	9
Total Transportation and Electronics Business Segment	**$ 8,827**	$ 9,591	$ 10,104
Drug Delivery	**$ 146**	$ 372	$ 407
Food Safety	**342**	341	328
Health Information Systems	**1,140**	1,177	837
Medical Solutions	**4,787**	3,439	3,073
Oral Care	**1,076**	1,321	1,353
Separation and Purification Sciences	**853**	791	817
Other Health Care	**1**	(10)	6
Total Health Care Business Group	**$ 8,345**	$ 7,431	$ 6,821
Consumer Health Care	**$ 366**	$ 379	$ 389
Home Care	**1,066**	991	1,013
Home Improvement	**2,527**	2,297	2,216
Stationery and Office	**1,223**	1,378	1,399
Other Consumer	**154**	106	110
Total Consumer Business Group	**$ 5,336**	$ 5,151	$ 5,127
Corporate and Unallocated	**$ (1)**	$ 110	$ 50
Elimination of Dual Credit	**(2,090)**	(1,661)	(1,751)
Total Company	**$ 32,184**	$ 32,136	$ 32,765

Net Sales (Millions)	Year ended December 31, 2020 Americas	Asia Pacific	Europe, Middle East and Africa	Other Unallocated	Worldwide
Safety and Industrial	**$ 6,177**	**$ 2,805**	**$ 2,791**	**$ (6)**	**$ 11,767**
Transportation and Electronics	**2,455**	**5,097**	**1,282**	**(7)**	**8,827**
Health Care	**5,062**	**1,478**	**1,809**	**(4)**	**8,345**
Consumer	**3,832**	**939**	**567**	**(2)**	**5,336**
Corporate and Unallocated	**(1)**	**—**	**—**	**—**	**(1)**
Elimination of Dual Credit	**(1,000)**	**(750)**	**(340)**	**—**	**(2,090)**
Total Company	**$ 16,525**	**$ 9,569**	**$ 6,109**	**$ (19)**	**$ 32,184**

Net Sales (Millions)	Year ended December 31, 2019 Americas	Asia Pacific	Europe, Middle East and Africa	Other Unallocated	Worldwide
Safety and Industrial	$ 6,008	$ 2,844	$ 2,666	$ (4)	$ 11,514
Transportation and Electronics	2,901	5,221	1,472	(3)	9,591
Health Care	4,200	1,490	1,743	(2)	7,431
Consumer	3,641	952	559	(1)	5,151
Corporate and Unallocated	109	—	1	—	110
Elimination of Dual Credit	(735)	(711)	(215)	—	(1,661)
Total Company	$ 16,124	$ 9,796	$ 6,226	$ (10)	$ 32,136

Net Sales (Millions)	Year ended December 31, 2018 Americas	Asia Pacific	Europe, Middle East and Africa	Other Unallocated	Worldwide
Safety and Industrial	$ 6,345	$ 3,076	$ 2,996	$ (3)	$ 12,414
Transportation and Electronics	3,015	5,513	1,577	(1)	10,104
Health Care	3,636	1,453	1,733	(1)	6,821
Consumer	3,562	980	586	(1)	5,127
Corporate and Unallocated	51	—	—	(1)	50
Elimination of Dual Credit	(745)	(768)	(238)	—	(1,751)
Total Company	$ 15,864	$ 10,254	$ 6,654	$ (7)	$ 32,765

Americas included United States net sales to customers of $13.9 billion, $13.2 billion and $12.8 billion in 2020, 2019 and 2018, respectively. Asia Pacific included China/Hong Kong net sales to customers of $3.5 billion, $3.3 billion and $3.6 billion in 2020, 2019, and 2018, 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.

2020 acquisitions:

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

2019 acquisitions:

In February 2019, 3M completed the acquisition of the technology business of M*Modal for $0.7 billion of cash, net of cash acquired, and assumption of $0.3 billion of M*Modal's debt. Based in Pittsburgh, Pennsylvania, M*Modal is a leading healthcare technology provider of cloud-based, conversational artificial intelligence-powered systems that help physicians efficiently capture and improve the patient narrative. The allocation of purchase consideration related to M*Modal was completed in the fourth quarter of 2019. Net sales and operating loss (inclusive of transaction and integration costs) of this business included in 3M's consolidated results of operations in 2019 were approximately $300 million and $25 million, respectively. M*Modal is reported within the Company's Health Care business.

In October 2019, the Company completed the acquisition of all of the ownership interests of Acelity Inc. and its KCI subsidiaries. Acelity is a leading global medical technology company focused on advanced wound care and specialty surgical applications marketed under the KCI brand. In the first quarter of 2020, the Company paid certain considerations previously accrued under the terms of related agreements. Adjustments in 2020 to the purchase price allocation were approximately $34 million and related to identification and valuation of certain acquired assets and liabilities. The change to provisional amounts did not result in material impacts to results of operations in 2020 or any portion related to earlier quarters in the measurement period. The allocation of purchase consideration related to Acelity was completed in the third quarter of 2020. Net sales and operating loss (inclusive of transaction and integration costs) of this business included in 3M's consolidated results of operations in the fourth quarter of 2019 were approximately $350 million and $45 million, respectively. Acelity is reported within the Company's Health Care business.

Proforma information related to these acquisitions has not been included as the impact on the Company's consolidated results of operations was not considered material. The following table shows the impact on the consolidated balance sheet of the purchase price allocations related to the 2019 acquisitions and assigned finite-lived asset weighted average lives.

	2019 Acquisition Activity			
(Millions) Asset (Liability)	M*Modal	Acelity	Total	Finite-Lived Intangible-Asset Weighted-Average Lives (Years)
Accounts receivable	$ 75	$ 295	$ 370	
Inventory	—	186	186	
Other current assets	2	65	67	
Property, plant, and equipment	8	147	155	
Purchased finite-lived intangible assets:				
Customer related intangible assets	275	1,760	2,035	18
Other technology-based intangible assets	160	1,390	1,550	10
Definite-lived tradenames	11	485	496	16
Purchased goodwill	517	2,952	3,469	
Other assets	58	73	131	
Accounts payable and other liabilities	(127)	(438)	(565)	
Interest bearing debt	(251)	(2,322)	(2,573)	
Deferred tax asset/(liability) and accrued income taxes	(24)	(288)	(312)	
Net assets acquired	$ 704	$ 4,305	$ 5,009	
Supplemental information:				
Cash paid	$ 708	$ 4,486	$ 5,194	
Less: Cash acquired	4	206	210	
Cash paid, net of cash acquired	$ 704	$ 4,280	$ 4,984	
Consideration payable	—	25	25	
	$ 704	$ 4,305	$ 5,009	

Purchased identifiable finite-lived intangible assets related to acquisitions which closed in 2019 totaled $4.081 billion. The associated finite-lived intangible assets acquired will be amortized on a systematic and rational basis (generally straight line) over a weighted-average life of 14 years (lives ranging from 6 to 19 years).

2018 acquisition:

There were no acquisitions that closed during 2018.

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 sale of businesses are reflected in Corporate and Unallocated.

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 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 reflects 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 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.

2019 divestitures:

During the first quarter of 2019, the Company sold certain oral care technology comprising a business and reflected an earnout on a previous divestiture resulting in an aggregate immaterial gain.

In August 2019, 3M closed on the sale of its gas and flame detection business, a leader in fixed and portable gas and flame detection, to Teledyne Technologies Incorporated. 3M's gas and flame business was part of the overall October 2017 acquisition of underlying legal entities and associated assets of Scott Safety. This business has annual sales of approximately $120 million. The transaction resulted in a pre-tax gain of $112 million that was reported within the Company's Safety and Industrial business.

2018 divestitures:

In February 2018, 3M closed on the sale of certain personal safety product offerings primarily focused on noise, environmental, and heat stress monitoring to TSI, Inc. This business has annual sales of approximately $15 million. The transaction resulted in a pre-tax gain of less than $20 million. In addition, during the first quarter of 2018, 3M divested a polymer additives compounding business, formerly part of the Company's Health Care business, and reflected a gain on final closing adjustments from a prior divestiture which, in aggregate, were not material. In May 2018, 3M divested an abrasives glass products business, formerly part of the Company's Safety and Industrial business, with annual sales of approximately $10 million. The transaction resulted in a pre-tax gain of less than $15 million.

In June 2018, 3M completed the sale of substantially all of its Communication Markets Division to Corning Incorporated. This business, with annual sales of approximately $400 million, consists of optical fiber and copper passive connectivity solutions for the telecommunications industry including 3M's xDSL, FTTx, and structured cabling solutions and, in certain countries, telecommunications system integration services. 3M received cash proceeds of $772 million and reflected a pre-tax gain of $494 million as a result of this divestiture. In December 2018, the Company completed the sale of the remaining telecommunications system integration services portion of the business based in Germany, resulting in a pre-tax gain of $15 million.

Operating income and held for sale amounts
The aggregate operating income of these businesses was approximately $40 million, $40 million, and $85 million in 2020, 2019, and 2018, respectively. The approximate amounts of major assets and liabilities associated with disposal groups classified as held-for-sale as of December 31, 2019 included the following:

(Millions)	December 31, 2019
Inventory	$ 70
Property, plant and equipment	150
Intangible assets	35

In addition, approximately $30 million of goodwill was estimated to be attributable to disposal groups classified as held-for-sale as of December 31, 2019, based upon relative fair value. The amounts above have not been segregated and are classified within the existing corresponding line items on the Company's consolidated balance sheet.

NOTE 4. Goodwill and Intangible Assets

Goodwill

There was no goodwill recorded from acquisitions during 2020. Goodwill from acquisitions total $3.5 billion in 2019, none of which was deductible for tax purposes. The acquisition activity in the following table also includes the net impact of adjustments to the preliminary allocation of purchase price within the one year measurement-period following prior acquisitions, which decreased goodwill by $34 million during 2020. 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, 2018	$ 4,716	$ 1,857	$ 3,248	$ 230	$ 10,051
Acquisition activity	—	—	3,469	—	3,469
Divestiture activity	(49)	—	—	—	(49)
Translation and other	(46)	(27)	22	24	(27)
Balance as of December 31, 2019	$ 4,621	$ 1,830	$ 6,739	$ 254	$ 13,444
Acquisition activity	—	—	**(34)**	—	**(34)**
Divestiture activity	—	**(10)**	**(19)**	—	**(29)**
Translation and other	**66**	**38**	**306**	**11**	**421**
Balance as of December 31, 2020	$ **4,687**	$ **1,858**	$ **6,992**	$ **265**	$ **13,802**

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 2020, 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. In conjunction with the change in segment reporting, 3M completed an assessment indicating no goodwill impairment existed as a result of this new segment structure. 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 2020 for all reporting units and determined that no impairment existed. In addition, the Company had no impairments of goodwill in 2019 or 2018.

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, as of December 31, follow:

(Millions)	December 31, 2020	December 31, 2019
Customer related intangible assets	**$ 4,280**	$ 4,316
Patents	**537**	538
Other technology-based intangible assets	**2,114**	2,124
Definite-lived tradenames	**1,178**	1,158
Other amortizable intangible assets	**104**	125
Total gross carrying amount	**$ 8,213**	$ 8,261
Accumulated amortization — customer related	**(1,422)**	(1,180)
Accumulated amortization — patents	**(512)**	(499)
Accumulated amortization — other technology-based	**(638)**	(435)
Accumulated amortization — definite-lived tradenames	**(385)**	(316)
Accumulated amortization — other	**(79)**	(90)
Total accumulated amortization	**$ (3,036)**	$ (2,520)
Total finite-lived intangible assets — net	**$ 5,177**	$ 5,741
Non-amortizable intangible assets (primarily tradenames)	**658**	638
Total intangible assets — net	**$ 5,835**	$ 6,379

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, 3M reflected an immaterial charge related to impairment of certain indefinite-lived assets in the first quarter of 2020.

Amortization expense for the years ended December 31 follows:

(Millions)	2020	2019	2018
Amortization expense	**$ 537**	$ 341	$ 249

Expected amortization expense for acquired amortizable intangible assets recorded as of December 31, 2020 follows:

(Millions)	2021	2022	2023	2024	2025	After 2025
Amortization expense	$ 528	$ 515	$ 488	$ 459	$ 428	$ 2,759

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 Restructuring Actions:

Operational/Marketing Capability Restructuring:

In late 2020, 3M announced it would undertake certain actions 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. During the fourth quarter of 2020, management approved and committed to undertake associated restructuring actions impacting approximately 2,100 positions resulting in a pre-tax charge of $137 million. 3M is planning further actions under this initiative primarily in the second half of 2021. This aggregate initiative, spanning 2020 and 2021, is expected to impact approximately 2,900 positions worldwide with an expected pre-tax charge of $250 to $300 million. The related 2020 restructuring charges were recorded in the income statement as follows:

(Millions)	Fourth Quarter 2020
Cost of sales	$ 51
Selling, general and administrative expenses	79
Research, development and related expenses	7
Total operating income impact	$ 137

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

	Fourth Quarter 2020		
(Millions)	Employee-Related	Asset-Related and Other	Total
Safety and Industrial	$ 36	$ 7	$ 43
Transportation and Electronics	16	12	28
Health Care	23	3	26
Consumer	10	1	11
Corporate and Unallocated	16	13	29
Total Operating Expense	$ 101	$ 36	$ 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

Remaining activities related to this restructuring actions approved and committed under this initiative in the 2020 are expected to be largely completed through 2021.

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)	Second Quarter 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 divestiture-related restructuring action balances as of December 31, 2020	$ 15	$ 9	$ 24

Remaining activities related to this divestiture-related restructuring are expected to be largely completed through the second 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)	Second Quarter 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:

	Second Quarter 2020		
(Millions)	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

Remaining activities related to this restructuring are expected to be largely completed through the second quarter of 2021.

2019 Restructuring Actions:

During the second quarter of 2019, in light of slower than expected 2019 sales, management approved and committed to undertake certain restructuring actions. These actions impacted approximately 2,000 positions worldwide, including attrition. The Company recorded second quarter 2019 pre-tax charges of $148 million. Additionally, during the fourth quarter of 2019, to realign 3M’s organizational structure and operating model to improve growth and operational efficiency, management approved and committed to undertake certain restructuring actions. These actions impacted approximately 1,500 positions worldwide. The Company recorded fourth quarter 2019 pre-tax charges of $134 million. These restructuring charges were recorded in the income statement as follows:

(Millions)	Second and Fourth Quarter 2019
Cost of sales	$ 72
Selling, general and administrative expenses	137
Research, development and related expenses	37
Total operating income impact	246
Other expense (income), net	36
Total income before income taxes impact	$ 282

The second quarter 2019 actions included a voluntary early retirement incentive initial charge (further discussed in Note 13), the charge for which is included in other expense (income), net above.

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

	Second and Fourth Quarter 2019		
(Millions)	Employee-Related	Asset-Related	Total
Safety and Industrial	$ 50	$ —	$ 50
Transportation and Electronics	31	—	31
Health Care	17	—	17
Consumer	8	—	8
Corporate and Unallocated	100	40	140
Total Operating Expense	$ 206	$ 40	$ 246

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

(Millions)	Employee-Related	Asset-Related	Total
Expense incurred in the second quarter and fourth quarter of 2019	$ 242	$ 40	$ 282
Non-cash changes	(36)	(40)	(76)
Cash payments	(52)	—	(52)
Adjustments	(14)	—	(14)
Accrued restructuring action balances as of December 31, 2019	$ 140	$ —	$ 140
Cash Payments	(51)	—	(51)
Adjustments	(59)	—	(59)
Accrued restructuring action balances as of December 31, 2020	$ 30	$ —	$ 30

Adjustments in the table above reflect changes in estimates from factors such as additional natural attrition and redeployment as COVID-19 delayed the start of plan execution and update of costs associated with the mix of impacted roles. Remaining activities related to this restructuring are expected to be completed largely through early 2021.

2018 Restructuring Actions:

Divestiture-Related Restructuring

During the second quarter and fourth quarter of 2018, management approved and committed to undertake certain restructuring actions related to addressing corporate functional costs following the Communication Markets Division divestiture. These actions affected approximately 1,200 positions worldwide and resulted in a second quarter 2018 pre-tax charge of $105 million and a fourth quarter pre-tax charge of $22 million, net of adjustments for reductions in cost estimates of $10 million, essentially all within Corporate and Unallocated. The restructuring charges were recorded in the income statement as follows:

(Millions)	Second and Fourth Quarter 2018
Cost of sales	$ 27
Selling, general and administrative expenses	105
Research, development and related expenses	5
Total	$ 137

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

(Millions)	Employee-Related	Asset-Related	Total
Expense incurred in the second quarter and fourth quarter of 2018	$ 125	$ 12	$ 137
Non-cash changes	—	(12)	(12)
Cash payments	(24)	—	(24)
Adjustments	(17)	—	(17)
Accrued restructuring action balances as of December 31, 2018	$ 84	$ —	$ 84
Cash payments	(76)	—	(76)
Adjustments	(5)	—	(5)
Accrued restructuring action balances as of December 31, 2019	$ 3	$ —	$ 3

Remaining activities related to this restructuring were substantially completed in 2019.

NOTE 6. Supplemental Income Statement Information

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

(Millions)	**2020**	**2019**	**2018**
Interest expense	**$ 529**	$ 448	$ 350
Interest income	**(29)**	(80)	(70)
Pension and postretirement net periodic benefit cost (benefit)	**(50)**	(68)	(73)
Loss on deconsolidation of Venezuelan subsidiary	**—**	162	—
Total	**$ 450**	$ 462	$ 207

Interest expense includes an early debt extinguishment pre-tax charge of approximately $10 million in the fourth quarter of 2020.

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. Pension and postretirement net periodic benefit costs for 2019 included a second quarter charge related to the voluntary early retirement incentive program announced in May 2019 in addition to U.S. non-qualified pension plan settlement charges of $32 million recognized in the fourth quarter of 2019. Refer to Note 13 for additional details on the voluntary early retirement incentive program in addition to the components of pension and postretirement net periodic benefit costs.

In the second quarter of 2019, the Company incurred a charge of $162 million related to the deconsolidation of its Venezuelan subsidiary. Refer to Note 1 for additional details.

NOTE 7. Supplemental Balance Sheet Information

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

(Millions)	2020	2019
Other current assets		
Derivative assets-current	$ 34	$ 75
Held-to-maturity debt security held in trust	—	470
Insurance related (receivables, prepaid expenses and other)	125	172
Other	166	174
Total other current assets	$ 325	$ 891
Property, plant and equipment - at cost		
Land	$ 338	$ 351
Buildings and leasehold improvements	8,021	7,877
Machinery and equipment	16,866	16,586
Construction in progress	1,425	1,310
Gross property, plant and equipment	26,650	26,124
Accumulated depreciation	(17,229)	(16,791)
Property, plant and equipment - net	$ 9,421	$ 9,333
Other assets		
Deferred income taxes	$ 871	$ 521
Prepaid pension and post retirement	630	230
Insurance related receivables and other	49	67
Cash surrender value of life insurance policies	258	254
Equity method investments	134	70
Equity and other investments	80	126
Other	418	406
Total other assets	$ 2,440	$ 1,674
Other current liabilities		
Accrued rebates	$ 639	$ 594
Deferred revenue	498	430
Derivative liabilities	81	17
Employee benefits and withholdings	192	229
Contingent liability claims and other	556	566
Property, sales-related and other taxes	308	247
Pension and postretirement benefits	71	67
Other	933	906
Total other current liabilities	$ 3,278	$ 3,056
Other liabilities		
Long term income taxes payable	$ 1,511	$ 1,507
Employee benefits	410	312
Contingent liability claims and other	815	787
Finance lease obligations	93	111
Deferred income taxes	333	301
Other	300	257
Total other liabilities	$ 3,462	$ 3,275

NOTE 8. Supplemental Equity and Comprehensive Income Information

Common stock ($.01 par value per share) of 3.0 billion shares is authorized, with 944,033,056 shares issued as of December 31, 2020, 2019 and 2018. Preferred stock, without par value, of 10 million shares is authorized but unissued.

Cash dividends declared and paid totaled $1.47, $1.44, and $1.36 per share for each quarter in 2020, 2019 and 2018, respectively, which resulted in total year declared and paid dividends of $5.88, $5.76, and $5.44 per share, respectively.

In connection with 3M’s January 1, 2019 adoption of ASU No. 2018-02, Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income, and ASU No. 2016-02, Leases, the Company recorded an increase in retained earnings of approximately $0.9 billion (with offsetting increase to accumulated other comprehensive loss for the same amount) and $14 million, respectively.

Transfer of Ownership Interest Involving Non-Wholly Owned Subsidiaries

During 2018, a wholly owned subsidiary in India was sold to 3M India Limited, which is 75 percent owned by the Company. Because the Company retained its controlling interest in the subsidiary involved, the sale resulted in a deemed dividend to 3M, resulting in an increase in 3M Company shareholders’ equity and a decrease in noncontrolling interest. Refer to the Consolidated Statement of Changes in Equity for further details.

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, 2017, net of tax:	$ (1,638)	$ (5,276)	$ (112)	$ (7,026)
Other comprehensive income (loss), before tax:				
Amounts before reclassifications	(414)	55	133	(226)
Amounts reclassified out	—	606	96	702
Total other comprehensive income (loss), before tax	(414)	661	229	476
Tax effect	(47)	(217)	(53)	(317)
Total other comprehensive income (loss), net of tax	(461)	444	176	159
Impact from purchase of subsidiary shares	1	—	—	1
Balance at December 31, 2018, net of tax:	$ (2,098)	$ (4,832)	$ 64	$ (6,866)
Impact of adoption of ASU No. 2018-02	(13)	(817)	(23)	(853)
Other comprehensive income (loss), before tax:				
Amounts before reclassifications	102	(1,227)	(26)	(1,151)
Amounts reclassified out	142	459	(70)	531
Total other comprehensive income (loss), before tax	244	(768)	(96)	(620)
Tax effect	(32)	208	24	200
Total other comprehensive income (loss), net of tax	212	(560)	(72)	(420)
Balance at December 31, 2019, net of tax:	$ (1,899)	$ (6,209)	$ (31)	$ (8,139)
Other comprehensive income (loss), before tax:				
Amounts before reclassifications	387	(555)	(113)	(281)
Amounts reclassified out	—	676	(71)	605
Total other comprehensive income (loss), before tax	387	121	(184)	324
Tax effect	62	50	42	154
Total other comprehensive income (loss), net of tax	449	171	(142)	478
Balance at December 31, 2020, net of tax:	$ (1,450)	$ (6,038)	$ (173)	$ (7,661)

Income taxes are not provided for foreign translation relating to permanent investments in international subsidiaries, but tax effects within cumulative translation does 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 (Millions)	Amounts Reclassified from Accumulated Other Comprehensive Income Year ended December 31, 2020	2019	2018	Location on Income Statement
Cumulative translation adjustment				
Deconsolidation of Venezuelan subsidiary	**$ —**	$ (142)	$ —	Other (expense) income, net
Total before tax	**—**	(142)	—	
Tax effect	**—**	—	—	Provision for income taxes
Net of tax	**$ —**	$ (142)	$ —	
Defined benefit pension and postretirement plans adjustments				
Gains (losses) associated with defined benefit pension and postretirement plans amortization				
Transition asset	**$ (2)**	$ —	$ —	See Note 13
Prior service benefit	**62**	69	76	See Note 13
Net actuarial loss	**(716)**	(478)	(678)	See Note 13
Curtailments/Settlements	**(20)**	(48)	(4)	See Note 13
Deconsolidation of Venezuelan subsidiary	**—**	(2)	—	Other (expense) income, net
Total before tax	**(676)**	(459)	(606)	
Tax effect	**161**	110	145	Provision for income taxes
Net of tax	**$ (515)**	$ (349)	$ (461)	
Cash flow hedging instruments gains (losses)				
Foreign currency forward/option contracts	**$ 80**	$ 74	$ (95)	Cost of sales
Interest rate contracts	**(9)**	(4)	(1)	Interest expense
Total before tax	**71**	70	(96)	
Tax effect	**(17)**	(17)	19	Provision for income taxes
Net of tax	**$ 54**	$ 53	$ (77)	
Total reclassifications for the period, net of tax	**$ (461)**	$ (438)	$ (538)	

NOTE 9. Supplemental Cash Flow Information

(Millions)	2020	2019	2018
Cash income tax payments, net of refunds	**$ 1,351**	$ 1,198	$ 1,560
Cash interest payments	**524**	370	314

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)	2020	2019	2018
United States	**$ 3,720**	$ 3,008	$ 3,487
International	**2,991**	2,704	3,513
Total	**$ 6,711**	$ 5,712	$ 7,000

Provision for Income Taxes

(Millions)	2020	2019	2018
Currently payable			
Federal	**$ 720**	$ 534	$ 698
State	**123**	59	109
International	**633**	673	763
Tax Cuts and Jobs Act (TCJA) non-current transition tax provision	**—**	—	176
Deferred			
Federal	**(59)**	(32)	(38)
State	**(20)**	(26)	(17)
International	**(79)**	(78)	(54)
Total	**$ 1,318**	$ 1,130	$ 1,637

Components of Deferred Tax Assets and Liabilities

(Millions)	2020	2019
Deferred tax assets:		
Accruals not currently deductible		
Employee benefit costs	**$ 232**	$ 169
Product and other claims	**338**	280
Miscellaneous accruals	**153**	119
Pension costs	**849**	824
Stock-based compensation	**231**	218
Net operating/capital loss/tax credit carryforwards	**148**	150
Foreign tax credits	**100**	66
Currency translation	**90**	—
Inventory	**54**	70
Other	**112**	113
Gross deferred tax assets	**2,307**	2,009
Valuation allowance	**(135)**	(158)
Total deferred tax assets	**$ 2,172**	$ 1,851
Deferred tax liabilities:		
Product and other insurance receivables	**$ (4)**	$ —
Accelerated depreciation	**(607)**	(580)
Intangible amortization	**(1,023)**	(1,021)
Currency translation	**—**	(30)
Other	**—**	—
Total deferred tax liabilities	**$ (1,634)**	$ (1,631)
Net deferred tax assets	**$ 538**	$ 220

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, 2020, the Company had tax effected operating losses, capital losses, and tax credit carryovers for federal (approximately $108 million), state (approximately $84 million), and international (approximately $58 million), with all amounts before limitation impacts and valuation allowances. Federal tax attribute carryovers will expire after one to 10 years, the state after one to 11 years, and the international after one year to an indefinite carryover period. As of December 31, 2020, the Company has provided $135 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

	2020	2019	2018
Statutory U.S. tax rate	**21.0 %**	21.0 %	21.0 %
State income taxes - net of federal benefit	**1.2**	0.5	1.0
International income taxes - net	**(1.2)**	0.2	0.2
Global Intangible Low Taxed Income (GILTI)	**0.8**	1.8	1.1
Foreign Derived Intangible Income (FDII)	**(1.8)**	(2.9)	(1.3)
U.S. TCJA enactment - net impacts	**—**	—	2.5
U.S. research and development credit	**(1.0)**	(1.7)	(1.5)
Reserves for tax contingencies	**0.5**	2.3	1.2
Employee share-based payments	**(0.5)**	(1.3)	(1.4)
All other - net	**0.6**	(0.1)	0.6
Effective worldwide tax rate	**19.6 %**	19.8 %	23.4 %

The effective tax rate for 2020 was 19.6 percent, compared to 19.8 percent in 2019, a decrease of 0.2 percentage points, impacted by several factors. Primary factors that decreased the effective tax rate for 2020 included geographical income mix and adjustments to uncertain tax positions. These decreases were partially offset by decreased benefit from stock options.

The effective tax rate for 2019 was 19.8 percent, compared to 23.4 percent in 2018, a decrease of 3.6 percentage points, impacted by several factors. Primary factors that decreased the effective tax rate for 2020 included prior year measurement period adjustments related to 2017 Tax Cuts and Jobs Act (TCJA), prior year resolution of the NRD lawsuit (as described in Note 16), and geographical income mix. These decreases were partially offset by the deconsolidation of the Venezuelan subsidiary, adjustments to uncertain tax positions, and significant litigation-related charges.

The TCJA was enacted in December 2017, after which the SEC staff issued Staff Accounting Bulletin (SAB) 118, which provided a measurement period of up to one year from the TCJA's enactment date for companies to complete their accounting under ASC 740. In connection with the enactment of the TCJA, the Company recorded net charges of $176 million as measurement period adjustments in 2018, which are comprised of both a transition tax in addition to a remeasurement of deferred tax assets/liabilities and other impacts.

The TCJA's transition tax is payable over eight years beginning in 2018. As of December 31, 2020 and December 31, 2019, 3M reflected $584 million and $653 million, respectively, in long term income taxes payable. As of December 31, 2020 and December 31, 2019, 3M reflected $69 million and $33 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 for 2005 through 2016, but the years have not closed as the Company is in the process of resolving issues identified during those examinations. The Company is under examination or in appeals for 2017 through 2018. 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, 2020, 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 of 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)	2020	2019	2018
Gross UTB Balance at January 1	**$ 1,167**	$ 647	$ 530
Additions based on tax positions related to the current year	**74**	76	129
Additions for tax positions of prior years	**106**	132	146
Additions related to recent acquisitions	**—**	396	—
Reductions for tax positions of prior years	**(173)**	(56)	(123)
Settlements	**(8)**	(4)	(17)
Reductions due to lapse of applicable statute of limitations	**(53)**	(24)	(18)
Gross UTB Balance at December 31	**$ 1,113**	$ 1,167	$ 647
Net UTB that would impact the effective tax rate at December 31	**$ 1,145**	$ 1,178	$ 655

The total amount of UTB, if recognized, would affect the effective tax rate by $1,145 million as of December 31, 2020, $1,178 million as of December 31, 2019, and $655 million as of December 31, 2018. 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 $21 million of expense, $33 million of expense, and $12 million of expense in 2020, 2019, and 2018, 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, 2020, and December 31, 2019, accrued interest and penalties in the consolidated balance sheet on a gross basis were $126 million and $102 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 manufacturing activities 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 (2023), Singapore (2025), and Brazil (2029). The income tax benefits attributable to the tax status of these subsidiaries are estimated to be $163 million (28 cents per diluted share) in 2020, $127 million (22 cents per diluted share) in 2019, and $227 million (38 cents per diluted share) in 2018.

As of December 31, 2020, the Company has approximately $15 billion of undistributed earnings in its foreign subsidiaries. During the third quarter of 2020, 3M determined that approximately $5 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 $10 billion of undistributed earnings from non-U.S. subsidiaries as of December 31, 2020 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.

In March 2020, in response to the impact of the COVID-19 pandemic in the U.S. and across the globe, the United States Congress passed the Coronavirus Aid, Relief and Economic Security (CARES) Act. In December 2020, Congress passed a second relief package, Consolidated Appropriations Act, 2021. The enactment period impacts to 3M were immaterial to income tax expense.

NOTE 11. Marketable Securities and Held-to-Maturity Debt Securities

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)	December 31, 2020	December 31, 2019
Corporate debt securities	**$ 7**	$ —
Commercial paper	**237**	85
Certificates of deposit/time deposits	**31**	10
U.S. treasury securities	**125**	—
U.S. municipal securities	**4**	3
Current marketable securities	**$ 404**	$ 98
U.S. municipal securities	**$ 30**	$ 43
Non-current marketable securities	**$ 30**	$ 43
Total marketable securities	**$ 434**	$ 141

At December 31, 2020 and 2019, gross unrealized, gross realized, and net realized gains and/or losses (pre-tax) were not material.

The balance at December 31, 2020, 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)	December 31, 2020
Due in one year or less	$ 404
Due after one year through five years	15
Due after five years through ten years	15
Total marketable securities	$ 434

Held-to-Maturity Debt Securities

In connection with the in-substance debt defeasance of the Third Lien Notes described in Note 12, the Company purchased a $0.5 billion U.S. Treasury security in the fourth quarter of 2019 and transferred it to a trust with irrevocable instructions to use the proceeds from its maturity to satisfy the redemption of the Third Lien Notes that occurred in May 2020. At December 31, 2019, this debt security was considered held-to-maturity due to the restrictions in satisfying and discharging the Third Lien Notes, was carried at amortized cost, and was reflected in other current assets on the Company’s consolidated balance sheet. At December 31, 2019, the difference between the amortized cost of the U.S. Treasury security and its fair value was not material. Upon the maturity of the debt security in May 2020, the Company has no held-to-maturity debt securities.

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, 2020. 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. For notes subject to in-substance defeasance, the final maturity reflected below is that associated with the redemption date included in the irrevocable instructions given to the trust. Long-term debt and short-term borrowings as of December 31 consisted of the following:

Long-Term Debt

(Millions) **Description / 2020 Principal Amount**	**Currency/** **Fixed vs. Floating**	**Effective** **Interest Rate**	**Final** **Maturity Date**	**Carrying Value** **2020**	 **2019**
Third lien senior secured notes subject to in-substance defeasance (repaid in 2020)	USD Fixed	— %	2020	$ —	$ 463
Medium-term note (repaid in 2020)	EUR Floating	— %	2020	—	726
Medium-term note (repaid in 2020)	USD Floating	— %	2020	—	299
Medium-term note (repaid in 2020)	USD Floating	— %	2020	—	200
Medium-term note (repaid in 2020)	USD Fixed	— %	2020	—	599
Medium-term note (repaid in 2020)	USD Fixed	— %	2020	—	199
Medium-term note (repaid in 2020)	USD Floating	— %	2020	—	204
Eurobond (300 million euros)	EUR Floating	(0.28)%	2021	374	346
Eurobond (300 million euros)	EUR Fixed	1.97 %	2021	367	334
Medium-term note (500 million euros)	EUR Fixed	0.45 %	2022	612	557
Medium-term note ($600 million)	USD Fixed	2.17 %	2022	598	597
Medium-term note ($450 million)	USD Fixed	2.76 %	2022	449	449
Medium-term note (600 million euros)	EUR Fixed	1.14 %	2023	731	665
Medium-term note ($650 million)	USD Fixed	2.26 %	2023	649	648
Registered note ($500 million)	USD Fixed	1.86 %	2023	498	497
Medium-term note ($300 million)	USD Floating	0.52 %	2024	299	299
Medium-term note ($300 million)	USD Fixed	3.30 %	2024	299	299
Medium-term note ($500 million)	USD Fixed	2.98 %	2024	502	503
Medium-term note ($550 million)	USD Fixed	3.04 %	2025	548	547
Registered note ($750 million)	USD Fixed	2.12 %	2025	744	743
Registered note ($500 million)	USD Fixed	2.67 %	2025	498	—
Medium-term note (750 million euros)	EUR Fixed	1.66 %	2026	908	826
Medium-term note ($650 million)	USD Fixed	2.37 %	2026	644	643
Medium-term note ($850 million)	USD Fixed	2.95 %	2027	843	842
30-year debenture ($220 million)	USD Fixed	6.44 %	2028	225	226
Medium-term note ($600 million)	USD Fixed	3.62 %	2028	598	597
Medium-term note ($800 million)	USD Fixed	3.38 %	2029	796	796
Registered note ($1 billion)	USD Fixed	2.50 %	2029	986	984
Medium-term note (500 million euros)	EUR Fixed	1.90 %	2030	604	549
Registered note ($600 million)	USD Fixed	3.09 %	2030	595	—
Medium-term note (500 million euros)	EUR Fixed	1.54 %	2031	608	554
30-year bond ($555 million)	USD Fixed	5.73 %	2037	551	551
Floating rate note ($96 million)	USD Floating	— %	2041	96	96
Medium-term note ($325 million)	USD Fixed	4.05 %	2044	315	314
Floating rate note ($55 million)	USD Floating	— %	2044	53	53
Medium-term note ($500 million)	USD Fixed	3.37 %	2046	476	475
Medium-term note ($500 million)	USD Fixed	3.68 %	2047	492	492
Medium-term note ($650 million)	USD Fixed	4.07 %	2048	637	637
Medium-term note ($500 million)	USD Fixed	3.78 %	2048	505	506
Registered note ($1 billion)	USD Fixed	3.37 %	2049	969	968
Registered note ($650 million)	USD Fixed	3.72 %	2050	642	—
Other borrowings	Various	0.01 %	2021-2040	72	76
Total long-term debt				**$ 18,783**	$ 19,359
Less: current portion of long-term debt				**794**	1,841
Long-term debt (excluding current portion)				**$ 17,989**	$ 17,518

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

	2020		2019	
(Millions)	Carrying Value	Effective Interest Rate	Carrying Value	Effective Interest Rate
Fixed-rate debt	**$ 17,889**	**2.80 %**	$ 17,061	3.01 %
Floating-rate debt	**894**	**0.06 %**	2,298	1.06 %
Total long-term debt, including current portion	**$ 18,783**		$ 19,359	

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

	Effective	Carrying Value	
(Millions)	Interest Rate	2020	2019
Current portion of long-term debt	0.78 %	**$ 794**	$ 1,841
U.S. dollar commercial paper	—%	—	150
Japan subsidiary credit facility	—%	—	632
German subsidiary credit facility	—%	—	168
Other borrowings	4.83 %	**12**	4
Total short-term borrowings and current portion of long-term debt		**$ 806**	$ 2,795

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 unaccreted debt issue costs such that total maturities equal the carrying value of long-term debt as of December 31, 2020. The maturities of long-term debt for the periods subsequent to December 31, 2020 are as follows (in millions):

2021	2022	2023	2024	2025	After 2025	Total
$ 794	$ 1,659	$ 1,878	$ 1,100	$ 1,790	$ 11,562	$ 18,783

As a result of put provisions associated with certain debt instruments, long-term debt payments due in 2021 include floating rate notes totaling $53 million (classified as current portion of long-term debt).

Credit Facilities

In November 2019, 3M amended and restated its existing $3.75 billion five-year revolving credit facility expiring in March 2021 to a $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 2020 with an expiration date of November 2021. 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, 2020. 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, 2020, this ratio was approximately 17 to 1. Debt covenants do not restrict the payment of dividends.

Other Credit Facilities

Apart from the committed credit facilities described above, in September 2019, 3M entered into a credit facility initially expiring in July 2020 that was further extended to August 2021 in the amount of 80 billion Japanese yen. In November 2019, 3M entered into a credit facility expiring in November 2020 in the amount of 150 million euros. During the third quarter of 2020, the Company paid the outstanding balances and closed these credit facilities.

The Company also had an additional $273 million in stand-alone letters of credit and bank guarantees issued and outstanding at December 31, 2020. These instruments are utilized in connection with normal business activities.

Long-Term Debt Issuances

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.

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%.

In February 2019, 3M issued $2.25 billion aggregate principal amount of fixed rate medium-term notes. These were comprised of $450 million of 3-year notes due 2022 with a coupon rate of 2.75%, $500 million of remaining 5-year notes due 2024 with a coupon rate of 3.25%, $800 million of 10-year notes due 2029 with a coupon rate of 3.375%, and $500 million of remaining 29.5-year notes due 2048 with a coupon rate of 4.00%. Issuances of the 5-year and 29.5-year notes were pursuant to a reopening of existing securities issued in September 2018.

In August 2019, 3M issued $3.25 billion aggregate principal amount of fixed rate registered notes. These were comprised of $500 million of 3.5-year notes due 2023 with a coupon rate of 1.75%, $750 million of 5.5-year notes due 2025 with a coupon rate of 2.00%, $1.0 billion of 10-year notes due 2029 with a coupon rate of 2.375%, and $1.0 billion of 30-year notes due 2049 with a coupon rate of 3.25%.

In September 2018, 3M issued $2.25 billion aggregate principal amount of medium-term notes. These were comprised of $400 million of 3-year fixed rate notes due 2021 with a coupon rate of 3.00%, $300 million of 5.5-year fixed rate notes due 2024 with a coupon rate of 3.25%, $300 million of 5.5-year floating rate notes due 2024 with a rate based on a floating three-month LIBOR index, $600 million aggregate principal amount of 10-year fixed rate medium-term notes due 2028 with a coupon rate of 3.625%, and $650 million of 30-year fixed rate notes due 2048 with a coupon rate of 4.00%. Upon debt issuance, the Company entered into a fixed-to-floating interest rate swap on $200 million aggregate principal amount of the 3-year fixed rate notes issued with an interest rate based on a three-month LIBOR index.

Long-Term Debt Maturities and Extinguishments

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 the aggregate $445 million principal amount of Third Lien notes subject to the in-substance defeasance noted below and 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.

In June 2019, 3M repaid $625 million aggregate principal amount of fixed-rate medium-term notes that matured.

In 2019, 3M also assumed approximately $2.6 billion of debt in connection with the acquisitions of Acelity and M*Modal (See Note 3) of which $2.1 billion was immediately redeemed or paid at close.

In November and August 2018, respectively, 3M repaid 500 million euros and $450 million aggregate principal amount of floating rate medium-term notes that matured.

In-Substance Defeasance

In conjunction with the October 2019 acquisition of Acelity (see Note 3), 3M assumed outstanding debt of the business, of which $445 million in principal amount of third lien senior secured notes (Third Lien Notes) maturing in 2021 with a coupon rate of 12.5% was not immediately redeemed at closing. Instead, at closing, 3M satisfied and discharged the Third Lien Notes via an in-substance defeasance, whereby 3M transferred cash equivalents and marketable securities to a trust with irrevocable instructions to redeem the Third Lien Notes on May 1, 2020. The trust assets were restricted from use in 3M's operations and were only used for the redemption of the Third Lien Notes that occurred in May 2020. These actions, however, did not represent a legal defeasance. Therefore, this debt was included in current portion of long-term debt and the related trust assets were included in current assets on the Company's consolidated balance sheet as of December 31, 2019.

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. 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 $201 million, $186 million and $173 million for 2020, 2019 and 2018, respectively. 3M subsidiaries in various international countries also participate in defined contribution plans. Employer contributions to the international defined contribution plans were $103 million, $96 million and $99 million for 2020, 2019 and 2018, respectively.

In May 2019 (as part of the 2019 restructuring actions discussed in Note 5), the Company began offering a voluntary early retirement incentive program to certain eligible participants of its U.S. pension plans who meet age and years of pension service requirements. The eligible participants who accepted the offer and retired by July 1, 2019 received an enhanced pension benefit. Pension benefits were enhanced by adding one additional year of pension service and one additional year of age for certain benefit calculations. Approximately 800 participants accepted the offer and retired before July 1, 2019. As a result, the Company incurred a $35 million charge related to these special termination benefits in the second quarter of 2019.

In the fourth quarter of 2019, the Company recognized a non-operating $32 million settlement expense in its U.S. non-qualified pension plan. The charge is related to lump sum payments made to employees at retirement. The settlement expense is an accelerated recognition of past actuarial losses.

In May 2019, 3M modified the 3M Retiree Life Insurance Plan postretirement benefit to close it to new participants effective August 1, 2019 (which results in employees who retire on or after August 1, 2019 not being eligible to participate in the plan) and reducing the maximum life insurance and death benefit to $8,000 for deaths on or after August 1, 2019. Due to these changes, the plan was re-measured in the second quarter of 2019, resulting in a decrease to the accumulated projected benefit obligation liability of approximately $150 million and a related increase to shareholders' equity, specifically accumulated other comprehensive income in addition to an immaterial income statement benefit prospectively.

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 less than $40 million as of December 31, 2020 and 2019.

	Qualified and Non-qualified Pension Benefits				Postretirement Benefits	
	United States		International			
(Millions)	2020	2019	2020	2019	2020	2019
Change in benefit obligation						
Benefit obligation at beginning of year	**$ 17,935**	$ 15,948	**$ 7,931**	$ 6,965	**$ 2,242**	$ 2,175
Acquisitions/Transfers	**—**	—	**1**	9	**—**	—
Service cost	**261**	251	**152**	131	**43**	43
Interest cost	**499**	620	**117**	156	**62**	82
Participant contributions	**—**	—	**9**	7	**—**	—
Foreign exchange rate changes	**—**	—	**427**	55	**(14)**	—
Plan amendments	**—**	—	**—**	3	**—**	(171)
Actuarial (gain) loss	**1,785**	2,209	**464**	906	**176**	225
Benefit payments	**(1,104)**	(1,128)	**(274)**	(302)	**(107)**	(112)
Settlements, curtailments, special termination benefits and other	**—**	35	**(57)**	1	**(5)**	—
Benefit obligation at end of year	**$ 19,376**	$ 17,935	**$ 8,770**	$ 7,931	**$ 2,397**	$ 2,242
Change in plan assets						
Fair value of plan assets at beginning of year	**$ 16,099**	$ 14,803	**$ 6,923**	$ 6,170	**$ 1,338**	$ 1,260
Acquisitions/Transfers	**—**	—	**—**	4	**—**	—
Actual return on plan assets	**2,071**	2,323	**1,102**	858	**147**	187
Company contributions	**61**	101	**92**	106	**3**	3
Participant contributions	**—**	—	**9**	7	**—**	—
Foreign exchange rate changes	**—**	—	**376**	80	**—**	—
Benefit payments	**(1,104)**	(1,128)	**(274)**	(302)	**(107)**	(112)
Settlements, curtailments, special termination benefits and other	**—**	—	**(34)**	—	**(5)**	—
Fair value of plan assets at end of year	**$ 17,127**	$ 16,099	**$ 8,194**	$ 6,923	**$ 1,376**	$ 1,338
Funded status at end of year	**$ (2,249)**	$ (1,836)	**$ (576)**	$ (1,008)	**$ (1,021)**	$ (904)

(Millions)	Qualified and Non-qualified Pension Benefits United States 2020	2019	International 2020	2019	Postretirement Benefits 2020	2019
Amounts recognized in the Consolidated Balance Sheet as of Dec. 31,						
Non-current assets	**$ —**	$ —	**$ 630**	$ 230	**$ —**	$ —
Accrued benefit cost						
Current liabilities	**(52)**	(48)	**(15)**	(15)	**(4)**	(4)
Non-current liabilities	**(2,197)**	(1,788)	**(1,191)**	(1,223)	**(1,017)**	(900)
Ending balance	**$ (2,249)**	$ (1,836)	**$ (576)**	$ (1,008)	**$ (1,021)**	$ (904)

(Millions)	Qualified and Non-qualified Pension Benefits United States 2020	2019	International 2020	2019	Postretirement Benefits 2020	2019
Amounts recognized in accumulated other comprehensive income as of Dec. 31,						
Net transition obligation (asset)	**$ —**	$ —	**$ 9**	$ 10	**$ —**	$ —
Net actuarial loss (gain)	**6,080**	5,899	**1,557**	1,967	**713**	663
Prior service cost (credit)	**(104)**	(128)	**(2)**	(5)	**(230)**	(262)
Ending balance	**$ 5,976**	$ 5,771	**$ 1,564**	$ 1,972	**$ 483**	$ 401

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 accumulated benefit obligation of the U.S. pension plans was $18.441 billion and $17.125 billion at December 31, 2020 and 2019, respectively. The accumulated benefit obligation of the international pension plans was $8.181 billion and $7.355 billion at December 31, 2020 and 2018, respectively.

The following amounts relate to pension plans with accumulated benefit obligations in excess of plan assets as of December 31:

(Millions)	Qualified and Non-qualified Pension Plans United States 2020	2019	International 2020	2019
Projected benefit obligation	**$ 19,376**	$ 17,935	**$ 3,385**	$ 2,986
Accumulated benefit obligation	**18,441**	17,125	**3,119**	2,752
Fair value of plan assets	**17,127**	16,099	**2,199**	1,778

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:

	Qualified and Non-qualified Pension Benefits						Postretirement Benefits		
	United States			International					
(Millions)	2020	2019	2018	2020	2019	2018	2020	2019	2018
Net periodic benefit cost (benefit)									
Operating expense									
Service cost	**$ 261**	$ 251	$ 288	**$ 152**	$ 131	$ 143	**$ 43**	$ 43	$ 52
Non-operating expense									
Interest cost	**499**	620	563	**117**	156	157	**62**	82	79
Expected return on plan assets	**(1,019)**	(1,040)	(1,087)	**(306)**	(299)	(307)	**(79)**	(81)	(84)
Amortization of transition asset	**—**	—	—	**2**	—	—	**—**	—	—
Amortization of prior service benefit	**(24)**	(24)	(23)	**(5)**	(12)	(13)	**(33)**	(33)	(40)
Amortization of net actuarial loss	**536**	366	503	**131**	78	114	**49**	34	61
Settlements, curtailments, special termination benefits and other	**16**	70	—	**1**	10	4	**3**	5	—
Total non-operating expense (benefit)	**8**	(8)	(44)	**(60)**	(67)	(45)	**2**	7	16
Total net periodic benefit cost (benefit)	**$ 269**	$ 243	$ 244	**$ 92**	$ 64	**$ 98**	**$ 45**	$ 50	$ 68
Other changes in plan assets and benefit obligations recognized in other comprehensive (income) loss									
Amortization of transition asset	**$ —**	$ —	$ —	**$ (2)**	$ —	$ —	**$ —**	$ —	$ —
Prior service cost (benefit)	**—**	—	—	**—**	3	7	**—**	(171)	—
Amortization of prior service benefit	**24**	24	23	**5**	12	13	**33**	33	40
Net actuarial (gain) loss	**733**	926	(44)	**(358)**	344	194	**108**	119	(127)
Amortization of net actuarial loss	**(536)**	(366)	(503)	**(131)**	(78)	(114)	**(49)**	(34)	(61)
Foreign currency	**—**	—	—	**79**	7	(83)	**(7)**	(1)	(2)
Settlements, curtailments, special termination benefits and other	**(16)**	(35)	—	**(1)**	(8)	(4)	**(3)**	(5)	—
Total recognized in other comprehensive (income) loss	**$ 205**	$ 549	$ (524)	**$ (408)**	$ 280	$ 13	**$ 82**	$ (59)	$ (150)
Total recognized in net periodic benefit cost (benefit) and other comprehensive (income) loss	**$ 474**	$ 792	$ (280)	**$ (316)**	$ 344	$ 111	**$ 127**	$ (9)	$ (82)

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

	Qualified and Non-qualified Pension Benefits						Postretirement Benefits		
	United States			International					
	2020	2019	2018	2020	2019	2018	2020	2019	2018
Discount rate	**2.55 %**	3.25 %	4.36 %	**1.38 %**	1.81 %	2.50 %	**2.50 %**	3.27 %	4.41 %
Compensation rate increase	**3.21 %**	3.21 %	4.10 %	**2.88 %**	2.88 %	2.89 %	**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						Postretirement Benefits		
	United States			International					
	2020	2019	2018	2020	2019	2018	2020	2019	2018
Discount rate - service cost	**3.41 %**	4.44 %	3.78 %	**1.61 %**	2.39 %	2.27 %	**3.45 %**	4.53 %	3.86 %
Discount rate - interest cost	**2.87 %**	4.02 %	3.35 %	**1.61 %**	2.26 %	2.14 %	**3.00 %**	4.15 %	3.52 %
Expected return on assets	**6.75 %**	7.00 %	7.25 %	**4.70 %**	4.90 %	5.02 %	**6.32 %**	6.43 %	6.53 %
Compensation rate increase	**3.21 %**	4.10 %	4.10 %	**2.88 %**	2.89 %	2.89 %	**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 percent 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 2.55% for the U.S. pension plans and 2.50% for the postretirement benefit plans as of December 31, 2020, which is a decrease of 0.70 percentage points and 0.77 percentage points, respectively, from the rates used as of December 31, 2019. A decrease in the discount rate increases the Projected Benefit Obligation (PBO), the significant decrease in the discount rate as of December 31, 2020 resulted in an approximately $1.8 billion higher 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 6.75% in 2020. 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, 2020, the Company’s 2021 expected long-term rate of return on U.S. plan assets is 6.50%. 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 2020 expected long-term rate of return is based on an asset allocation assumption of 22% global equities, 12% private equities, 49% fixed-income securities, and 17% 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 2020 was 13.6%. In 2019 the plan earned a rate of return of 16.3% and in 2018 earned a return of -0.5%. The average annual actual return on the plan assets over the past 10 and 25 years has been 8.8% and 9.0%, 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.

As of December 31, 2019, the Company converted to the “Pri-2012 Aggregate Mortality Table”. In 2020, the Company updated the mortality improvement scales to the Society of Actuaries Scale MP-2020. The December 31, 2020 update resulted in an immaterial decrease to the U.S. pension PBO and U.S. accumulated postretirement benefit obligations.

During 2020, the Company contributed $153 million to its U.S. and international pension plans and $3 million to its postretirement plans. During 2019, the Company contributed $207 million to its U.S. and international pension plans and $3 million to its postretirement plans. In 2021, 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 2021. 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.

	Qualified and Non-qualified Pension Benefits		Postretirement Benefits
(Millions)	United States	International	
2021 Benefit Payments	$ 1,127	$ 263	$ 127
2022 Benefit Payments	1,134	276	133
2023 Benefit Payments	1,135	292	140
2024 Benefit Payments	1,134	311	145
2025 Benefit Payments	1,139	319	152
Next five years	5,619	1,752	792

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 50% 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:

(Millions)	Fair Value Measurements Using Inputs Considered as						Fair Value at	
	Level 1		Level 2		Level 3		Dec. 31,	
Asset Class	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**
Equities								
U.S. equities	**$ 2,082**	$ 1,575	**$ —**	$ —	**$ —**	$ —	**$ 2,082**	$ 1,575
Non-U.S. equities	**2,041**	1,585	**—**	—	**—**	—	**2,041**	1,585
Index and long/short equity funds*							**433**	417
Total Equities	**$ 4,123**	$ 3,160	**$ —**	$ —	**$ —**	$ —	**$ 4,556**	$ 3,577
Fixed Income								
U.S. government securities	**$ 1,301**	$ 2,346	**$ 978**	$ 916	**$ —**	$ —	**$ 2,279**	$ 3,262
Non-U.S. government securities	**—**	—	**71**	61	**—**	—	**71**	61
Preferred and convertible securities	**—**	—	**55**	52	**—**	—	**55**	52
U.S. corporate bonds	**10**	10	**4,501**	3,566	**—**	—	**4,511**	3,576
Non-U.S. corporate bonds	**—**	—	**820**	759	**—**	—	**820**	759
Derivative instruments	**(4)**	(5)	**7**	109	**—**	—	**3**	104
Other*							**71**	—
Total Fixed Income	**$ 1,307**	$ 2,351	**$ 6,432**	$ 5,463	**$ —**	$ —	**$ 7,810**	$ 7,814
Private Equity								
Growth equity	**$ 70**	$ 80	**$ —**	$ —	**$ —**	$ —	**$ 70**	$ 80
Partnership investments*							**1,801**	1,865
Total Private Equity	**$ 70**	$ 80	**$ —**	$ —	**$ —**	$ —	**$ 1,871**	$ 1,945
Absolute Return								
Fixed income and other	**$ —**	$ 1	**$ 134**	$ 117	**$ —**	$ —	**$ 134**	$ 118
Hedge fund/fund of funds*							**2,046**	2,010
Partnership investments*							**567**	589
Total Absolute Return	**$ —**	$ 1	**$ 134**	$ 117	**$ —**	$ —	**$ 2,747**	$ 2,717
Cash and Cash Equivalents								
Cash and cash equivalents	**$ 25**	$ 20	**$ 12**	$ 5	**$ —**	$ —	**$ 37**	$ 25
Repurchase agreements and derivative margin activity	**—**	—	**(6)**	(1)	**—**	—	**(6)**	(1)
Cash and cash equivalents, valued at net asset value*							**475**	480
Total Cash and Cash Equivalents	**$ 25**	$ 20	**$ 6**	$ 4	**$ —**	$ —	**$ 506**	$ 504
Total	**$ 5,525**	$ 5,612	**$ 6,572**	$ 5,584	**$ —**	$ —	**$ 17,490**	$ 16,557
Other items to reconcile to fair value of plan assets							**$ (363)**	$ (458)
Fair value of plan assets							**$ 17,127**	$ 16,099

* 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:

(Millions)	Fair Value Measurements Using Inputs Considered as						Fair Value at	
	Level 1		Level 2		Level 3		Dec. 31,	
Asset Class	2020	2019	2020	2019	2020	2019	2020	2019
Equities								
U.S. equities	$ 347	$ 337	$ —	$ —	$ —	$ —	$ 347	$ 337
Non-U.S. equities	103	77	—	—	—	—	103	77
Index and long/short equity funds*							31	33
Total Equities	$ 450	$ 414	$ —	$ —	$ —	$ —	$ 481	$ 447
Fixed Income								
U.S. government securities	$ 95	$ 136	$ 214	$ 242	$ —	$ —	$ 309	$ 378
Non-U.S. government securities	—	—	6	6	—	—	6	6
U.S. corporate bonds	1	—	267	203	—	—	268	203
Non-U.S. corporate bonds	—	—	52	46	—	—	52	46
Derivative instruments	—	—	—	5	—	—	—	5
Other*							3	—
Total Fixed Income	$ 96	$ 136	$ 539	$ 502	$ —	$ —	$ 638	$ 638
Private Equity								
Growth equity	$ 3	$ 4	$ —	$ —	$ —	$ —	$ 3	$ 4
Partnership investments*							95	92
Total Private Equity	$ 3	$ 4	$ —	$ —	$ —	$ —	$ 98	$ 96
Absolute Return								
Fixed income and other	$ —	$ —	$ 7	$ 5	$ —	$ —	$ 7	$ 5
Hedge fund/fund of funds*							100	92
Partnership investments*							28	27
Total Absolute Return	$ —	$ —	$ 7	$ 5	$ —	$ —	$ 135	$ 124
Cash and Cash Equivalents								
Cash and cash equivalents	$ 25	$ 33	$ 1	$ 1	$ —	$ —	$ 26	$ 34
Cash and cash equivalents, valued at net asset value*							23	22
Total Cash and Cash Equivalents	$ 25	$ 33	$ 1	$ 1	$ —	$ —	$ 49	$ 56
Total	$ 574	$ 587	$ 547	$ 508	$ —	$ —	$ 1,401	$ 1,361
Other items to reconcile to fair value of plan assets							$ (25)	$ (23)
Fair value of plan assets							$ 1,376	$ 1,338

*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.

The balances of and changes in the fair values of the U.S. pension plans' and postretirement plans' level 3 assets for the periods ended December 31, 2020 and 2019 were not material.

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 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:

(Millions)	Fair Value Measurements Using Inputs Considered as						Fair Value at Dec. 31,	
	Level 1		Level 2		Level 3			
Asset Class	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**
Equities								
Growth equities	**$ 547**	$ 638	**$ 209**	$ 796	**$ —**	$ —	**$ 756**	$ 1,434
Value equities	**659**	696	**396**	10	**—**	—	**1,055**	706
Core equities	**46**	61	**99**	88	**4**	5	**149**	154
Equities, valued at net asset value*							**74**	18
Total Equities	**$ 1,252**	$ 1,395	**$ 704**	$ 894	**$ 4**	$ 5	**$ 2,034**	$ 2,312
Fixed Income								
Domestic government	**$ 71**	$ 353	**$ 1,045**	$ 433	**$ 5**	$ 4	**$ 1,121**	$ 790
Foreign government	**33**	22	**476**	603	**—**	—	**509**	625
Corporate debt securities	**34**	3	**2,470**	1,599	**11**	9	**2,515**	1,611
Fixed income securities, valued at net asset value*							**563**	449
Total Fixed Income	**$ 138**	$ 378	**$ 3,991**	$ 2,635	**$ 16**	$ 13	**$ 4,708**	$ 3,475
Private Equity								
Real estate	**$ 128**	$ 6	**$ 86**	$ 207	**$ 5**	$ 4	**$ 219**	$ 217
Real estate, valued at net asset value*							**92**	36
Partnership investments*							**116**	85
Total Private Equity	**$ 128**	$ 6	**$ 86**	$ 207	**$ 5**	$ 4	**$ 427**	$ 338
Absolute Return								
Derivatives	**$ —**	$ —	**$ 1**	$ 3	**$ —**	$ —	**$ 1**	$ 3
Insurance	**—**	—	**—**	—	**555**	513	**555**	513
Other	**8**	—	**—**	—	**6**	5	**14**	5
Other, valued at net asset value*							**1**	1
Hedge funds*							**410**	195
Total Absolute Return	**$ 8**	$ —	**$ 1**	$ 3	**$ 561**	$ 518	**$ 981**	$ 717
Cash and Cash Equivalents								
Cash and cash equivalents	**$ 149**	$ 94	**$ 51**	$ 39	**$ —**	$ —	**$ 200**	$ 133
Cash and cash equivalents, valued at net asset value*							**1**	1
Total Cash and Cash Equivalents	**$ 149**	$ 94	**$ 51**	$ 39	**$ —**	$ —	**$ 201**	$ 134
Total	**$ 1,675**	$ 1,873	**$ 4,833**	$ 3,778	**$ 586**	$ 540	**$ 8,351**	$ 6,976
Other items to reconcile to fair value of plan assets							**$ (157)**	$ (53)
Fair value of plan assets							**$ 8,194**	$ 6,923

*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 2020 the aggregate of net purchases and net unrealized gains and losses decreased this balance by $0.5 million and the change in currency exchange rates increased balance by $43.5 million for a net increase of $43 million. In 2019 the aggregate net purchases and net unrealized gains increased this balance by $24 million and the change in currency exchange rates decreased the balance by $7 million for a net increase to this balance of $17 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, interest rate and commodity price 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.

3M adopted ASU No. 2017-12, *Targeted Improvements to Accounting for Hedging Activities* as of January 1, 2019. The disclosures contained within this note have been updated to reflect the new guidance, except for prior period amounts presented, as the disclosure changes were adopted prospectively. For derivative instruments that are designated in a cash flow or fair value hedging relationship, the impact of this accounting standard was to remove the requirement to test for ineffectiveness. Prior to the adoption of this ASU, any gain or loss related to hedge ineffectiveness was recognized in current earnings. For any net investment hedges entered into on or after January 1, 2019, amounts excluded from the assessment of hedge effectiveness, including the time value of the forward contract at the inception of the hedge, are recognized in earnings using an amortization approach over the life of the hedging instrument on a straight-line basis. Any difference between the change in the fair value of the excluded component and the amount amortized into earnings during the period is recorded in cumulative translation within other comprehensive income.

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.

Types of Derivatives/Hedging Instruments and Inclusion in Income/Other Comprehensive Income:

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 dedesignate 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 dedesignated 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 dedesignation 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.

During 2018, the Company entered into forward starting interest rate swaps with a notional amount of $1.2 billion as hedges against interest rate volatility associated with forecasted issuances of fixed rate debt. Concurrent with the issuance of the medium-term notes in September 2018, 3M terminated $500 million of these interest rate swaps. The termination resulted in an immaterial gain within accumulated other comprehensive income that will be amortized over the respective lives of the debt. As of December 31, 2018, the Company had $700 million of notional amount in outstanding forward starting interest rate swaps as hedges against interest rate volatility with forecasted issuances of fixed rate debt.

During 2019, the Company entered into additional forward starting interest rate swaps with a notional amount of $743 million. Concurrent with the issuance of the medium-term notes in February 2019 and the additional issuance of registered notes in August 2019, 3M terminated all outstanding interest rate swaps related to forecasted issuances of debt. These terminations resulted in a net loss of $143 million within accumulated other comprehensive income that will be amortized over the respective lives of the debt.

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.

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, 2020, the Company had a balance of $173 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 $107 million (after-tax loss) related to the forward starting interest rate swap and treasury rate lock contacts, which will be amortized over the respective lives of the notes. Based on exchange rates as of December 31, 2020, 3M expects to reclassify approximately $51 million, $23 million, and $99 million of the after-tax net unrealized foreign exchange cash flow hedging losses to earnings in 2021, 2022, and after 2022, respectively, (with the impact offset by earnings/losses from underlying hedged items).

The location in the consolidated statements of income and comprehensive income and amounts of gains and losses related to derivative instruments designated as cash flow hedges are provided in the following table. Reclassifications of amounts from accumulated other comprehensive income into income include accumulated gains (losses) on dedesignated hedges at the time earnings are impacted by the forecasted transaction.

	Pretax Gain (Loss) Recognized in Other Comprehensive Income on Derivative	Pretax Gain (Loss) Reclassified from Accumulated Other Comprehensive Income into Income	
Year ended December 31, 2020 (Millions)	**Amount**	**Location**	**Amount**
Foreign currency forward/option contracts	$ (111)	Cost of sales	$ 80
Interest rate contracts	(2)	Interest expense	(9)
Total	$ (113)		$ 71

Year ended December 31, 2019 (Millions)	**Amount**	**Location**	**Amount**
Foreign currency forward/option contracts	$ 96	Cost of sales	$ 74
Interest rate contracts	(122)	Interest expense	(4)
Total	$ (26)		$ 70

	Pretax Gain (Loss) Recognized in Other Comprehensive Income on Effective Portion of Derivative	Pretax Gain (Loss) Recognized in Income on Effective Portion of Derivative as a Result of Reclassification from Accumulated Other Comprehensive Income		Ineffective Portion of Gain (Loss) on Derivative and Amount Excluded from Effectiveness Testing Recognized in Income	
Year ended December 31, 2018 (Millions)	**Amount**	**Location**	**Amount**	**Location**	**Amount**
Foreign currency forward/option contracts	$ 151	Cost of sales	$ (95)	Cost of sales	$ —
Interest rate swap contracts	(18)	Interest expense	(1)	Interest expense	—
Total	$ 133		$ (96)		$ —

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 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.

In June 2014, 3M issued $950 million aggregate principal amount of medium-term notes. Upon debt issuance, the Company entered into an interest rate swap to convert $600 million of a $625 million note that was due in 2019, included in this issuance, to an interest rate based on a floating three-month LIBOR index as a fair value hedge of a portion of the fixed interest rate medium-term note obligation. This interest rate swap matured in conjunction with the repayment of the $625 million aggregate principal amount of fixed-rate medium notes that matured in June 2019.

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.

Refer to the section below titled *Statement of Income Location and Impact of Cash Flow and Fair Value Derivative Instruments* for details on the location within the consolidated statements of income for amounts of gains and losses related to derivative instruments designated as fair value hedges and similar information relative to the hedged items for the year ended December 31, 2020 and 2019.

The location in the consolidated statements of income and amounts of gains and losses related to derivative instruments designated as fair value hedges and similar information relative to the hedged items are as follows for periods prior to 2019:

	Gain (Loss) on Derivative Recognized in Income		Gain (Loss) on Hedged Item Recognized in Income	
Year ended December 31, 2018 (Millions)	**Location**	**Amount**	**Location**	**Amount**
Interest rate swap contracts	Interest expense	$ (5)	Interest expense	$ 5
Total		$ (5)		$ 5

The following amounts were recorded on the consolidated balance sheet related to cumulative basis adjustments for fair value hedges:

	Carrying Value of the Hedged Liabilities (in millions)		Cumulative Amount of Fair Value Hedging Adjustment Included in the Carrying Value of the Hedged Liabilities (in millions)	
Location on the Consolidated Balance Sheet	**December 31, 2020**	**December 31, 2019**	**December 31, 2020**	**December 31, 2019**
Short-term borrowings and current portion of long-term debt	$ 373	$ 499	$ 5	$ —
Long-term debt	225	775	6	22
Total	$ 598	$ 1,274	$ 11	$ 22

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 dedesignated 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 dedesignated, 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.

During the first quarter of 2018, the Company dedesignated 300 million euros of foreign currency denominated debt from a former net investment hedge relationship.

At December 31, 2020, the total notional amount of foreign exchange forward contracts designated in net investment hedges was approximately 50 million euros, along with a principal amount of long-term debt instruments designated in net investment hedges totaling 3.5 billion euros. The maturity dates of these derivative and nonderivative instruments designated in net investment hedges range from 2021 to 2031.

The location in the consolidated statements of income and comprehensive income and amounts of gains and losses related to derivative and nonderivative instruments designated as net investment hedges are as follows. There were no reclassifications of the effective portion of net investment hedges out of accumulated other comprehensive income into income for the periods presented in the table below.

	Pretax Gain (Loss) Recognized as Cumulative Translation within Other Comprehensive Income	Amount of Gain (Loss) Excluded from Effectiveness Testing Recognized in Income	
Year ended December 31, 2020 (Millions)	**Amount**	**Location**	**Amount**
Foreign currency denominated debt	$ (351)	Cost of sales	$ —
Foreign currency forward contracts	(1)	Cost of sales	5
Total	$ (352)		$ 5

Year ended December 31, 2019 (Millions)	**Amount**	**Location**	**Amount**
Foreign currency denominated debt	$ 108	Cost of sales	$ —
Foreign currency forward contracts	32	Cost of sales	20
Total	$ 140		$ 20

	Pretax Gain (Loss) Recognized as Cumulative Translation within Other Comprehensive Income on Effective Portion of Instrument	Ineffective Portion of Gain (Loss) on Instrument and Amount Excluded from Effectiveness Testing Recognized in Income	
Year ended December 31, 2018 (Millions)	**Amount**	**Location**	**Amount**
Foreign currency denominated debt	$ 222	Cost of sales	$ (2)
Foreign currency forward contracts	18	Cost of sales	4
Total	$ 240		$ 2

Derivatives Not Designated as Hedging Instruments:

Derivatives not designated as hedging instruments include dedesignated 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.

The location in the consolidated statements of income and amounts of gains and losses related to derivative instruments not designated as hedging instruments are as follows:

	Gain (Loss) on Derivative Recognized in Income			
		Year ended December 31,		
		2020	2019	2018
(Millions)	**Location**	**Amount**	**Amount**	**Amount**
Foreign currency forward/option contracts	Cost of sales	$ 2	$ 2	$ 13
Foreign currency forward contracts	Interest expense	43	(13)	(109)
Total		$ 45	$ (11)	$ (96)

Statement of Income Location and Impact of Cash Flow and Fair Value Derivative Instruments

The location in the consolidated statement of income and pre-tax amounts recognized in income related to derivative instruments designated in a cash flow or fair value hedging relationship are as follows:

	Location and Amount of Gain (Loss) Recognized in Income	
	Year ended December 31, 2020	
(Millions)	Cost of sales	Other expense (income), net
Total amounts of income and expense line items presented in the consolidated statement of income in which the effects of cash flow or fair value hedges are recorded	$ 16,605	$ 450
The effects of cash flow and fair value hedging:		
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	$ 80	$ —
Interest rate contracts:		
Amount of gain or (loss) reclassified from accumulated other comprehensive income into income	—	(9)
Gain or (loss) on fair value hedging relationships:		
Interest rate contracts:		
Hedged items	$ —	$ 4
Derivatives designated as hedging instruments	—	(4)

	Location and Amount of Gain (Loss) Recognized in Income	
	Year ended December 31, 2019	
(Millions)	Cost of sales	Other expense (income), net
Total amounts of income and expense line items presented in the consolidated statement of income in which the effects of cash flow or fair value hedges are recorded	$ 17,136	$ 462
The effects of cash flow and fair value hedging:		
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	$ 74	$ —
Interest rate contracts:		
Amount of gain or (loss) reclassified from accumulated other comprehensive income into income	—	(4)
Gain or (loss) on fair value hedging relationships:		
Interest rate contracts:		
Hedged items	$ —	$ (8)
Derivatives designated as hedging instruments	—	8

Location and Fair Value Amount 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. Additional information with respect to the fair value of derivative instruments is included in Note 15.

December 31, 2020 (Millions)	Gross Notional Amount	Assets Location	Assets Fair Value Amount	Liabilities Location	Liabilities Fair Value Amount
Derivatives designated as hedging instruments					
Foreign currency forward/option contracts	$ 1,630	Other current assets	$ 14	Other current liabilities	$ 67
Foreign currency forward/option contracts	669	Other assets	10	Other liabilities	25
Interest rate contracts	403	Other current assets	7	Other current liabilities	—
Total derivatives designated as hedging instruments			$ 31		$ 92
Derivatives not designated as hedging instruments					
Foreign currency forward/option contracts	$ 3,166	Other current assets	$ 13	Other current liabilities	$ 14
Total derivatives not designated as hedging instruments			$ 13		$ 14
Total derivative instruments			$ 44		$ 106

December 31, 2019 (Millions)	Gross Notional Amount	Assets Location	Assets Fair Value Amount	Liabilities Location	Liabilities Fair Value Amount
Derivatives designated as hedging instruments					
Foreign currency forward/option contracts	$ 1,995	Other current assets	$ 64	Other current liabilities	$ 9
Foreign currency forward/option contracts	1,041	Other assets	50	Other liabilities	3
Interest rate contracts	500	Other current assets	—	Other current liabilities	—
Interest rate contracts	603	Other assets	17	Other liabilities	—
Total derivatives designated as hedging instruments			$ 131		$ 12
Derivatives not designated as hedging instruments					
Foreign currency forward/option contracts	$ 2,684	Other current assets	$ 11	Other current liabilities	$ 8
Total derivatives not designated as hedging instruments			$ 11		$ 8
Total derivative instruments			$ 142		$ 20

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. As of December 31, 2020, 3M has International Swaps and Derivatives Association (ISDA) agreements with 17 applicable banks and financial institutions which contain netting provisions. In addition to a master agreement with 3M supported by a primary counterparty's parent guarantee, 3M also has associated credit support agreements in place with 16 of its primary derivative counterparties which, among other things, provide the circumstances under which either party is required to post eligible collateral (when the market value of transactions covered by these agreements exceeds specified thresholds or if a counterparty's credit rating has been downgraded to a predetermined rating). 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. As of the applicable dates presented below, no cash collateral had been received or pledged related to these derivative instruments.

Offsetting of Financial Assets under Master Netting Agreements with Derivative Counterparties

		Gross Amounts not Offset in the Consolidated Balance Sheet that are Subject to Master Netting Agreements		
December 31, 2020 (Millions)	**Gross Amount of Derivative Assets Presented in the Consolidated Balance Sheet**	**Gross Amount of Eligible Offsetting Recognized Derivative Liabilities**	**Cash Collateral Received**	**Net Amount of Derivative Assets**
Derivatives subject to master netting agreements	$ 44	$ 11	$ —	$ 33
Derivatives not subject to master netting agreements	—			—
Total	$ 44			$ 33
December 31, 2019 (Millions)				
Derivatives subject to master netting agreements	$ 142	$ 14	$ —	$ 128
Derivatives not subject to master netting agreements	—			—
Total	$ 142			$ 128

Offsetting of Financial Liabilities under Master Netting Agreements with Derivative Counterparties

		Gross Amounts not Offset in the Consolidated Balance Sheet that are Subject to Master Netting Agreements		
December 31, 2020 (Millions)	**Gross Amount of Derivative Liabilities Presented in the Consolidated Balance Sheet**	**Gross Amount of Eligible Offsetting Recognized Derivative Assets**	**Cash Collateral Pledged**	**Net Amount of Derivative Liabilities**
Derivatives subject to master netting agreements	$ 106	$ 11	$ —	$ 95
Derivatives not subject to master netting agreements	—			—
Total	$ 106			$ 95
December 31, 2019 (Millions)				
Derivatives subject to master netting agreements	$ 20	$ 14	$ —	$ 6
Derivatives not subject to master netting agreements	—			—
Total	$ 20			$ 6

Foreign Currency Effects

3M estimates that year-on-year foreign currency transaction effects, including hedging impacts, decreased pre-tax income by approximately $21 million in 2020 and increased pre-tax income by approximately $201 million in 2019. These estimates include transaction gains and losses, including derivative instruments designed to reduce foreign currency exchange rate risks.

NOTE 15. 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. The Company adopted ASU No. 2018-13, *Changes to the Disclosure Requirements for Fair Value Measurements,* as of January 1, 2020. This ASU primarily amended the disclosures around Level 3 investments, of which the Company had an immaterial amount for all periods presented.

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. Derivatives include cash flow hedges, interest rate swaps and net investment hedges. 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 2020 and 2019.

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 certain cities in the United States as of December 31, 2020. Due to the nature of these securities, the valuation method utilized includes referencing the carrying value of the corresponding finance lease obligation as adjusted for additional issuances when 3M sells its assets to the municipality and decreases in the form of bond amortization payments, and as such will be classified as level 3 securities separately.

Investments:

Investments include equity securities that are traded in an active market. Closing stock prices are readily available from active markets and are representative of fair value. 3M classifies these securities as Level 1. Investments are included within other assets on the Company's consolidated balance sheet.

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 at December 31, 2020	Fair Value Measurements Using Inputs Considered as		
		Level 1	Level 2	Level 3
Assets:				
Available-for-sale:				
Marketable securities:				
Corporate debt securities	$ 7	$ —	$ 7	$ —
Commercial paper	237	—	237	—
Certificates of deposit/time deposits	31	—	31	—
U.S. treasury securities	125	125	—	—
U.S. municipal securities	34	—	—	34
Derivative instruments — assets:				
Foreign currency forward/option contracts	37	—	37	—
Interest rate contracts	7	—	7	—
Liabilities:				
Derivative instruments — liabilities:				
Foreign currency forward/option contracts	106	—	106	—

Description (Millions)	Fair Value at December 31, 2019	Fair Value Measurements Using Inputs Considered as		
		Level 1	Level 2	Level 3
Assets:				
Available-for-sale:				
Marketable securities:				
Commercial paper	$ 85	$ —	$ 85	$ —
Certificates of deposit/time deposits	10	—	10	—
U.S. municipal securities	46	—	—	46
Investments	25	25	—	—
Derivative instruments — assets:				
Foreign currency forward/option contracts	125	—	125	—
Interest rate contracts	17	—	17	—
Liabilities:				
Derivative instruments — liabilities:				
Foreign currency forward/option contracts	20	—	20	—

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)	2020	2019	2018
Beginning balance	**$ 46**	$ 40	$ 30
Total gains or losses:			
Included in earnings	**—**	—	—
Included in other comprehensive income	**—**	—	—
Purchases and issuances	**10**	9	13
Sales and settlements	**(22)**	(3)	(3)
Transfers in and/or out of level 3	**—**	—	—
Ending balance	**34**	46	40
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 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 long-lived asset impairments for 2018 and 2019. There were no material adjustments to equity securities using the measurement alternative for 2019. 3M reflected an immaterial charge related to impairment of certain indefinite-lived assets and a net charge of $22 million related to adjustment to the carrying value of equity securities using the measurement alternative during the first quarter of 2020.

Fair Value of Financial Instruments:

The Company's financial instruments include cash and cash equivalents, marketable securities, held-to-maturity debt securities, accounts receivable, certain investments, accounts payable, borrowings, and derivative contracts. The fair values of cash equivalents, accounts receivable, held-to-maturity debt securities, 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:

	December 31, 2020		December 31, 2019	
(Millions)	Carrying Value	Fair Value	Carrying Value	Fair Value
Long-term debt, excluding current portion	**$ 17,989**	**$ 20,496**	$ 17,518	$ 18,475

The fair values reflected 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. A number of 3M's fixed-rate bonds were trading at a premium at December 31, 2020 and 2019 due to the lower interest rates and tighter credit spreads compared to issuance levels.

NOTE 16. Commitments and Contingencies

Unconditional Purchase Obligations:

Unconditional purchase obligations are defined as an agreement to purchase goods or services that is enforceable and legally binding (non-cancelable, or cancelable only in certain circumstances). The Company estimates its total unconditional purchase obligation commitment (for those contracts with terms in excess of one year) as of December 31, 2020, at $985 million. Payments by year are estimated as follows: 2021 ($294 million), 2022 ($328 million), 2023 ($216 million), 2024 ($95 million), 2025 ($46 million) and after 2026 ($6 million). Many of these commitments relate to take or pay contracts, in which 3M guarantees payment to ensure availability of products or services that are sold to customers. The Company expects to receive consideration (products or services) for these unconditional purchase obligations. The purchase obligation amounts do not represent the entire anticipated purchases in the future, but represent only those items for which the Company is contractually obligated. The majority of 3M's products and services are purchased as needed, with no unconditional commitment. For this reason, these amounts will not provide an indication of the Company's expected future cash outflows related to purchases.

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 $46 million at December 31, 2020, and $51 million at December 31, 2019. Further information on product warranties are not disclosed, as the Company considers the balance immaterial to its consolidated results of operations and financial condition. The fair value of 3M guarantees of loans with third parties and other guarantee arrangements are not material.

Related Party Activity:

3M does not have any material related party activity.

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 False Claims Act, securities, and state and federal environmental laws. Unless otherwise stated, the Company is vigorously defending all such litigation and proceedings. From time to time, the Company also receives subpoenas or requests for information from various government agencies. The Company generally responds to such subpoenas and requests 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 subpoenas and 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 liability 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. Although the Company cannot estimate its exposure to all legal proceedings, the Company currently believes that the ultimate outcome of legal proceedings or future charges, if any, would not have a material adverse effect on the consolidated financial position of the Company. 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 likely to be recovered. 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 expects to recover under 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 expects to recover 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, 2020, the Company is a named defendant, with multiple co-defendants, in numerous lawsuits in various courts that purport to represent approximately 2,075 individual claimants, compared to approximately 1,727 individual claimants with actions pending on December 31, 2019.

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. As of year-end 2020, there has been an increase in the number of cases filed alleging injuries from exposures to coal mine dust. 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. During March and April 2019, the Company agreed in principle to settle a substantial majority of the 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. That settlement was completed in 2019, 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 has filed a notice of appeal.

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.

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. In January 2020, the manufacturers filed a petition with the West Virginia Supreme Court, challenging the trial court's rulings; that petition was denied in November 2020. No liability has been recorded for this matter because the Company believes that liability is not probable and 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, the otherwise minimal activity in this case, 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 jury 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 2020 for respirator mask/asbestos liabilities by a total of $120 million. In 2020, the Company made payments for legal defense costs and settlements of $66 million related to the respirator mask/asbestos litigation. During the first quarter of 2019, the Company recorded a pre-tax charge of $313 million in conjunction with an increase in the accrual as a result of the March and April 2019 settlements-in-principle of the coal mine dust lawsuits mentioned above and the Company's assessment of other current and expected coal mine dust lawsuits (including the costs to resolve all current and expected coal mine dust lawsuits in Kentucky and West Virginia). As of December 31, 2020, the Company had an accrual for respirator mask/asbestos liabilities (excluding Aearo accruals) of $662 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, 2020, the Company's receivable for insurance recoveries related to the respirator mask/asbestos litigation was $4 million. 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.

As of December 31, 2020, 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.

As of December 31, 2020, the Company, through its Aearo subsidiary, had accruals of $28 million for product liabilities and defense costs related to current and future Aearo-related asbestos, silica-related and coal mine dust claims. This accrual represents the Company's best estimate of Aearo's probable loss and reflects an estimation period for future claims that may be filed against Aearo approaching the year 2050. The accrual was reduced by $37 million during the second quarter of 2020 after paying Aearo's share of certain settlements under the informal arrangement described below. The accrual reflects the Company's assessment of pending and expected lawsuits, its review of its respirator mask/asbestos liabilities, and the cost of resolving claims of persons who claim more serious injuries. Responsibility for legal costs, as well as for settlements and judgments, is currently 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 substances, and the handling and disposal of solid and hazardous wastes enforceable by national, state, and local authorities around the world, and private parties in the United States and abroad. These laws and regulations provide, under certain circumstances, a basis for the remediation of contamination, for capital investment in pollution control equipment, for restoration of 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, typically with other companies, for the costs of remediation of environmental contamination at current or former facilities and at off-site locations. The Company has identified numerous locations, most of which are in the United States, at which it may have some liability. 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), or other per- and polyfluoroalkyl substances (collectively PFAS). As a result of its 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 or as byproducts in some of 3M's current fluorochemical manufacturing processes, products, and waste streams.

Regulatory activities concerning PFAS continue in the United States, Europe and elsewhere, and before certain international bodies. These activities include gathering of exposure and use information, risk assessment, and consideration of regulatory approaches. In the European Union, where 3M has manufacturing facilities in countries such as Germany and Belgium, recent regulatory activities have included preliminary work on various restrictions under the Regulation concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), including the restriction of PFAS in certain usages and a broader restriction of PFAS as a class. As of December 2020, PFOA is subject to certain restrictions under EU's Persistent Organic Pollutants (POPs) Recast Regulation.

In the United States, as the database of studies of both PFOA and PFOS has expanded, the EPA has developed human health effects documents summarizing the available data from these studies. In February 2014, the EPA initiated external peer review of its draft human health effects documents for PFOA and PFOS. The peer review panel met in August 2014. In May 2016, the EPA announced lifetime health advisory levels for PFOA and PFOS at 70 parts per trillion (ppt) (superseding the provisional levels established by the EPA in 2009 of 400 ppt for PFOA and 200 ppt for PFOS). Where PFOA and PFOS are found together, EPA recommends that the concentrations be added together, and the lifetime health advisory for PFOA and PFOS combined is also 70 ppt. Lifetime health advisories, which are non-enforceable and non-regulatory, provide information about concentrations of drinking water contaminants at which adverse health effects are not expected to occur over the specified exposure duration. To collect exposure information under the Safe Drinking Water Act, the EPA published on May 2, 2012 a list of unregulated substances, including six PFAS chemicals, required to be monitored during the period 2013-2015 by public water system suppliers to determine the extent of their occurrence. Through January 2017, the EPA reported results for 4,920 public water supplies nationwide. Based on the 2016 lifetime health advisory, 13 public water supplies exceed the level for PFOA and 46 exceed the level for PFOS (unchanged from the July 2016 EPA summary). A technical advisory issued by EPA in September 2016 on laboratory analysis of drinking water samples stated that 65 public water supplies had exceeded the combined level for PFOA and PFOS. These results are based on one or more samples collected during the period 2012-2015 and do not necessarily reflect current conditions of these public water supplies. EPA reporting does not identify the sources of the PFOA and PFOS in the public water supplies.

The Company is continuing 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 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 in the "Other PFAS-related Matters" section.

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 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 from these sites and proposing response actions; (ii) providing treatment or alternative drinking water upon identifying any level exceeding a Health Based Value (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 for which a HBV and/or HRL exists as a result of contamination from these sites; (iii) remediating identified sources of other PFAS 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. During 2008, the MPCA issued formal decisions adopting remedial options for the former disposal sites in Washington County, Minnesota (Oakdale and Woodbury). In August 2009, the MPCA issued a formal decision adopting remedial options for the Company's Cottage Grove manufacturing facility. During the spring and summer of 2010, 3M began implementing the agreed upon remedial options at the Cottage Grove and Woodbury sites. 3M commenced the remedial option at the Oakdale site in late 2010. At each location the remedial options were recommended by the Company and approved by the MPCA. Remediation work has been completed at the Oakdale and Woodbury sites, and they are in an operational maintenance mode. Remediation work has been substantially completed at the Cottage Grove site, with operational and maintenance activities ongoing.

In August 2014, the Illinois EPA 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 May 2017, the MDH issued new HBVs for PFOA and PFOS. The new HBVs are 35 ppt for PFOA and 27 ppt for PFOS. In connection with its announcement the MDH stated that "Drinking water with PFOA and PFOS, even at the levels above the updated values, does not represent an immediate health risk. These values 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." In December 2017, the MDH issued a new HBV for perfluorobutane sulfonate (PFBS) of 2 parts per billion (ppb). In February 2018, the MDH published reports finding no unusual rates of certain cancers or adverse birth outcomes (low birth rates or premature births) among residents of Washington and Dakota Counties in Minnesota. In April 2019, the MDH issued a new HBV for PFOS of 15 ppt and a new HBV for PFHxS of 47 ppt.

In May 2018, the EPA announced a four-step PFAS action plan, which includes evaluating the need to set Safe Drinking Water Act maximum contaminant levels (MCLs) for PFOA and PFOS and beginning the steps necessary to designate PFOA and PFOS as "hazardous substances" under CERCLA. In November 2018, the EPA asked for public comment on draft toxicity assessments for two PFAS compounds, including PFBS. In February 2019, the EPA issued a PFAS Action Plan that outlines short- and long-term actions the EPA is taking to address PFAS – actions that include developing a national drinking water determination for PFOA and PFOS, strengthening enforcement authorities and evaluating cleanup approaches, nationwide drinking water monitoring for PFAS, expanding scientific knowledge for understanding and managing risk from PFAS, and developing consistent risk communication tools for communicating with other agencies and the public. With respect to groundwater contaminated with PFOA and PFOS, the EPA issued interim recommendations in December 2019, providing guidance for screening levels and preliminary remediation goals for groundwater that is a current or potential drinking water source, to inform final clean-up levels of contaminated sites. In February 2020, the EPA provided notice and requested public comment on certain preliminary determinations to regulate PFOA and PFOS under the Safe Drinking Water Act (SDWA). In June 2020, 3M submitted comments on EPA's preliminary determinations to regulate PFOA and PFOS under the SDWA.

EPA announced in its Spring 2020 Regulatory Agenda, released in June 2020, that it intended to publish a notice of proposed rulemaking to designate PFOA and PFOS as hazardous substances under CERCLA in August 2020. In November 2020, EPA announced it was developing of a new analytical method to test for PFAS in wastewater and other environmental media. In December 2020, EPA released two new guidance documents related to PFAS. First, it issued a Draft Compliance Guide for Imported Articles Containing Surface Coatings Subject to the Long-Chain Perfluoroalkyl Carboxylate and Perfluoroalkyl Sulfonate Chemical Substances Significant New Use Rule. Second, EPA released for public comment interim guidance on destroying and disposing of certain PFAS and PFAS-containing materials.

In January 2021, EPA announced its intention to initiate a process to develop a national primary drinking water regulation for PFOA and PFOS; the process will include further analyses, scientific review and opportunities for public comment. EPA also announced in January 2021 that it will issue an advance notice of proposed rulemaking (ANPR) to solicit public comment on whether the agency should take additional regulatory steps to address PFAS contamination, including designating PFOA and PFOS and other PFAS as hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and seeking comment on whether PFOA and PFOS and other PFAS should be subject to regulation as hazardous waste under the Resource Conservation and Recovery Act (RCRA). EPA indicated it will also issue an ANPR to collect information regarding manufacturers of PFAS and the presence and treatment of PFAS in discharges from these facilities.

The U.S. Agency for Toxic Substances and Disease Registry (ATSDR) within the Department of Health and Human Services released a draft Toxicological Profile for PFAS for public review and comment in June 2018. In the draft report, ATSDR proposed draft 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 are not intended to define cleanup or action levels for ATSDR or other agencies. In August 2018, 3M submitted comments on the ATSDR proposal, noting that there are major shortcomings with the current draft, especially with the MRLs, and that the ATSDR's profile must reflect the best science and full weight of evidence known about these chemicals.

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 September 2019, 3M and several other parties filed a lawsuit in New Hampshire state court to enjoin PFAS regulations in New Hampshire. In November 2019, the court issued a preliminary injunction preventing the regulations from being enforced. In April 2020, the New Hampshire Supreme Court agreed to review several issues related to the preliminary injunctive order. In July 2020, the governor signed a bill passed by the New Hampshire legislature setting the same drinking water standards that had been enjoined by the court.

Vermont finalized drinking water standards for a combination of PFOA, PFOS and three other PFAS in March 2020. New Jersey finalized drinking water standards and designated PFOA and PFOS as hazardous substances in June 2020. New York established drinking water standards for PFOA and PFOS in July 2020. Michigan implemented final drinking water standards for certain PFAS, including PFOS and PFOA, in August 2020. Massachusetts published final regulations establishing a drinking water standard relating to six combined PFAS in October 2020. Some other states have also been evaluating or have taken actions relating to PFOA, PFOS and other PFAS in products such as food packaging, carpets and other products.

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, and the parties are proceeding to litigation on the merits.

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.

Litigation Related to Historical PFAS Manufacturing Operations in Alabama

As previously reported, a former employee filed a putative class action lawsuit against 3M, BFI Waste Management Systems of Alabama, and others in the Circuit Court of Morgan County, Alabama (the “St. John” case), seeking property damage from exposure to certain perfluorochemicals at or near the Company’s Decatur, Alabama, manufacturing facility. The parties have agreed to continue to stay the St. John case through February 2021*,* pending ongoing mediation between the parties involved in this case and another case discussed below. Two additional putative class actions filed in the same court by certain residents in the vicinity of the Decatur plant seeking relief on similar grounds (the Chandler case and the Stover case, respectively) are stayed pending the resolution of class certification issues in the St. John case.

In October 2015, West Morgan-East Lawrence Water & Sewer Authority (Water Authority) filed an individual complaint against 3M Company, Dyneon, L.L.C, and Daikin America, Inc., in the U.S. District Court for the Northern District of Alabama. The complaint also includes representative plaintiffs who brought the complaint on behalf of themselves, and a class of all owners and possessors of property who use water provided by the Water Authority and five local water works to which the Water Authority supplies water (collectively, the “Water Utilities”). The complaint seeks compensatory and punitive damages and injunctive relief based on allegations that the defendants’ chemicals, including PFOA and PFOS from their manufacturing processes in Decatur, have contaminated the water in the Tennessee River at the water intake, and that the chemicals cannot be removed by the water treatment processes utilized by the Water Authority. In April 2019, 3M and the Water Authority settled the lawsuit for $35 million, which will fund a new water filtration system, with 3M indemnifying the Water Authority from liability resulting from the resolution of the currently pending and future lawsuits against the Water Authority alleging liability or damages related to 3M PFAS. The putative class claims brought by the representative plaintiffs who were supplied drinking water by the Water Authority (the “Lindsey” case) remain. The parties are in active discussions regarding a negotiated resolution, and the case is currently stayed.

In June 2016, the Tennessee Riverkeeper, Inc. (Riverkeeper), a non-profit corporation, filed a lawsuit in the U.S. District Court for the Northern District of Alabama against 3M; BFI Waste Systems of Alabama; the City of Decatur, Alabama; and the Municipal Utilities Board of Decatur, Morgan County, Alabama. The complaint alleges that the defendants violated the Resource Conservation and Recovery Act in connection with the disposal of certain PFAS through their ownership and operation of their respective sites. The complaint further alleges such practices may present an imminent and substantial endangerment to health and/or the environment and that Riverkeeper has suffered and will continue to suffer irreparable harm caused by defendants’ failure to abate the endangerment unless the court grants the requested relief, including declaratory and injunctive relief. This case has been stayed through February 2021, pending ongoing mediation between the parties in conjunction with the St. John case.

In August 2016, a group of over 200 plaintiffs filed a putative class action against West Morgan-East Lawrence Water and Sewer Authority (Water Authority), 3M, Dyneon, Daikin, BFI, and the City of Decatur in state court in Lawrence County, Alabama (the “Billings” case). Plaintiffs are residents of Lawrence, Morgan and other counties who are or have been customers of the Water Authority. They contend defendants have released PFAS that contaminate the Tennessee River and, in turn, their drinking water, causing damage to their health and properties. In January 2017, the court in the St. John case, discussed above, stayed this litigation pending resolution of the St. John case. Plaintiffs in the Billings case amended their complaint in November 2020 and added 557 additional plaintiffs, and in January 2021 amended again to add 331 additional plaintiffs.

In January 2017, several hundred plaintiffs sued 3M, Dyneon and Daikin America in Lawrence and Morgan Counties, Alabama (the “Owens” case). The plaintiffs are owners of property, residents, and holders of property interests who receive their water from the West Morgan-East Lawrence Water and Sewer Authority (Water Authority). They assert common law claims for negligence, nuisance, trespass, wantonness and battery, and they seek injunctive relief and punitive damages. The plaintiffs contend that the defendants own and operate manufacturing and disposal facilities in Decatur that have released and continue to release PFOA, PFOS and related chemicals into the groundwater and surface water of their sites, resulting in discharges into the Tennessee River. The plaintiffs contend that, as a result of the alleged discharges, the water supplied by the Water Authority to the plaintiffs was, and is, contaminated with PFOA, PFOS and related chemicals at a level dangerous to humans. The court denied a motion by co-defendant Daikin to stay this case pending resolution of the St. John case, and the case is progressing through discovery.

In November 2017, a putative class action (the "King" case) was filed against 3M, Dyneon, Daikin America and the West Morgan-East Lawrence Water and Sewer Authority (Water Authority) in the U.S. District Court for the Northern District of Alabama. The plaintiffs are residents of Lawrence and Morgan County, Alabama who receive their water from the Water Authority and seek injunctive relief, attorneys' fees, compensatory and punitive damages for their alleged personal injuries. The plaintiffs contend that the defendants own and operate manufacturing and disposal facilities in Decatur, Alabama that have released and continue to release PFOA, PFOS and related chemicals into the groundwater and surface water of their sites, resulting in discharges into the Tennessee River. The plaintiffs contend that, as a result of the alleged discharges, the water supplied by the Water Authority to the plaintiffs was, and is, contaminated with PFOA, PFOS and related chemicals at a level dangerous to humans. In November 2019, the King plaintiffs amended their complaint to withdraw all class allegations. Since then, the plaintiffs have added 37 new individual plaintiffs and voluntarily dismissed five plaintiffs (for a total of 55 plaintiffs). The case is scheduled for trial in June 2022. Discovery in this case is proceeding.

In July 2019, 3M announced that it had initiated an investigation into the possible presence of PFAS in three closed municipal landfills in Decatur that accepted waste from 3M's Decatur plant and other companies in the 1960s through the 1980s. 3M is working with local and state entities as it conducts its investigation and will report the results and recommended remedial action, if any, to those entities and the public. 3M is also defending or has received notice of potential lawsuits in state and federal court brought by individual property owners who claim damages related to historical PFAS disposal at former area landfills near their properties. 3M has resolved for an immaterial amount some of the claims brought by property owners.

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. In this same month, Guin WWSB dismissed its lawsuit without prejudice and is working with 3M to further investigate the presence of chemicals in the area.

Litigation Related to Historical PFAS Manufacturing Operations in Minnesota

In July 2016, the City of Lake Elmo filed a lawsuit in the U.S. District Court for the District of Minnesota against 3M alleging that the City suffered damages from drinking water supplies contaminated with PFAS, including costs to construct alternative sources of drinking water. In April 2019, 3M and the City of Lake Elmo agreed to settle the lawsuit for less than $5 million.

State Attorneys General Litigation related to PFAS

Minnesota. In December 2010, the State of Minnesota, by its Attorney General, filed a lawsuit in Hennepin County District Court against 3M seeking damages and injunctive relief with respect to the presence of PFAS in the groundwater, surface water, fish or other aquatic life, and sediments in the state of Minnesota (the "NRD Lawsuit"). In February 2018, 3M and the State of Minnesota reached a resolution of the NRD Lawsuit. Under the terms of the settlement, 3M agreed to provide an $850 million grant to the State for a special "3M Water Quality and Sustainability Fund." This Fund, which is administered by the State, will enable projects that support water sustainability in the Twin Cities East Metro region, such as continued delivery of water to residents and enhancing groundwater recharge to support sustainable growth. Other purposes of the grant include habitat and recreation improvements, such as fishing piers, trails, and open space preservation. 3M recorded a pre-tax charge of $897 million, inclusive of legal fees and other related obligations, in the first quarter of 2018 associated with the resolution of this matter.

In connection with the above referenced settlement, the Minnesota Pollution Control Agency and the Department of Natural Resources, as co-trustees of the Fund, released in September 2020 a conceptual drinking water supply plan for the communities in the East Metro area, seeking public comment on three recommended options for utilizing the Fund. In December 2020, 3M submitted preliminary comments on the co-trustees' draft conceptual drinking water supply plan to address legal and technical aspects of the draft plan.

New York. The State of New York, by its Attorney General, has filed four lawsuits (in June 2018, February 2019, July 2019, and November 2019) against 3M and other defendants seeking to recover the costs incurred in responding to PFAS contamination allegedly caused by Aqueous Film Forming Foam (AFFF) manufactured by 3M and others. Each of the four suits was filed in Albany County Supreme Court before being removed to federal court, and each has been transferred to the multi-district litigation (MDL) proceeding for AFFF cases, which is discussed further below. The state is seeking compensatory and punitive damages, and injunctive and equitable relief in the form of a monetary fund for the State's reasonably expected future damages, and/or requiring defendants to perform investigative and remedial work.

Ohio. In December 2018, the State of Ohio, by its Attorney General, filed a lawsuit in the Common Pleas Court of Lucas County, Ohio against 3M, Tyco Fire Products LP, Chemguard, Inc., Buckeye Fire Equipment Co., National Foam, Inc., and Angus Fire Armour Corp., seeking injunctive relief and compensatory and punitive damages for remediation costs and alleged injury to Ohio natural resources from AFFF manufacturers. This case was removed to federal court and transferred to the MDL.

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 August 2019, the court stayed all proceedings in these actions pending a ruling on NJDEP's motions to remand the cases to state court. In April 2020, the federal court denied the state's motion to remand. In June 2020, the court entered a consent order lifting the stay and consolidating the two actions, along with two others brought by the NJDEP relating to the DuPont facilities, for case management and pretrial purposes. The case is in early stages of litigation.

In May 2019, the New Jersey Attorney General and NJDEP filed a lawsuit against 3M, DuPont, and six other companies, alleging natural resource damages from AFFF products and seeking damages, including punitive damages, and associated fees. This case was removed to federal court and transferred to the AFFF MDL.

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. The first lawsuit was filed against 3M and seven co-defendants, alleging PFAS contamination resulting from the use of AFFF products at several sites around the state. This case was removed to federal court and transferred to the AFFF MDL. The second suit asserts PFAS contamination from non-AFFF sources and names 3M, DuPont, and Chemours as defendants. In its June 2020 ruling on defendants' motions to dismiss, the court dismissed the state's trespass claim, but allowed several claims to proceed. In October 2020, the state amended its complaint to add a state commission as plaintiff and make a claim related to the state's drinking water and groundwater trust fund statute. Defendants have filed motions to dismiss related to these amendments, and the case remains in early stages of litigation.

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. The first lawsuit was filed against 3M and ten co-defendants, alleging PFAS contamination resulting from the use of AFFF products at several sites around the state. This case was removed to federal court and transferred to the AFFF MDL. The second 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. In May 2020, the court denied the defendants' motion to dismiss, but dismissed the state's trespass claim as to property the state does not own. The parties are now engaged in discovery.

Michigan. In January 2020, the Michigan Attorney General filed a lawsuit in state court against 3M, Dyneon, DuPont, Chemours and others seeking injunctive and equitable relief and damages for alleged injury to Michigan public natural resources and its residents related to PFAS, excluding AFFF. The defendants filed motions to dismiss, and 3M's motion was denied in August 2020. Discovery has started in this case. In addition, in August 2020, the Michigan Attorney General filed two lawsuits against numerous AFFF manufacturers and distributors, and suppliers of PFAS to AFFF manufacturers. 3M is named a defendant in one of the lawsuits, filed in federal court, and the case has been transferred to the AFFF MDL, where it remains in early stages of litigation.

Guam. In September 2019, the Attorney General of Guam filed a lawsuit against 3M and other defendants relating to contamination of the territory's drinking water supplies and other natural resources by PFAS, allegedly resulting from the use of AFFF products at several sites around the island. This lawsuit has been removed to federal court and transferred to the AFFF MDL.

Commonwealth of Northern Mariana Islands. In December 2019, the Attorney General of the Commonwealth of Northern Mariana Islands, a U.S. territory, filed a lawsuit against 3M and other defendants relating to contamination of the territory's drinking water supplies and other natural resources by PFAS, allegedly resulting from the use of AFFF products. This lawsuit has been removed to federal court and transferred to the AFFF MDL.

Mississippi. In December 2020, the Mississippi Attorney General filed an AFFF-related PFAS lawsuit against 3M and other defendants directly with the AFFF MDL court in South Carolina. The lawsuit alleges injuries to the State's property and natural resources purportedly caused by PFAS contamination from AFFF use and seeks both compensatory and punitive damages.

In addition to the above state attorneys general actions, 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, 2020, 943 lawsuits (including 26 putative class actions) alleging injuries by AFFF use have been filed against 3M (along with other defendants) in various state and federal courts. As previously noted, some of these cases have been brought by state or territory attorneys general. In most of these cases, plaintiffs typically allege that certain PFAS used in AFFF contaminated the soil and groundwater where AFFF was used and seek damages for alleged injuries such as loss of use and enjoyment of properties, diminished property values, investigation costs, remediation costs, personal injury and/or funds for medical monitoring. 414 cases filed since October 2019 have been brought by current or former firefighters who claim to have suffered personal injury as a result of exposure to AFFF while using the product. The United States, the U.S. Department of Defense and several companies have been sued along with 3M, including but not limited to Ansul Co. (acquired by Tyco, Inc.), Angus Fire, Buckeye Fire Protection Co., Chemguard, Chemours, DuPont, National Foam, Inc., and United Technologies Corp.

In December 2018, the U.S. Judicial Panel on Multidistrict Litigation (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. Additional AFFF cases continue to be transferred into the MDL as they are filed or removed to federal court. As of December 31, 2020, there were 947 cases in the MDL, 933 of which name 3M as a defendant. The parties in the MDL are currently in the process of conducting discovery.

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. 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 in early stages of litigation, after Valero dismissed its Ohio state court action without prejudice in October 2019. The parties in the state court cases have agreed to stay all five cases until March 2021.

Two subsidiaries of Husky Energy filed suit in April 2020 against 3M and other AFFF manufacturers in Wisconsin state court relating to alleged PFAS contamination from AFFF use at Husky facilities in Superior, Wisconsin and Lima, Ohio. The parties have entered into a tolling agreement deferring further action on the plaintiffs' claims. The plaintiffs filed a notice of dismissal without prejudice in September 2020.

As of December 31, 2020, the Company is a defendant in two AFFF-related lawsuits originally filed in state courts (in California and Missouri) that had been removed to federal court. Plaintiffs in these cases have filed motions seeking remand to state court and opposing transfer to the AFFF MDL. In addition, the Company is in discussions with several parties that have raised claims related to the use and disposal of AFFF and is exploring a negotiated resolution with some of them.

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Other PFAS-related Product and Environmental Litigation

3M manufactured and sold products containing various 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 41 individual cases and one putative class action filed in the U.S. District Court for the Northern District of New York and four additional 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). The plaintiffs allege that 3M manufactured and sold PFOA that was used for manufacturing purposes at Saint-Gobain's and Honeywell's facilities located in the Village of Hoosick Falls and the Town of Hoosick. The plaintiffs claim that the drinking water around Hoosick Falls became contaminated with unsafe levels of PFOA due to the activities of the defendants and allege that they suffered bodily injury due to the ingestion and inhalation of PFOA. The four state court cases also include Tonaga, Inc. (Taconic) as a defendant and make similar allegations related to Taconic's facility in neighboring Petersburg. The plaintiffs seek unstated compensatory, consequential, and punitive damages, as well as attorneys' fees and costs. 3M has answered the complaints in these cases, which are now proceeding through discovery. The plaintiffs in the putative class action have moved for class certification. 3M is also defending 11 individual cases in New York filed by Nassau County drinking water providers in the U.S. District Court for the Eastern District of New York. The plaintiffs in these cases allege that 3M, DuPont, and additional unnamed defendants are responsible for the contamination of plaintiffs' water supply sources with various PFAS compounds. DuPont's motion to transfer these cases to the AFFF MDL was denied in March 2020. 3M has filed answers in the eight cases in which it has been served. Preliminary 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. In January 2021, 3M moved to dismiss certain claims in the complaint, and the case remains in early stages of litigation. In addition to the consolidated federal court putative class action, as of December 31, 2020, 3M is a defendant in approximately 274 private individual actions in Michigan state court based on similar allegations. These cases are coordinated for pre-trial purposes. Five of these cases were selected over time for bellwether trials. In January 2020, the court issued the first round of dispositive motion rulings related to the first two bellwether cases, including dismissing the second bellwether case entirely and dismissing certain plaintiffs' medical monitoring and risk of future disease claims, and granting summary judgment to the defendants on one plaintiff's cholesterol injury claims. The parties settled the first bellwether case in early 2020. In June 2020, the court denied the plaintiffs' motion to reconsider the dismissal of the second bellwether case, and the plaintiffs have appealed the decision to the state appellate court. In January 2021, the court granted summary judgment in favor of the defendants in one of three remaining bellwether cases. The remaining two bellwether trials are tentatively scheduled for October 2021, subject to COVID-19 developments. The parties have engaged in mediation efforts in both the putative class action and the state court mass action cases.

Wolverine also filed a third-party complaint against 3M in a suit by the State of Michigan and intervenor townships that seeks to compel Wolverine to investigate and address contamination associated with its historic disposal activity. 3M filed an answer and counterclaims to Wolverine's third-party complaint in June 2019. In September and October 2019, the parties (including 3M as third-party defendant) engaged in mediation. In December 2019, the State of Michigan, the intervening townships, and Wolverine announced that they had tentatively resolved the State and townships' claims against Wolverine in exchange for a $70 million payment and certain future remediation measures by Wolverine. In February 2020, the court approved a Consent Decree that memorializes Wolverine's ongoing remediation obligations and the State's and intervening townships' covenants not to bring further lawsuits as to the remediated area. 3M has been formally designated as a "Contributing Party," and as such, the State's and townships' covenants will also apply to 3M. In February 2020, 3M and Wolverine executed an agreement to resolve the legal claims between the two companies. Pursuant to the agreement, 3M made a one-time financial contribution of $55 million in March 2020 to support Wolverine's past and ongoing efforts to address PFAS remediation under Wolverine's Consent Decree with the State and the townships. This amount was part of 3M's charge taken in the fourth quarter of 2019 as discussed below in the "Environmental Liabilities and Insurance Receivables" section.

3M is also a defendant, together with Georgia-Pacific as co-defendant, in a putative class action in federal court in Michigan brought by residents of Parchment, who allege that the municipal drinking water is contaminated from waste generated by a paper mill owned by Georgia-Pacific's corporate predecessor. The defendants moved to dismiss certain claims in the complaint, and that motion was denied in January 2021. The parties continue to engage in discovery. As a result of discussions among Georgia-Pacific, 3M and municipalities near Parchment, Georgia-Pacific and 3M have contributed to a fund of approximately $5 million to provide expanded municipal water service in the area. The municipalities have released 3M from claims relating to or arising out of the extension of municipal water or the alleged PFAS contamination in the area of that extension. The putative class action claims are not included in this resolution.

In Alabama and Georgia, 3M, together with multiple co-defendants, is defending four state court cases, including three 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 and Gadsden, Alabama. The three water utility cases remain in the early stages of litigation. One state court case 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 3M has filed a motion to dismiss a series of amended complaints.

In California, 3M and other defendants are defending an action brought in federal court by Golden State Water Company, alleging PFAS contamination of certain wells located in its water systems. 3M filed a motion to dismiss in November 2020 and in January 2021, the court granted defendants' motion to dismiss the case for lack of personal jurisdiction. In December 2020, the Orange County Water District and ten additional local water providers sued 3M, Decra Roofing and certain DuPont-related entities in California state court, 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.

In Delaware, 3M, together with several co-defendants, 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 has been removed from state court to federal court, and plaintiffs have withdrawn its motion to remand to state court and filed an amended complaint. 3M has filed a motion to dismiss the amended complaint.

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. 3M's motion to transfer the case to the AFFF MDL was denied. 3M has moved to dismiss the complaint, and the case is currently in discovery. In addition, 3M, together with several co-defendants, is defending two federal court cases by multiple individuals with private drinking water wells near DuPont and Solvay facilities that were allegedly supplied with PFAS by 3M. Plaintiffs seek medical monitoring and damages. 3M has filed a motion to dismiss in the first of those actions and the second is in early stages of litigation. 3M and other defendants are also defending three federal court cases brought by individuals who live near the DuPont and Solvay facilities, alleging personal injury caused by PFAS exposure. Those cases are in early stages of litigation. In September 2020, a federal court case was filed against 3M on behalf of the Borough of Hopatcong, alleging general PFAS contamination of its public water supply. In December 2020, 3M filed a motion to dismiss the Hopatcong matter.

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. 3M and other entities jointly filed a motion to dismiss in February 2019. In September 2019, the court denied the defendants' motion to dismiss. In February 2020, the court denied 3M's motion to transfer the case to the AFFF MDL. In December 2020, the defendants filed their joint opposition to the class certification motion filed earlier by the plaintiff.

In West Virginia, 3M and other defendants are defending a state court action brought by Weirton Area Water Board that alleges PFAS contamination of local water supplies. This case has been removed to federal court. The defendants filed various motions to dismiss the complaint based on pleading deficiencies and lack of personal jurisdiction. In November 2020, the court granted some of the personal jurisdiction motions, denied other personal jurisdiction motions (including 3M's) and ordered the remaining parties to engage in discovery on jurisdiction. In December 2020, the court denied the defendants' non-jurisdictional motion to dismiss. The case remains in early stages of litigation.

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 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 does not permit 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. Environmental Protection Agency (EPA) and the Alabama Department of Environmental Management (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 by 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 the terms of a Clean Water Act National Pollutant Discharge Elimination System (NPDES) permit issued by ADEM. The NPDES permit requires the Company to report on a monthly and quarterly basis the quality and quantity of pollutants discharged to the Tennessee River. In June 2019, 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 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 and announced that it had elected to temporarily idle certain other manufacturing processes at 3M Decatur. The Company is reviewing its operations at the plant, has installed wastewater treatment controls and has restarted idled processes.

As a result of the Company's discussions with ADEM to address these and other related matters in the state of Alabama, 3M and ADEM have 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 certain notices or reports and performing various analytical and characterization studies and (b) future capital improvements; and (ii) remediation activities, including certain 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. The Company does not expect them to have a material impact on its consolidated results of operations or financial position. With respect to remediation activities, financial obligations related to certain activities under the Consent Order are probable and estimable, and are included in the Company's accruals for "other environmental liabilities" as described in the "Environmental Liabilities and Insurance Receivables" section below. As offsite investigation activities continue, additional remediation amounts may become probable and estimable in the future.

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 with this inquiry and is producing documents in response to the subpoena.

In addition, 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). The Company continues to work with the EPA and IEPA to address these issues from the Cordova facility. In December 2020, the EPA requested certain documents and information related to TSCA compliance at the facility. The Company is cooperating and producing documents and information in response to the request.

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, 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. The Company continues to work with the MPCA and EPA to address the discharges from the Cottage Grove facility.

Separately, 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 Resource Conservation and Recovery Act (RCRA) permit for its Cottage Grove incinerator. In July 2020, the Company received an information request from MPCA related to the June 2020 disclosure, to which the Company responded in September 2020. The Company continues to work with the MPCA to address WAP/FAP implementation issues disclosed in June 2020. In January 2021, the Company received a notice of violation (NOV) from MPCA related to, among other matters, the above-described Clean Water Act and RCRA issues. The Company is cooperating with MPCA to address the issues that are the subject of the NOV.

In February 2020, 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. The Company is cooperating with this inquiry and is producing documents and information in response to the request for information.

The Company will continue 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. The Company cannot predict at this time the outcomes of resolving these compliance matters or what potential actions may be taken by the regulatory agencies.

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 stated, no liability has been recorded as the Company believes liability in those matters is not probable and estimable and the Company is not able to estimate a possible loss or range of 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 estimable based on experience and developments in those matters. During 2020, the Company increased its accrual for PFAS-related other environmental liabilities by $96 million and made related payments of $125 million. During the first quarter of 2019, the EPA issued its PFAS Action Plan and the Company settled the litigation with the Water Authority (both matters are described in more detail above). The Company completed a comprehensive review with the assistance of environmental consultants and other experts regarding environmental matters and litigation related to historical PFAS manufacturing operations in Minnesota; Alabama; Gendorf, Germany; and at four former landfills in Alabama. As a result of these developments and of that review, the Company increased its accrual for "other environmental liabilities" by $235 million pre-tax (including the settlement with the Water Authority) in the first quarter of 2019. During the fourth quarter of 2019, 3M updated its evaluation of certain customer-related litigation based on continued, productive settlement discussions with multiple parties. As previously disclosed, 3M has been engaged in mediation and resolution negotiations in multiple cases. In addition, during the fourth quarter of 2019, the Company updated its assessment of environmental matters and litigation related to its historical PFAS manufacturing operations and expanded its evaluation of other 3M sites that may have used certain PFAS-containing materials and locations at which they were disposed. As a result of these actions during the fourth quarter the Company recorded a pre-tax charge of $214 million. As of December 31, 2020, the Company had recorded liabilities of $416 million for “other environmental liabilities.” The accruals represent the Company’s best estimate of the probable loss. The Company is not able to estimate a possible loss or range of loss in excess of the established accruals at this time.

As of December 31, 2020, the Company had recorded liabilities of $23 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 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, 2020, 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. 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, 2020, the Company is a named defendant in approximately 3,130 lawsuits (including 14 putative class actions) in various state and federal courts that purport to represent approximately 12,400 individual claimants making similar allegations. 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 a multi-district litigation (MDL) proceeding to centralize pre-trial proceedings. Discovery is underway. The plaintiffs and 3M filed preliminary summary judgment motions on the government contractor defense. In July 2020, based on the then current record, the 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 MDL court granted the plaintiffs' motion to consolidate three plaintiffs for the first bellwether trial scheduled to begin in March 2021. Individual trials for the next two bellwether plaintiffs are scheduled to proceed in May and June of 2021.

3M is also defending 24 lawsuits brought 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. The Company has appealed the remand orders to the U.S. Court of Appeals for the Eighth Circuit. The state court actions will be subject to a bellwether selection process. The first trial in Hennepin County was scheduled for March 2021 but has been delayed.

No liability has been recorded for these matters because the Company believes that any such liability is not probable and estimable at this time.

As of December 31, 2020, the Company was a named defendant in 23 lawsuits in the United States involving 26 plaintiffs 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 had been a named defendant in lawsuits in federal courts involving over 5,000 plaintiffs. The plaintiffs claim 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 have appealed that decision to the U.S. Court of Appeals for the Eighth Circuit. Plaintiffs have 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.

Among the 23 remaining lawsuits in the United States, 20 are in the MDL court and three are in state court. The MDL court declined to remand one case to Oklahoma state court and has stayed all 20 remaining lawsuits pending the appeal of the summary judgment decision. In February 2020, the MDL court remanded two cases to state court in Jackson County, Missouri that combined Bair Hugger product liability claims with medical malpractice claims. There is also one case in Hidalgo County, Texas that combines Bair Hugger product liability claims with medical malpractice claims. In August 2019, the MDL court enjoined the individual plaintiff from pursuing his claims in Texas state court because he had previously filed and dismissed a claim in the MDL. That plaintiff has appealed the order to the U.S. Court of Appeals for the Eighth Circuit. The Texas state court has stayed the entire case while the appeal is pending.

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 finial 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 was 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.

No liability has been recorded for the Bair Hugger™ litigation because the Company believes that any such liability is not probable and estimable at this time.

For product liability litigation 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. In addition, the Company is not able to estimate a possible loss or range of loss in excess of the established accruals at this time.

Securities 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. The suit is in the early stages of litigation.

In October 2019, a follow-on 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 plaintiffs have agreed to stay these cases pending a ruling on a motion to dismiss the securities class action. 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, an individual shareholder 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 also relies on similar factual allegations as the putative securities class action discussed above.

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. The complaints contain 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 seek monetary damages. One complaint (the "Godecke case") also contains allegations that the KCI Defendants retaliated against the relator-plaintiff for alleged whistle-blowing behavior.

In October 2016, the KCI Defendants filed counterclaims in the Godecke case, asserting breach of contract and conversion. In August 2017, the relator-plaintiff's fraud claim in the Godecke case was dismissed in favor of the KCI defendants. In January 2018, the district court stayed the retaliation claim and the KCI Defendants' counterclaims pending the relator-plaintiff's appeal. In September 2019, the U.S. Court of Appeals for the Ninth Circuit reversed and remanded the case to the district court for further proceedings. The district court has ordered a stay of the proceedings pending a further status conference in March 2021. Separately, in June 2019, following discovery, the district court in the second case (the "Hartpence case") 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's opinion remains pending.

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 cannot predict at this time the outcome of its investigation or what potential actions 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)	Year ended December 31, 2020	2019
Operating lease cost	$ 348	$ 308
Finance lease cost:		
Amortization of assets	21	20
Interest on lease liabilities	1	2
Variable lease cost	101	93
Total net lease cost	$ 471	$ 423

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	As of December 31, 2020	2019
Operating leases:			
Operating lease right of use assets	Operating lease right of use assets	$ 864	$ 858
Current operating lease liabilities	Operating lease liabilities - current	$ 256	$ 247
Noncurrent operating lease liabilities	Operating lease liabilities	609	607
Total operating lease liabilities		$ 865	$ 854
Finance leases:			
Property and equipment, at cost	Property, plant and equipment	$ 225	$ 239
Accumulated amortization	Property, plant and equipment (accumulated depreciation)	(106)	(102)
Property and equipment, net		$ 119	$ 137
Current obligations of finance leases	Other current liabilities	$ 22	$ 21
Finance leases, net of current obligations	Other liabilities	93	111
Total finance lease liabilities		$ 115	$ 132
Weighted average remaining lease term (in years):			
Operating leases		5.6	5.7
Finance leases		7.6	9.0
Weighted average discount rate:			
Operating leases		2.4 %	3.2 %
Finance leases		3.5 %	3.8 %

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

(Millions)	Year Ended December 31, 2020	2019
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows from operating leases	$ 326	$ 309
Operating cash flows from finance leases	1	2
Financing cash flows from finance leases	58	18
Right of use assets obtained in exchange for lease liabilities:		
Operating leases	250	326
Finance leases	18	61

In the first quarter of 2020, 3M sold and leased-back certain recently constructed machinery and equipment in return for municipal securities, which in aggregate, were recorded as a finance lease asset and obligation of approximately $10 million. In the first quarter of 2019, 3M sold and leased-back certain recently constructed machinery and equipment in return for municipal securities, which in aggregate, were recorded as a finance lease asset and obligation of approximately $9 million. During 2019, the Company sold and leased-back an office location and a manufacturing site resulting in a combined gain of $82 million.

Maturities of lease liabilities were as follows:

(Millions)	December 31, 2020 Finance Leases	Operating Leases
2021	$ 20	$ 273
2022	18	201
2023	18	141
2024	16	93
2025	10	60
After 2025	41	162
Total	$ 123	$ 930
Less: Amounts representing interest	8	65
Present value of future minimum lease payments	115	865
Less: Current obligations	22	256
Long-term obligations	$ 93	$ 609

As of December 31, 2020, the Company has additional operating lease commitments that have not yet commenced of approximately $18 million. These commitments pertain to 3M's right of use of certain buildings.

Disclosures related to periods prior to 2019 adoption of new lease standard:

Capital and Operating Leases:
Rental expense under operating leases was $393 million in 2018.

NOTE 18. Stock-Based Compensation

The 3M 2016 Long-Term Incentive Plan provides for the issuance or delivery of up to 123,965,000 shares of 3M common stock pursuant to awards granted under the plan. 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, 2020, the remaining shares available for grant under the LTIP Program are 16 million and there were approximately 8,000 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 35 percent of the annual grant's 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

	Years ended December 31		
(Millions)	**2020**	**2019**	**2018**
Cost of sales	**$ 50**	$ 47	$ 48
Selling, general and administrative expenses	**169**	185	207
Research, development and related expenses	**43**	46	47
Stock-based compensation expenses	**$ 262**	$ 278	$ 302
Income tax benefits	**(82)**	(141)	(154)
Stock-based compensation expenses (benefits), net of tax	**$ 180**	$ 137	$ 148

Stock Option Program

The following table summarizes stock option activity for the years ended December 31:

	2020		**2019**		**2018**	
(Options in thousands)	**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	**33,675**	**$ 151.15**	34,569	$ 138.98	34,965	$ 125.73
Granted	**4,777**	**157.25**	3,434	200.80	3,211	233.19
Exercised	**(2,759)**	**93.23**	(4,193)	89.89	(3,482)	91.01
Forfeited	**(292)**	**181.33**	(135)	201.27	(125)	188.00
December 31	**35,401**	**$ 156.23**	33,675	$ 151.15	34,569	$ 138.98
Options exercisable						
December 31	**27,537**	**$ 149.67**	26,487	$ 136.75	26,117	$ 121.98

Stock options generally vest over a period from one to three years with the expiration date at 10 years from date of grant. As of December 31, 2020, there was $56 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 20 months. For options outstanding at December 31, 2020, the weighted-average remaining contractual life was 63 months and the aggregate intrinsic value was $929 million. For options exercisable at December 31, 2020, the weighted-average remaining contractual life was 51 months and the aggregate intrinsic value was $847 million.

The total intrinsic values of stock options exercised during 2020, 2019 and 2018 was $206 million, $433 million and $469 million, respectively. Cash received from options exercised during 2020, 2019 and 2018 was $256 million, $375 million and $316 million, respectively. The Company's actual tax benefits realized for the tax deductions related to the exercise of employee stock options for 2020, 2019 and 2018 was $44 million, $91 million and $99 million, respectively.

For the primary 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		
	2020	**2019**	**2018**
Exercise price	**$ 157.24**	$ 201.12	$ 233.63
Risk-free interest rate	**1.5 %**	2.6 %	2.7 %
Dividend yield	**2.7 %**	2.5 %	2.4 %
Expected volatility	**19.7 %**	20.4 %	21.0 %
Expected life (months)	**78**	79	78
Black-Scholes fair value	**$ 21.58**	$ 34.19	$ 41.59

Expected volatility is a statistical measure of the amount by which a stock price is expected to fluctuate during a period. For the 2020 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 for the years ended December 31:

	2020		2019		2018	
(Shares in thousands)	**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	**1,573**	**$ 201.11**	1,789	$ 180.02	1,994	$ 162.60
Granted						
Annual	**733**	**157.29**	564	200.41	467	233.61
Other	**45**	**159.49**	15	180.08	8	207.76
Vested	**(570)**	**176.20**	(732)	149.33	(640)	164.83
Forfeited	**(59)**	**196.31**	(63)	192.52	(40)	186.48
As of December 31	**1,722**	**$ 189.78**	1,573	$ 201.11	1,789	$ 180.02

As of December 31, 2020, there was $79 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, 2020, 2019 and 2018 was $91 million, $144 million and $155 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 2020, 2019 and 2018 was $26 million, $28 million and $29 million, respectively.

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.

Performance Shares

Instead of restricted stock units, the Company makes annual grants of performance shares to members of its executive management. The 2020 performance criteria for these performance shares (organic volume growth, return on invested capital, free cash flow conversion, 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 for the years ended December 31:

	2020		2019		2018	
(Shares in thousands)	**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	**444**	**$ 205.58**	562	$ 188.96	686	$ 171.90
Granted	**203**	**153.16**	166	207.49	166	229.13
Distributed	**(206)**	**190.84**	(210)	162.16	(206)	159.82
Performance change	**25**	**166.49**	(48)	204.73	(56)	198.39
Forfeited	**(43)**	**172.92**	(26)	209.96	(28)	204.09
As of December 31	**423**	**$ 188.61**	444	$ 205.58	562	$ 188.96

As of December 31, 2020, there was $17 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 20 months. The total fair value of performance shares that were distributed were $35 million, $45 million, and $48 million for 2020, 2019 and 2018, respectively. The Company's actual tax benefits realized for the tax deductions related to the distribution of performance shares were $7 million, $9 million, and $11 million per year for 2020, 2019, and 2018, respectively.

General Employees' Stock Purchase Plan (GESPP):

As of December 31, 2020, 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 2020, 2019 and 2018 was $23.47, $27.14 and $31.91, respectively. The fair value of GESPP options was based on the 15% purchase price discount. The Company recognized compensation expense for GESSP options of $31 million in 2020, $30 million in 2019, and $30 million in 2018.

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. 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.

Effective in the second quarter of 2020, 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) has been updated for all 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.

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 includes dual credit for certain related operating income (as described below in "Elimination of Dual Credit"). Business segment operating income excludes certain expenses and income that are not allocated to business segments (as described below in "Corporate and Unallocated"). Additionally, the following special items are excluded from business segment operating income and, instead, are included within Corporate and Unallocated: significant litigation-related charges/benefits, gain/loss on sale of businesses (see Note 3), and divestiture-related restructuring actions (see Note 5).

In addition, effective in the first quarter of 2020, in a continuing effort to improve the alignment of its businesses around customers and markets, the Company made the following changes:

Continued alignment of customer account activity

- As part of 3M's regular customer-focus initiatives, the Company realigned certain customer account activity ("sales district") to correlate with the primary divisional product offerings in various countries and reduce complexity for customers when interacting with multiple 3M businesses. This largely impacted the amount of dual credit certain business segments receive as a result of sales district attribution. 3M business segment reporting measures include dual credit to business segments for certain sales and operating income. This dual credit is based on which business segment provides customer account activity with respect to a particular product sold in a specific country. As a result of this change, previously reported aggregate business segment net sales and operating income for the total year 2019 decreased $42 million and $10 million, respectively, offset by corresponding decreases in the "Elimination of Dual Credit" net sales and operating income amounts.

Additional actions impacting product line alignments

- The remaining retail auto care product lines formerly in the Automotive Aftermarket Division (within the Safety and Industrial business segment), were realigned to the Construction and Home Improvement Division (within the Consumer business segment). This change resulted in a decrease of previously reported net sales and operating income for total year 2019 of $35 million and $11 million, respectively, in the Safety and Industrial business segment, offset by a corresponding increase in net sales and operating income within the Consumer business segment.
- In addition, certain product lines were realigned within business segments. The transdermal drug delivery components business, formerly included in the Drug Delivery Systems Division, was realigned to the Medical Solutions Division (both of which are within the Health Care business segment) and the paint protection film business, formerly included in the Automotive and Aerospace Division, was realigned to the Commercial Solutions Division (both of which are within the Transportation and Electronics business segment).

The financial information presented herein reflects the impact of the preceding business segment reporting changes for all periods presented.

Business Segment Products

Business Segment	**Representative revenue-generating activities, products or services**
Safety and Industrial	o Industrial abrasives and finishing for metalworking applications o Autobody repair solutions o Closure systems for personal hygiene products, masking, and packaging materials o Electrical products and materials for construction and maintenance, power distribution and electrical OEMs o Structural adhesives and tapes o Respiratory, hearing, eye and fall protection solutions o Natural and color-coated mineral granules for shingles
Transportation and Electronics	o Advanced ceramic solutions o Attachment tapes, films, sound and temperature management for transportation vehicles o Premium large format graphic films for advertising and fleet signage o Light management films and electronics assembly solutions o Packaging and interconnection solutions o Reflective signage for highway, and vehicle safety
Health Care	o Food safety indicator solutions o Health care procedure coding and reimbursement software o Skin, wound care, and infection prevention products and solutions o Dentistry and orthodontia solutions o Filtration and purification systems
Consumer	o Consumer bandages, braces, supports and consumer respirators o Cleaning products for the home o Retail abrasives, paint accessories, car care DIY products, picture hanging and consumer air quality solutions o Stationery products

Business Segment Information

Net Sales (Millions)	Year ended December 31, 2020	2019	2018
Safety and Industrial	**$ 11,767**	$ 11,514	$ 12,414
Transportation and Electronics	**8,827**	9,591	10,104
Health Care	**8,345**	7,431	6,821
Consumer	**5,336**	5,151	5,127
Corporate and Unallocated	**(1)**	110	50
Elimination of Dual Credit	**(2,090)**	(1,661)	(1,751)
Total Company	**$ 32,184**	$ 32,136	$ 32,765
Operating Performance (Millions)			
Safety and Industrial	**$ 3,054**	$ 2,510	$ 2,860
Transportation and Electronics	**1,927**	2,221	2,643
Health Care	**1,828**	1,858	1,918
Consumer	**1,249**	1,124	1,084
Elimination of Dual Credit	**(534)**	(409)	(436)
Total business segment operating income	**$ 7,524**	$ 7,304	$ 8,069
Corporate and Unallocated			
Special items:			
Significant litigation-related (charges)/benefits	**$ (17)**	$ (762)	$ (897)
Gain/(loss) on sale of businesses	**389**	114	547
Divestiture-related restructuring actions	**(55)**	—	(127)
Other corporate expense - net	**(680)**	(482)	(385)
Total Corporate and Unallocated	**(363)**	(1,130)	(862)
Total Company operating income	**$ 7,161**	$ 6,174	$ 7,207
Other expense/(income), net	**450**	462	207
Income before income taxes	**$ 6,711**	$ 5,712	$ 7,000

Business Segment Information

(Millions)	Assets 2020	Assets 2019	Depreciation & Amortization 2020	Depreciation & Amortization 2019	Depreciation & Amortization 2018	Capital Expenditures 2020	Capital Expenditures 2019	Capital Expenditures 2018
Safety and Industrial	**$ 11,711**	$ 11,682	**$ 562**	$ 509	$ 493	**$ 451**	$ 391	$ 375
Transportation and Electronics	**6,997**	6,871	**429**	401	390	**454**	390	339
Health Care	**14,531**	14,790	**626**	392	262	**251**	264	245
Consumer	**2,567**	2,428	**140**	134	126	**120**	130	115
Corporate and Unallocated	**11,538**	8,888	**154**	157	217	**225**	524	503
Total Company	**$ 47,344**	$ 44,659	**$ 1,911**	$ 1,593	$ 1,488	**$ 1,501**	$ 1,699	$ 1,577

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.

During 2020, information relative to business segment depreciation and assets reviewed by 3M's CODM changed. The change did not impact each segment's operating income, but did change the separate summarization of depreciation by segment in CODM information. Depreciation previously was summarized based generally on depreciation of a particular asset being associated entirely with a single reporting unit, as opposed to an estimate of underlying asset usage. New CODM reporting of depreciation is as described above. With respect to assets in CODM reporting, previously certain assets used by multiple segments were "split" in terms of determining the balances associated with each business segment (new reporting aligns the entire asset to a single primary user), certain shared manufacturing assets were retained in Corporate and Unallocated, and a number of other assets were allocated to the business segments. The impact of these changes has been reflected in the above table for all periods presented.

Corporate and Unallocated
Corporate and unallocated operating income includes a variety of miscellaneous items, such as corporate investment gains and losses, certain derivative gains and losses, certain insurance-related gains and losses, certain litigation and environmental expenses, corporate restructuring charges and certain under- or over-absorbed costs (e.g. pension, stock-based compensation) that the Company may choose not to allocate directly to its business segments and is disclosed as 'other corporate expense-net". Additionally, Corporate and Unallocated includes special items such as significant litigation-related charges/benefits, gain/loss on sale of businesses (see Note 3), and divestiture-related restructuring costs (see Note 5). Corporate and Unallocated also includes sales, costs, and income from contract manufacturing, transition services and other arrangements with the acquirer of all of the Communication Markets Division following its 2018 divestiture through 2019 and the acquirer of the former drug delivery business following its 2020 divestiture. Because this category includes a variety of miscellaneous items, it is subject to fluctuation on a quarterly and annual basis.

Elimination of Dual Credit
3M business segment reporting measures include dual credit to business segments for certain sales and related operating income. Management evaluates each of its four business segments based on net sales and operating income performance, including dual credit reporting to further incentivize sales growth. As a result, 3M reflects 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 is provided by a different business segment. This additional dual credit is largely reflected at the division level. 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) would also receive credit for the associated net sales initiated through its sales district and the related approximate operating income. The assigned operating income related to dual credit activity may differ from operating income that would result from actual costs associated with such sales. The offset to the dual credit business segment reporting is reflected as a reconciling item entitled "Elimination of Dual Credit," such that sales and operating income in total are unchanged.

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.

	Property, Plant and Equipment - net	
(Millions)	**2020**	**2019**
Americas	**$ 5,752**	$ 5,873
Asia Pacific	**1,662**	1,637
Europe, Middle East and Africa	**2,007**	1,823
Total Company	**$ 9,421**	$ 9,333

United States net property, plant and equipment (PP&E) was $5,358 and $5,442 million at December 31, 2020 and 2019, respectively. China/Hong Kong net property, plant and equipment (PP&E) was $583 million and $553 million at December 31, 2020 and 2019, respectively.

NOTE 20. Quarterly Data (Unaudited)

(Millions, except per-share amounts) **2020**	**First Quarter**	**Second Quarter**	**Third Quarter**	**Fourth Quarter**	**Year 2020**
Net sales	**$ 8,075**	**$ 7,176**	**$ 8,350**	**$ 8,583**	**$ 32,184**
Cost of sales	**4,109**	**3,805**	**4,303**	**4,388**	**16,605**
Net income including noncontrolling interest	**1,294**	**1,287**	**1,417**	**1,390**	**5,388**
Net income attributable to 3M	**1,292**	**1,290**	**1,413**	**1,389**	**5,384**
Earnings per share attributable to 3M common shareholders - basic	**2.24**	**2.24**	**2.45**	**2.40**	**9.32**
Earnings per share attributable to 3M common shareholders - diluted	**2.22**	**2.22**	**2.43**	**2.38**	**9.25**

(Millions, except per-share amounts) **2019**	**First Quarter**	**Second Quarter**	**Third Quarter**	**Fourth Quarter**	**Year 2019**
Net sales	$ 7,863	$ 8,171	$ 7,991	$ 8,111	$ 32,136
Cost of sales	4,310	4,313	4,188	4,325	17,136
Net income including noncontrolling interest	893	1,131	1,588	970	4,582
Net income attributable to 3M	891	1,127	1,583	969	4,570
Earnings per share attributable to 3M common shareholders - basic	1.54	1.95	2.75	1.68	7.92
Earnings per share attributable to 3M common shareholders - diluted	1.51	1.92	2.72	1.66	7.81

Gross profit is calculated as net sales minus cost of sales.

In the first quarter of 2020, 3M recorded a net pre-tax charge of $17 million ($13 million after tax) related to PFAS (certain perfluorinated compounds) matters. The charge was more than offset by a reduction in tax expense of $52 million related to resolution of tax treatment with authorities regarding the previously disclosed 2018 agreement reached with the State of Minnesota that resolved the Natural Resources Damages (NRD) lawsuit. These items, in aggregate, resulted in a $39 million after tax benefit, or $0.07 per diluted share. Also, in the second quarter of 2020, the Company recorded an aggregate after tax gain on sale of businesses of $303 million, or $0.52 per diluted share in addition to divestiture-related restructuring charges of $46 million, or $0.08 per diluted share.

In 2019, the Company recorded significant litigation-related charges related to PFAS matters and coal mine dust respirator mask lawsuits as further described in Note 16, which reduced net income by $590 million, or $1.01 per diluted share, of which $424 million, or $0.72 per diluted share occurred in the first quarter and $166 million, or $0.29 per diluted share occurred in the fourth quarter. Additionally, in 2019, the Company recorded an aggregate after tax gain on sale of businesses of $129 million, or $0.22 per diluted share. In the second quarter of 2019, the Company recorded a non-operating charge related to the deconsolidation of its Venezuelan subsidiary, which reduced net income by $162 million, or $0.28 per diluted share.

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, 2020, the Company's internal control over financial reporting is effective. The Company's internal control over financial reporting as of December 31, 2020 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, 2020.

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 15, 2020, OFAC granted 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, 2020, 3M paid $522 to IIPO as part of its intellectual property protection efforts in Iran. 3M plans to continue these activities, as authorized under the specific license.

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, 2020) for its annual meeting to be held on May 11, 2021, are incorporated by reference in this Form 10-K.

Item 10. <u>Directors, Executive Officers and Corporate Governance.</u>

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 11, 2021 ("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: Vice President, 3M Ethics & Compliance

Item 11. <u>Executive Compensation.</u>

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, 2020 follows:

Equity Compensation Plans Information (1)

Plan Category (options and shares in thousands)	A Number of securities to be issued upon exercise of outstanding options, warrants and rights	B Weighted-average exercise price of outstanding options, warrants and rights	C 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	35,401	$ 156.23	—
Restricted stock units	1,722		—
Performance shares	423		—
Non-employee director deferred stock units	244		—
Total	37,790		16,044
Employee stock purchase plan	—		22,887
Subtotal	37,790		38,931
Total	37,790		38,931

(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 2, 2021, are incorporated by reference from our Form 8-K dated February 3, 2021.

(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 is incorporated by reference from our Form 8-K dated May 12, 2016.
(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 filed herewith.
(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 Agreement for Stock Option Grants to Executive Officers under 3M 2008 Long-Term Incentive Plan is incorporated by reference from our Form 8-K dated May 13, 2008.
(10.11)*	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.
(10.12)*	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.
(10.13)*	Amended and Restated 3M VIP Excess Plan is incorporated by reference from our Form 10-K for the year ended December 31, 2016.
(10.14)*	Amended and Restated 3M VIP (Voluntary Investment Plan) Plus Plan is incorporated by reference from our Form 10-K for the year ended December 31, 2016.
(10.15)*	3M Deferred Compensation Excess Plan is incorporated by reference from our Form 10-K for the year ended December 31, 2009.
(10.16)*	3M Performance Awards Deferred Compensation Plan is incorporated by reference from our Form 10-K for the year ended December 31, 2009.
(10.17)*	3M Annual Incentive Plan (including amendments through February 3, 2020) incorporated by reference from our Form 10-K for the year ended December 31, 2019.
(10.18)*	3M Executive Severance Plan is incorporated by reference from our Form 10-K for the year ended December 31, 2019.
(10.19)*	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.
(10.20)*	Amendment of 3M Compensation Plan for Non-Employee Directors is incorporated by reference from our Form 8-K dated November 14, 2008.
(10.21)*	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.
(10.22)*	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.
(10.23)*	3M Executive Life Insurance Plan, as amended, is incorporated by reference from our Form 10-K for the year ended December 31, 2017.
(10.24)*	Policy on Reimbursement of Incentive Payments is incorporated by reference from our Form 10-Q for the quarter ended June 30, 2018.
(10.25)*	Amended and Restated 3M Nonqualified Pension Plan I is incorporated by reference from our Form 10-K for the year ended December 31, 2016.
(10.26)*	Amended and Restated 3M Nonqualified Pension Plan II is incorporated by reference from our Form 10-K for the year ended December 31, 2016.
(10.27)*	Amended and Restated 3M Nonqualified Pension Plan III is incorporated by reference from our Form 10-K for the year ended December 31, 2016.
(10.28)*	Offer letter of Employment of Monish Patolawala, dated May 19, 2020 is incorporated by reference from our Form 8-K dated June 3, 2020.
(10.29)	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.
(10.30)	364-day credit agreement as of November 13, 2020, is incorporated by reference from our Form 8-K dated November 17, 2020.
(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.

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,
Senior Vice President and Chief Financial Officer
(Principal Financial Officer)
February 4, 2021

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 4, 2021.

Signature	Title
Michael F. Roman	Chairman of the Board, President and Chief Executive Officer (Principal Executive Officer and Director)
Theresa E. Reinseth	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
Herbert L. Henkel	Director
Amy E. Hood	Director
Muhtar Kent	Director
Dambisa F. Moyo	Director
Gregory R. Page	Director
Patricia A. Woertz	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*

EXHIBIT 10.6

3M COMPANY
2016 LONG-TERM INCENTIVE PLAN

PERFORMANCE SHARE AWARD AGREEMENT

Pursuant to the 3M Company 2016 Long-Term Incentive Plan (as amended from time to time, the "***Plan***"), 3M Company (the "***Company***") granted to the participant listed below ("***Participant***") the performance shares described below (the "***Performance Shares***"). The Performance Shares are subject to the terms and conditions set forth in this Performance Share Award Agreement, the vesting provisions set forth in Appendix A hereto (the "***Vesting Appendix***"), any additional terms and conditions for Participant's country set forth in Appendix B hereto (the "***Global Appendix***") and the Plan. This Performance Share Award Agreement, the Vesting Appendix and the Global Appendix are referred to, collectively, as this "***Agreement***." The Plan, the Vesting Appendix and the Global Appendix are incorporated into this Performance Share Award Agreement by reference.

Participant:	______________________________
Grant Date:	______________________________
Target Number of Performance Shares:	______________________________
Performance Period:	[_______, 20__] through [_______, 20__] (the "***Performance Period***")
Vesting Schedule:	Subject to the terms and conditions of this Agreement and the Plan, the Performance Shares shall vest as set forth in the Vesting Appendix hereto. Except as provided in [Sections 1.3 and 1.5] of this Performance Share Award Agreement, in the Vesting Appendix, the Global Appendix, or as otherwise provided by the Administrator, in no event shall the Performance Shares vest following Participant's Termination of Service.

ELECTRONIC ACCEPTANCE OF AWARD:

By clicking on the "**ACCEPT**" box on the "**Grant Terms and Agreement**" page, you agree to be bound by the terms and conditions of this Agreement and the Plan. You acknowledge that you have reviewed and fully understand all of the provisions of this Agreement and the Plan, and have had the opportunity to obtain advice of counsel prior to accepting the grant of the Performance Shares pursuant to this Agreement. You hereby agree to accept as binding, conclusive and final all decisions or interpretations of the Administrator upon any questions arising under the Plan or relating to the Performance Shares.

ARTICLE I.
AWARD; VESTING; FORFEITURE AND SETTLEMENT

1.1 Performance Shares and Dividend Equivalents.

(a) This Award is expressed in terms of a Target Number of Performance Shares as set forth above (the "***Target Number of Performance Shares***"). The actual number of Performance Shares that may be earned will depend on Participant's continued service with the Company or any Subsidiary and the extent to which the performance goals established for the Award are achieved. Each Performance Share earned represents the right to receive one Share on the terms, and subject to the conditions, set forth in this Agreement. Participant will have no right to the distribution of any Shares until the time (if ever) the Performance Shares have vested.

(b) The Company hereby grants to Participant, with respect to each Performance Share, a Dividend Equivalent for ordinary cash dividends paid to substantially all holders of outstanding Shares with a record date after the Grant Date and prior to the date the applicable Performance Share is settled, forfeited or otherwise expires. Each Dividend Equivalent entitles Participant to receive the equivalent value of any such ordinary cash dividends paid on a single Share. The Company will establish a separate Dividend Equivalent bookkeeping account (a "***Dividend Equivalent Account***") for each Dividend Equivalent and credit the Dividend Equivalent Account (without interest) on the applicable dividend payment date with the amount of any such cash paid.

1.2 Vesting; Forfeiture(a) .

(a) The Performance Shares will vest according to the vesting schedule set forth in the Vesting Appendix (the "***Vesting Schedule***"). Except as otherwise provided by the Administrator (or its delegate) or as provided for in the Plan or this Agreement with respect to Participant's Termination of Service prior to the last day of the Performance Period by reason of Participant's [Retirement,]death or Disability, the Performance Shares will immediately and automatically be cancelled and forfeited as to any portion that is not vested as of Participant's Termination of Service to the extent such Termination of Service occurs prior to the last day of the Performance Period. For the avoidance of doubt, [except as set forth in Sections 1.3 and 1.5 of this Agreement or as provided by the Company under a formal, written severance plan or agreement,] if Participant's Termination of Service occurs prior to the last day of the Performance Period, Participant will not earn or be entitled to any pro-rated vesting for any portion of time before the end of the Performance Period during which Participant was providing services, nor will Participant be entitled to any compensation for lost vesting. In addition, the Performance Shares will immediately and automatically be cancelled and forfeited (including any portion that is then vested) upon the execution of a written determination by the Administrator or an authorized representative of the Company that Participant engaged in an act of Misconduct (whether the execution of such written determination occurs before or after Participant's Termination of Service).

(b) Dividend Equivalents (including any Dividend Equivalent Account balance) will vest or be forfeited, as applicable, upon the vesting or forfeiture of the Performance Share with respect to which the Dividend Equivalent (including the Dividend Equivalent Account) relates.

1.3 [Special Vesting Provisions. Notwithstanding anything to the contrary in Section 1.2 or the Vesting Schedule, the Performance Shares shall continue to vest, or vest on an accelerated basis, in the event of Participant's Termination of Service prior to the last day of the Performance Period under the following circumstances:

(a) [If Participant's Termination of Service occurs prior to the last day of the Performance Period by reason of Participant's Retirement, the Performance Shares shall remain eligible to vest in accordance with the Vesting Schedule as if Participant had not incurred a Termination of Service, subject to accelerated vesting pursuant to clause (c) of this Section 1.3; provided, however, that the Target Number of Performance Shares shall be adjusted, effective as of Participant's Termination of Service, as follows:

(i) If Participant was appointed to the Executive Conference on or after January 1, 2006 and on or before December 31, 2017, the Target Number of Performance Shares shall be adjusted to equal the product of (A) the Target Number of Performance Shares, as in effect immediately prior to Participant's Termination of Service, and (B) a fraction, the numerator of which equals the number of whole calendar months Participant provided services to the Company or any Subsidiary during the Performance Period and the denominator of which equals the total number of months in the Performance Period; or

(ii) If Participant was appointed to the Executive Conference before January 1, 2006 or after December 31, 2017, the Target Number of Performance Shares shall be adjusted to equal the product of (A) the Target Number of Performance Shares, as in effect immediately prior to Participant's Termination of Service, and (B) a fraction, the numerator of which equals the number of consecutive three-month periods Participant provided services to the Company or any Subsidiary during the first twelve months of the Performance Period and the denominator of which equals four.

Notwithstanding the foregoing, if the Company receives an opinion of counsel that there has been a legal judgment and/or legal development in Participant's jurisdiction that likely would result in the favorable Retirement treatment that otherwise would apply to the Performance Shares pursuant to this Section 1.3(a) being deemed unlawful and/or discriminatory, then the Company will not apply this favorable Retirement treatment at the time of Participant's Termination of Service and the Performance Shares will be treated as they would under the rules that otherwise would have applied if Participant's Termination of Service did not qualify as a Retirement.]

(b) If Participant's Termination of Service occurs by reason of Disability prior to the last day of the Performance Period, the Performance Shares shall remain eligible to vest in accordance with the Vesting Schedule as if Participant had not incurred a Termination of Service, subject to accelerated vesting pursuant to clause (c) of this Section 1.3.

(c) If Participant's Termination of Service occurs by reason of death or Participant dies following the date of Participant's Termination of Service by reason of [Retirement or] Disability[, in each case] prior to the last day of the Performance Period, Participant shall vest in a number of Performance Shares equal to the lesser of (i) the Target Number of Performance Shares, or (ii) such other number of Performance Shares determined by the Administrator, in its discretion.

For purposes of this Article I, the term "***Disability***" shall have the meaning given to such term in Treasury Regulation section 1.409A-3(i)(4).]

1.4 Settlement.

(a) Except as provided in Section 1.4(c), all of Participant's Performance Shares which are then vested will be paid in Shares, and any related Dividend Equivalents (including any

Dividend Equivalent Account balance) will be paid in cash, in each case, during the thirty (30)-day period beginning with the earliest to occur of the following events:

(i) the Certification Date (as defined in the Vesting Appendix) (provided that in no event will Shares be issued in settlement of Participant's Performance Shares pursuant to this clause (i) later than March 15 of the calendar year immediately following the completion of the Performance Period);

(ii) the date of Participant's death; or

(iii) the date of Participant's Termination of Service following a Change in Control of the Company [(provided that, if Participant is or will be eligible for Retirement at any time during the Performance Period, such Termination of Service must constitute a "separation from service" from the Company (within the meaning of Section 409A(a)(2)(A)(i) of the Code and Treasury Regulation Section 1.409A-1(h))]. Notwithstanding anything to the contrary in this Agreement or the Plan, no Performance Shares or Dividend Equivalents shall be distributed to Participant pursuant to this Section 1.4(a)(iii) during the six-month period following Participant's separation from service if the Company determines that distributing such Performance Shares and Dividend Equivalents at the time or times indicated in this Agreement would be a prohibited distribution under Section 409A(a)(2)(B)(i) of the Code. If the distribution of any of Participant's Performance Shares and Dividend Equivalents is delayed as a result of the previous sentence, then such Performance Shares and Dividend Equivalents (including any Dividend Equivalent Account balance) shall be paid to Participant during the thirty (30)-day period beginning on the first business day following the end of such six-month period (or such earlier date upon which such Performance Shares and Dividend Equivalents can be distributed under Section 409A without resulting in a prohibited distribution, including as a result of Participant's death).

(b) [Reserved.]

(c) If permitted by the Company and provided Participant makes a valid deferral election within the time period specified by the Company in the deferral election form, then Participant may elect to change the timing of receipt of the Shares otherwise distributable under Section 1.4(a). Any such deferral election must comply with the requirements of Section 409A of the Code and the applicable Treasury Regulations or other guidance issued thereunder as well as any Plan rules on deferrals and must be made on a form approved by the Company. To the extent made, any such deferral election will be incorporated herein by this reference.

(d) Notwithstanding any provisions of this Agreement or the Plan to the contrary, the time of distribution of the Performance Shares and the Dividend Equivalents under this Agreement may not be changed except as may be permitted by the Administrator in accordance with Section 409A and the applicable Treasury Regulations promulgated thereunder.

1.5 [Effect of Change in Control. Notwithstanding anything to the contrary in the Vesting Schedule or Sections 1.2 and 1.3, in the event of Participant's Termination of Service prior to the last day of the Performance Period (i) by the Company or any Subsidiary other than as a result of Participant's Misconduct or (ii) by Participant for Good Reason, in either case, within eighteen (18) months following a Change in Control of the Company, Participant shall vest in a number of Performance Shares equal to the sum of:

(a) With respect to any calendar year(s) during the Performance Period that have ended prior to the date of such Termination of Service, the Vesting Eligible Shares for such calendar year(s) as determined pursuant to the Vesting Schedule; plus

(b) With respect to any calendar year(s) during the Performance Period that have not ended prior to the date of such Termination of Service, the greatest of (i) the Performance Shares that would have been Vesting Eligible Shares for such calendar year(s) if the Company's performance relative to the performance objectives for such calendar year(s) equaled its actual performance during those calendar quarters completed during the calendar year in which such Participant's Termination of Service occurs and prior to the date of such Termination of Service as set forth in the Vesting Schedule, (ii) the Performance Shares that would have been Vesting Eligible Shares for such calendar year(s) if the Company's performance relative to the performance objectives for such calendar year(s) equaled its actual performance for the three consecutive calendar year period ending immediately prior to the calendar year in which the Termination of Service occurs, or (iii) such other number of Performance Shares determined by the Administrator, in its discretion;

provided, however, that the resulting number of Performance Shares under this Section 1.5 shall be prorated to reflect the number of full calendar months during the Performance Period that elapsed prior to the date of Participant's Termination of Service.

For purposes of this Section 1.5, "***Good Reason***" means (i) a material diminution in Participant's position, authority, duties or responsibilities as in effect immediately prior to the Change in Control of the Company, (ii) a material diminution in Participant's base salary or annual planned cash compensation, or (iii) a material change in the geographic location at which Participant is required to perform services for the Company or its Subsidiaries.]

ARTICLE II.
TAXATION AND TAX WITHHOLDING

2.1 Responsibility for Taxes.

(a) Participant acknowledges that, regardless of any action taken by the Company or, if different, Participant's employer (the "***Employer***"), the ultimate liability for all income tax, social insurance, payroll tax, fringe benefit tax, payment on account or other tax-related items related to Participant's participation in the Plan and legally applicable to Participant or deemed by the Company or the Employer in its discretion to be an appropriate charge to Participant even if legally applicable to the Company or the Employer ("***Tax-Related Items***") is and remains Participant's responsibility and may exceed the amount, if any, actually withheld by the Company or the Employer. Participant further acknowledges that the Company and/or the Employer (i) make no representations or undertakings regarding the treatment of any Tax-Related Items in connection with any aspect of the Performance Shares, including, but not limited to, the grant or vesting of the Performance Shares or any related Dividend Equivalents, the subsequent sale of Shares acquired upon vesting, and the receipt of any dividends; and (ii) do not commit to and are under no obligation to structure the terms of the grant or any aspect of the Performance Shares to reduce or eliminate Participant's liability for Tax-Related Items or achieve any particular tax result. Further, if Participant is subject to Tax-Related Items in more than one jurisdiction, Participant acknowledges that the Company and/or the Employer (or former employer, as applicable) may be required to withhold or account for Tax-Related Items in more than one jurisdiction.

(b) Prior to the relevant taxable or tax withholding event, as applicable, Participant agrees to assist the Company and/or the Employer in satisfying any applicable withholding obligations for Tax-Related Items. In this regard, the Company and/or the Employer, or their respective agents, at their discretion, may satisfy, or allow Participant to satisfy, their withholding obligation, if any, with regard to all Tax-Related Items by any of the following, or a combination thereof:

(i) By cash, check or wire transfer of immediately available funds; provided that the Company may limit the use of one of the foregoing methods if one or more of the methods below is permitted;

(ii) Delivery (including telephonically to the extent permitted by the Company) of a notice that Participant has placed a market sell order with a broker acceptable to the Company with respect to Shares then issuable upon settlement of the Performance Shares, and that the broker has been directed to deliver promptly to the Company funds sufficient to satisfy the withholding obligation for Tax-Related Items; provided that such amount is paid to the Company at such time as may be required by the Company;

(iii) To the extent permitted by the Administrator, surrendering Shares then issuable upon settlement of the Performance Shares valued at their Fair Market Value on such date; or

(iv) By the deduction of such amount from salary or other compensation payable to Participant.

(c) The Company and/or the Employer has the right and option, but not the obligation, to treat Participant's failure to provide timely payment of any withholding obligation for Tax-Related Items as Participant's election to satisfy all or any portion of the Tax-Related Items pursuant to Section 2.1(b)(iii) or (iv) above, or a combination of such sections.

(d) The Company and/or the Employer may withhold or account for Tax-Related Items by considering applicable statutory withholding amounts or other applicable withholding rates, including maximum applicable rates in Participant's jurisdiction(s). In the event of over-withholding, Participant may receive a refund of any over-withheld amount in cash through the Employer's normal payroll processes (with no entitlement to the equivalent in Common Stock) or, if not refunded, Participant may seek a refund from the local tax authorities. In the event of under-withholding, Participant may be required to pay additional Tax-Related Items directly to the applicable tax authority or to the Company and/or the Employer. If the obligation for Tax-Related Items is satisfied by surrendering Shares, solely for tax purposes and not intended to modify or restrict in any way Section 4.2 of the Plan, Participant is deemed to have been issued the full number of Shares subject to the vested Performance Share, notwithstanding that a number of Shares are surrendered for the purpose of paying the Tax-Related Items.

(e) Participant understands and agrees that certain withholding obligations for Tax-Related Items may arise prior to any issuance of Shares or payment of cash under Section 1.4 if the Performance Shares are at any time not subject to a substantial risk of forfeiture for purposes of Section 83 of the Code (or similar rules under non-U.S. legislation or case law) prior to such date. If Shares are issued or cash paid on an accelerated basis to satisfy the Federal Insurance Contributions Act tax imposed under Sections 3101, 3121(a) or 3121(v)(2) of the Code (the "***FICA Tax***") or comparable non-U.S. tax liabilities as provided in this Section 2.1(e) as a result of the lapse of the substantial risk of forfeiture for purposes of Section 83 of the Code (or similar rules under non-U.S. legislation or case law) prior to the issuance of Shares or payment of cash under Section 1.4, then Participant may have income tax at source on wages imposed under Section 3401 of the Code or the corresponding withholding provisions of applicable non-U.S. federal tax laws, or applicable U.S. or non-U.S. state or local tax laws (together with the FICA Tax, the "***FICA-Related Taxes***"). Participant's FICA-Related Taxes shall be satisfied by the deduction of such amount from other compensation payable to Participant. To the extent the other compensation payable to Participant is determined by the Company to be insufficient to satisfy Participant's FICA-Related Taxes, Participant's acceptance of the Performance Shares hereunder constitutes Participant's instruction and authorization to the Company to satisfy the FICA-Related Taxes through the accelerated issuance and withholding of Shares otherwise issuable pursuant to the Performance Shares having a then-current Fair Market Value not exceeding the amount necessary to satisfy the FICA-Related Taxes of the Company and its Subsidiaries based on the applicable statutory withholding rates.

(f) Finally, Participant agrees to pay to the Company or the Employer any amount of Tax-Related Items that the Company or the Employer may be required to withhold or account for as a result of Participant's participation in the Plan that cannot be satisfied by the means previously described. The Company may refuse to honor the vesting of the Performance Shares and/or refuse to issue or deliver the Shares or the proceeds from the sale of the Shares if Participant fails to comply with Participant's obligations in connection with the Tax-Related Items.

ARTICLE III.
OTHER PROVISIONS

3.1 Nature of Grant. In accepting the Performance Shares, Participant understands, acknowledges, and agrees that:

(a) the Plan is established voluntarily by the Company, it is discretionary in nature and it may be modified, amended, suspended or terminated by the Company at any time in accordance with its terms;

(b) the grant of the Performance Shares is exceptional, voluntary and occasional and does not create any contractual or other right to receive future grants of Performance Shares, or benefits in lieu of Performance Shares, even if Performance Shares have been granted in the past;

(c) all decisions with respect to future Performance Shares (as defined in the Plan) or other grants, if any, will be at the sole discretion of the Administrator;

(d) the Performance Share grant and participation in the Plan shall not create a right to employment or be interpreted as forming or amending an employment or service contract with the Company, the Employer, or any other Subsidiary and shall not interfere with the ability of the Company, the Employer or any other Subsidiary, as applicable, to terminate Participant's employment or service relationship (if any) at any time with or without cause;

(e) Participant is voluntarily participating in the Plan;

(f) the Performance Shares and any Shares acquired under the Plan, and the income from and value of same, are not intended to replace any pension rights or compensation;

(g) the Performance Shares and any Shares acquired under the Plan, and the income from and value of same, are not part of normal or expected compensation for purposes of calculating any severance, resignation, termination, redundancy, dismissal, end of service payments, bonuses, long-service awards, holiday pay, pension or retirement benefits, welfare benefits or other similar payments;

(h) the future value of the Shares underlying the Performance Shares is unknown, indeterminable and cannot be predicted with certainty;

(i) no claim or entitlement to compensation or damages shall arise from forfeiture of the Performance Shares resulting from Participant's Termination of Service (for any reason whatsoever, whether or not later found to be invalid or in breach of employment laws in the jurisdiction where Participant is employed or the terms of Participant's employment agreement, if any);

(j) for purposes of the Performance Shares, Termination of Service will be deemed to have occurred as of the date Participant is no longer actively providing services to the Company or any of its Subsidiaries (regardless of the reason for such termination and whether or not later found to be invalid or in breach of employment laws in the jurisdiction where Participant is employed or the terms of Participant's employment agreement, if any), and unless otherwise expressly provided in this Agreement or determined by the Administrator, Participant's right to vest in the Performance Shares, if any, will terminate as of such date and will not be extended by any notice period (e.g., Participant's period of service would not include any contractual notice period or any period of "garden leave" or similar period mandated under employment laws in the jurisdiction where Participant is employed or the terms of Participant's employment agreement, if any); the Administrator shall have the exclusive discretion to determine when Participant is no longer actively providing services for purposes of the Performance Shares (including whether Participant may still be considered to be providing services while on a leave of absence);

(k) unless otherwise agreed with the Company, the Performance Shares and the Shares underlying the Performance Shares, and the income from and value of same, are not granted as consideration for, or in connection with, any services Participant may provide as a director of a Subsidiary;

(l) unless otherwise provided in the Plan or by the Administrator, the Performance Shares and the benefits evidenced by this Agreement do not create any entitlement to have the Performance Shares or any such benefits transferred to, or assumed by, another company, nor to be exchanged, cashed out or substituted for, in connection with any corporate transaction affecting the Common Stock;

(m) the following provision shall not apply to Employees in the State of California: In consideration of the grant of the Performance Shares, and to the extent permitted by applicable law, Participant agrees not to institute any claim against the Company, the Employer or any other Subsidiary, to waive Participant's ability, if any, to bring such claim, and release the Company, the Employer and any other Subsidiary from any such claim; if, notwithstanding the foregoing, any such claim is allowed by a court of competent jurisdiction, then, by participating in the Plan, Participant shall be deemed irrevocably to have agreed not to pursue such claim and agrees to execute any and all documents necessary to request dismissal or withdrawal of such claim; and

(n) the following provisions apply if Participant is providing services outside the United States:

(i) the Performance Shares and any Shares acquired under the Plan, and the income from and value of same, are not part of normal or expected compensation or salary for any purpose; and

(ii) neither the Company, the Employer nor any other Subsidiary shall be liable for any foreign exchange rate fluctuation between Participant's local currency and the United States Dollar that may affect the value of the Performance Shares or any amounts due to Participant pursuant to the vesting of the Performance Shares or the subsequent sale of any Shares acquired upon such vesting.

3.2 No Advice Regarding Grant. The Company is not providing any tax, legal or financial advice, nor is the Company making recommendations regarding participation in the Plan, or Participant's acquisition or sale of the underlying Shares. Participant understands and agrees that Participant should consult with Participant's own personal tax, legal and financial advisors regarding participation in the Plan before taking any action related to his or her Award(s).

3.3 Transferability. The Performance Shares are not transferable, except by will or the laws of descent and distribution or as permitted by the Administrator in accordance with the terms of the Plan.

3.4 Adjustments. Participant acknowledges that the Performance Shares, the Shares subject to the Performance Shares, and the Dividend Equivalents are subject to adjustment, modification and termination in certain events as provided in this Agreement and the Plan.

3.5 Defined Terms; Titles. Capitalized terms not defined in this Agreement have the meanings given to them in the Plan. Titles are provided herein for convenience only and are not to serve as a basis for interpretation or construction of this Agreement.

3.6 Conformity to Applicable Laws. Participant acknowledges that the Plan and this Agreement are intended to conform to the extent necessary with all Applicable Laws and, to the extent Applicable Laws permit, will be deemed amended as necessary to conform to Applicable Laws.

3.7 Successors and Assigns. The Company may assign any of its rights under this Agreement to single or multiple assignees, and this Agreement will inure to the benefit of the successors and assigns of the Company. Subject to the transfer provisions set forth in the Plan, this Agreement will be binding upon and inure to the benefit of the heirs, legatees, legal representatives, successors and assigns of the parties hereto.

3.8 Entire Agreement and Imposition of Other Terms. The Plan, this Agreement (including all exhibits and appendices hereto) and any valid deferral election made pursuant to Section 1.4(c) constitute the entire agreement of the parties and supersede in their entirety all prior undertakings and agreements of the Company and Participant with respect to the subject matter hereof. Nonetheless, the Company reserves the right to impose other requirements on Participant's participation in the Plan, on the Performance Shares and on any Shares acquired under the Plan, to the extent the Company determines it is necessary or advisable for legal or administrative reasons, and to require Participant to sign any additional agreements or undertakings that may be necessary to accomplish the foregoing. In the event of any inconsistency between the Plan and this Agreement, the terms of the Plan will control.

3.9 Severability. In the event that any provision of this Agreement is held illegal or invalid, the provision will be severable from, and the illegality or invalidity of the provision will not be construed to have any effect on, the remaining provisions of this Agreement.

3.10 Waiver. Participant acknowledges that a waiver by the Company of breach of any provision of this Agreement shall not operate or be construed as a waiver of any other provision of this Agreement, or of any subsequent breach by Participant or any other person.

3.11 Limitation on Participant’s Rights. Participation in the Plan confers no rights or interests other than as herein provided. This Agreement creates a contractual arrangement between the Company and Participant only and shall not be construed as creating a trust for the benefit of Participant. Neither the Plan nor any underlying program, in and of itself, has any assets. Participant will have only the rights of a general unsecured creditor of the Company with respect to amounts credited and benefits payable, if any, with respect to the Performance Shares and Dividend Equivalents, and rights no greater than the right to receive the Shares as a general unsecured creditor with respect to the Performance Shares and Dividend Equivalents, as and when settled pursuant to the terms hereof.

3.12 Electronic Delivery and Acceptance. The Company may, in its sole discretion, decide to deliver any documents related to current or future participation in the Plan by electronic means. Participant hereby consents to receive such documents by electronic delivery and agrees to participate in the Plan through an on-line or electronic system established and maintained by the Company or a third party designated by the Company.

3.13 Language. Participant acknowledges that he or she is sufficiently proficient in English, or has consulted with an advisor who is sufficiently proficient in English, so as to allow Participant to understand the terms and conditions of this Agreement. Furthermore, if Participant receives this Agreement or any other document relating to the Plan translated into a language other than English, and if the meaning of the translated version is different than the English version, the English version will control.

3.14 Foreign Asset/Account and Exchange Control and Tax Reporting. Participant acknowledges that, depending on Participant’s country, Participant may be subject to foreign asset/account, exchange control and/or tax reporting requirements as a result of the acquisition, holding and/or transfer of Shares or cash (including upon settlement of Dividend Equivalents, from dividends received or the proceeds arising from the sale of Shares) derived from participation in the Plan, in, to and/or from a brokerage/bank account or legal entity located outside Participant’s country. The Applicable Laws of Participant’s country may require that Participant report such accounts, assets, the balances therein, the value thereof and/or the transactions related thereto to the applicable authorities in such country. Participant also may be required to repatriate sale proceeds or other funds received as a result of participation in the Plan to Participant’s country through a designated broker or bank and/or within a certain time after receipt. Participant acknowledges that Participant is responsible for ensuring compliance with any applicable foreign asset/account, exchange control and tax reporting requirements and should consult Participant’s personal legal advisor on these matters.

3.15 Insider Trading Restrictions/Market Abuse Laws. Participant acknowledges that, depending on Participant’s country, or broker’s country, or the country in which the Shares are listed, Participant may be subject to insider trading restrictions and/or market abuse laws in applicable jurisdictions, which may affect Participant's ability to, directly or indirectly, accept, acquire, sell, or attempt to sell or otherwise dispose of Shares or rights to Shares under the Plan during such times when Participant is considered to have "inside information" regarding the Company (as defined by the laws or regulations in the applicable jurisdictions or Participant's country). Local insider trading laws and regulations may prohibit the cancellation or amendment of orders placed by Participant before possessing inside information. Furthermore, Participant understands that he or she may be prohibited from (i) disclosing the inside information to any third party, including fellow employees (other than on a "need to know" basis) and (ii) "tipping" third parties or causing them to otherwise buy or sell securities. Any restrictions under these laws or regulations are separate from and in addition to any restrictions that may be imposed under any applicable insider trading policy of the Company. Participant acknowledges that Participant is responsible for ensuring compliance with any applicable restrictions and should consult Participant's personal legal advisor on these matters.

3.16 Section 409A. The intent of the parties is that the payments and benefits under this Agreement comply with or be exempt from Section 409A and the regulations and guidance promulgated thereunder and, accordingly, to the maximum extent permitted, this Agreement shall be interpreted to be in compliance therewith. For purposes of Section 409A, each payment that Participant may be eligible to receive under this Agreement shall be treated as a separate and distinct payment.

3.17 Appendices. Notwithstanding any provisions in this Performance Share Award Agreement, the Performance Shares and Dividend Equivalents shall be subject to any additional terms and conditions set forth in the Vesting Appendix and the Global Appendix. Specifically, in the event Participant resides or relocates to one of the countries included in the Global Appendix, the terms and conditions for such country will apply to Participant to the extent the Company determines that the application of such terms and conditions is necessary or advisable for legal or administrative reasons. The Vesting Appendix and the Global Appendix constitute a part of this Performance Share Award Agreement.

3.18 Governing Law and Venue. This Agreement and the Performance Shares and the Dividend Equivalents will be governed by and interpreted in accordance with the laws of the State of Delaware, disregarding the choice-of-law principles of the State of Delaware and any other state requiring the application of a jurisdiction's laws other than the State of Delaware. For purposes of litigating any dispute concerning the grant of the Performance Shares, the Dividend Equivalents or this Agreement, Participant consents to the exclusive jurisdiction of the State of Minnesota and agrees that such litigation shall be conducted exclusively in the courts of Ramsey County, Minnesota, or the federal courts for the United States for the District of Minnesota, where this grant is made and/or to be performed.

* * * * *

EXHIBIT 21

3M COMPANY AND CONSOLIDATED SUBSIDIARIES (PARENT AND SUBSIDIARIES) AS OF DECEMBER 31, 2020

Name of Company	Organized Under Law of
Registrant — 3M Company	Delaware
Consolidated subsidiaries of the Registrant:	
3M Financial Management Company	Delaware
3M Global Channel Services, Inc.	Delaware
3M Innovative Properties Company	Delaware
3M Interamerica, Inc.	Delaware
3M Occupational Safety LLC	Delaware
3M Purification Inc.	Delaware
Acelity, Inc.	Delaware
Aearo Holding LLC	Delaware
Aearo Intermediate LLC	Delaware
Aearo LLC	Delaware
Aearo Technologies LLC	Delaware
Capital Safety North America Holdings Inc.	Delaware
Capital Safety North America Intermediate Holdings LLC	Delaware
Ceradyne, Inc.	Delaware
Chiron Holdings, Inc.	Delaware
KCI Holding Company, Inc.	Delaware
KCI International, Inc.	Delaware
KCI Licensing, Inc.	Delaware
KCI USA, Inc.	Delaware
MModal IP LLC	Delaware
MModal LLC	Delaware
Scott Technologies, Inc.	Delaware
3M Unitek Corporation	California
Meguiar's, Inc.	California
3M Health Information Systems, Inc.	Maryland
D B Industries, LLC	Minnesota
MModal MQ Inc.	New Jersey
MModal Services, Ltd.	New Jersey
Kinetic Concepts, Inc.	Texas
3M Australia Pty. Ltd.	Australia
3M Precision Grinding GmbH	Austria
3M Belgium bvba/sprl	Belgium
3M do Brasil Ltda.	Brazil
3M Manaus Industria de Produtos Quimicos Ltda.	Brazil
3M Canada Company - Compagnie 3M Canada	Canada
Capital Safety Group Canada ULC	Canada
KCI Cayman Holdings	Cayman Islands
3M China Limited	China
3M International Trading (Shanghai) Co., Ltd.	China
3M Investments (China) Co., Ltd.	China
3M Material Technology (Suzhou) Co., Ltd.	China
3M Specialty Materials (Shanghai) Co., Ltd.	China
3M Purification SAS	France
3M France S.A.S.	France
Capital Safety Group EMEA	France
3M Deutschland GmbH	Germany
3M Real Estate GmbH & Co KG	Germany
Dyneon GmbH	Germany
3M Hong Kong Limited	Hong Kong
3M India Limited	India
KCI Manufacturing Unlimited Company	Ireland
3M ITALIA s.r.l.	Italy
3M Health Care Sales Limited	Japan
3M Japan Limited	Japan
3M Japan Holdings G.K.	Japan

Name of Company	Organized Under Law of
3M Japan Products Limited	Japan
3M Korea High Tech Limited	Korea
3M Korea Ltd	Korea
3M Asset Management S.a.r.l.	Luxembourg
3M Global Capital S.a.r.l.	Luxembourg
Medical Holdings Limited	Malta
3M Mexico, Sociedad Anonima de Capital Variable	Mexico
3M Asia Holding B.V.	Netherlands
3M Holding Company B.V.	Netherlands
3M Intermediate Acquisitions B.V.	Netherlands
3M International Group B.V.	Netherlands
3M International Holding B.V.	Netherlands
3M International Investments B.V.	Netherlands
3M West Europe B.V.	Netherlands
KCI Europe Holding B.V.	Netherlands
Systagenix Wound Management B.V.	Netherlands
Systagenix Wound Management Mezz B.V.	Netherlands
3M Panama Pacifico S. de R.L.	Panama
3M Poland Manufacturing Sp. z.o.o.	Poland
3M Wroclaw spolka z ograniczona odpowiedzialnoscia	Poland
3M Innovation Singapore Pte. Ltd.	Singapore
3M Singapore Pte. Ltd.	Singapore
3M Espana, S.L.	Spain
3M Svenska Aktiebolag	Sweden
3M EMEA GmbH	Switzerland
3M Taiwan Limited	Taiwan
3M Taiwan Optronics Corporation	Taiwan
Alpha Beta Global Tapes and Adhesives Co., Ltd.	Taiwan
3M Thailand Limited	Thailand
3M Asia Pacific UK Holding Ltd	United Kingdom
3M Products Limited	United Kingdom
3M UK Holdings Limited	United Kingdom
3M United Kingdom Public Limited Company	United Kingdom
Capital Safety Acquisitions Limited	United Kingdom
Capital Safety Global Holdings Limited	United Kingdom
KCI UK Holdings Limited	United Kingdom
Scott Health & Safety Limited	United Kingdom
Systagenix Wound Management, Limited	United Kingdom

NOTE: Subsidiary companies excluded from the above listing, if considered in the aggregate, would not constitute a significant subsidiary.

EXHIBIT 23

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (Nos. 333-30689, 333-30691, 333-44760, 333-73192, 333-101727, 333-109282, 333-128251, 333-130150, 333-151039, 333-156626, 333-156627, 333-166908, 333-181269, 333-181270, and 333-211431) and Form S-3 (Nos. 333-236344, 333-42660, and 333-109211) of 3M Company of our report dated February 4, 2021 relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP
Minneapolis, Minnesota
February 4, 2021

EXHIBIT 24

POWER OF ATTORNEY

Each of the undersigned Directors and the Principal Executive, Principal Financial and Principal Accounting Officers of 3M COMPANY, a Delaware corporation (the "Company"), hereby constitute and appoint Michael F. Roman, Monish Patolawala, Theresa E. Reinseth, Ivan K. Fong, and Sarah M. Grauze, and each of them, his or her true and lawful attorneys-in-fact and agents, with full and several power of substitution and resubstitution, for him or her and in his or her name, place and stead in any and all capacities, to sign one or more Annual Reports for the Company's fiscal year ended December 31, 2020, on Form 10-K under the Securities Exchange Act of 1934, as amended, any amendments thereto, and all additional amendments thereto, each in such form as they or any one of them may approve, and to file the same with all exhibits thereto and other documents in connection therewith with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done so that such Annual Report or Annual Reports shall comply with the Securities Exchange Act of 1934, as amended, and the applicable Rules and Regulations adopted or issued pursuant thereto, as fully and to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them or their substitute or resubstitute, may lawfully do or cause to be done by virtue hereof.

The undersigned have signed this Power of Attorney this 2nd day of February 2021.

/s/ Michael F. Roman
Michael F. Roman, Chairman of the Board and Chief Executive Officer (Principal Executive Officer and Director)

/s/ Monish Patolawala
Monish Patolawala, Senior Vice President and Chief Financial Officer (Principal Financial Officer)

/s/ Theresa E. Reinseth
Theresa E. Reinseth, Vice President, Controller and Chief Accounting Officer (Principal Accounting Officer)

/s/ Amy E. Hood
Amy E. Hood, Director

/s/ Thomas K. Brown
Thomas K. Brown, Director

/s/ Muhtar Kent
Muhtar Kent, Director

/s/ Pamela J. Craig
Pamela J. Craig, Director

/s/ Dambisa F. Moyo
Dambisa F. Moyo, Director

/s/ David B. Dillon
David B. Dillon, Director

/s/ Gregory R. Page
Gregory R. Page, Director

/s/ Michael L. Eskew
Michael L. Eskew, Director

s/ Patricia A. Woertz
Patricia A. Woertz, Director

/s/ Herbert L. Henkel
Herbert L. Henkel, Director

EXHIBIT 31.1

SARBANES-OXLEY SECTION 302 CERTIFICATION

I, Michael F. Roman, certify that:

1. I have reviewed this annual report on Form 10-K of 3M Company;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Registrant as of, and for, the periods presented in this report;

4. The Registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the Registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the Registrant’s internal control over financial reporting that occurred during the Registrant’s most recent fiscal quarter (the Registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the Registrant’s internal control over financial reporting; and

5. The Registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Registrant’s auditors and the audit committee of the Registrant’s board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Registrant’s ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant’s internal control over financial reporting.

/s/ Michael F. Roman
Michael F. Roman
Chief Executive Officer

February 4, 2021

EXHIBIT 31.2

SARBANES-OXLEY SECTION 302 CERTIFICATION

I, Monish Patolawala, certify that:

1. I have reviewed this annual report on Form 10-K of 3M Company;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Registrant as of, and for, the periods presented in this report;

4. The Registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Registrant and have:

    (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    (c) Evaluated the effectiveness of the Registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    (d) Disclosed in this report any change in the Registrant's internal control over financial reporting that occurred during the Registrant's most recent fiscal quarter (the Registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the Registrant's internal control over financial reporting; and

5. The Registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Registrant's auditors and the audit committee of the Registrant's board of directors (or persons performing the equivalent functions):

    (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Registrant's ability to record, process, summarize and report financial information; and

    (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant's internal control over financial reporting.

/s/ Monish Patolawala
Monish Patolawala
Chief Financial Officer

February 4, 2021

EXHIBIT 32.1

SARBANES-OXLEY SECTION 906 CERTIFICATION

In connection with the Annual Report of 3M Company (the “Company”) on Form 10-K for the period ended December 31, 2020 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Michael F. Roman, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Michael F. Roman
Michael F. Roman
Chief Executive Officer

February 4, 2021

EXHIBIT 32.2

SARBANES-OXLEY SECTION 906 CERTIFICATION

In connection with the Annual Report of 3M Company (the “Company”) on Form 10-K for the period ended December 31, 2020 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Monish Patolawala, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Monish Patolawala
Monish Patolawala
Chief Financial Officer

February 4, 2021

EXHIBIT 95

MINE SAFETY DISCLOSURES

For the year 2020, the Company has the following mine safety information to report in accordance with Section 1503(a) of the Act, in connection with the Pittsboro, North Carolina mine, the Little Rock, Arkansas mine, the Corona, California mine, and the Wausau, Wisconsin mine (including Greystone Plant):

Mine or Operating Name/MSHA Identification Number	Section 104 S&S Citations (#)	Section 104(b) Orders (#)	Section 104(d) Citations and Orders (#)	Section 110(b)(2) Violations (#)	Section 107(a) Orders (#)	Total Dollar Value of MSHA Assessments Proposed ($)	Total Number of Mining Related Fatalities (#)	Received Notice of Pattern of Violations Under Section 104(e) (yes/no)	Received Notice of Potential to Have Pattern Under Section 104(e) (yes/no)	Legal Actions Pending as of Last Day of Period (#)	Aggregate Legal Actions Initiated During Period (#)	Aggregate Legal Actions Resolved During Period (#)
3M Pittsboro ID: 3102153	—	—	—	—	—	$ 516	—	No	No	—		
3M Little Rock ID: 0300426	3	—	—	—	—	$ 2,795	—	No	No	—		
3M Corona Plant ID: 0400191	2	—	—	—	—	$ 19,293	—	No	No	—		
Greystone Plant ID: 4700119	2	—	—	—	—	$ 4,449	—	No	No	—		
Wausau Plant ID: 4702918	—	—	—	—	—	$ 1,107	—	No	No	—		
Total	7	—	—	—	—	$ 28,160	—			—	—	—